



UNIVERSITÀ DEGLI STUDI DI BERGAMO

Scuola di Alta Formazione Dottorale

Corso di Dottorato in

Economia e Diritto dell'Impresa – Business & Law

XXXVII Ciclo

***The Impact of Taxation on the Ecological Transition.
The Case of the so-called Plastic Tax***

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Tesi di Dottorato

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ANNO ACCADEMICO 2023 / 2024

*A mia mamma, mio papà e mio fratello
linfa della mia esistenza*

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Introduction

Taxation has long been one of the most fundamental tools for shaping economic behaviour to achieve specific policy objectives. In the last decades of the 20th century, amid growing global environmental challenges, fiscal measures gained further significance as instruments to drive the ecological transition. Among these, environmental taxation plays a central role in internalizing environmental externalities, promoting sustainability, and fostering accountability. These measures are designed to influence production and consumption patterns, building a more accountable and resilient economy that aligns fiscal policies with sustainability ambitions.

Plastic pollution is one of the most pressing environmental issues of modern times. Millions of tons of plastic waste are produced annually, contributing to ecosystem degradation, biodiversity loss, and climate change through greenhouse gas emissions generated during production and disposal. Addressing this problem necessitates innovative solutions that combine regulatory and economic tools. Taxes on single-use plastics have become a pivotal component of environmental fiscal policy globally, aiming to reduce dependence on virgin plastics and encourage the adoption of sustainable alternatives.

The European Union has taken center stage in environmental action through initiatives like the “*European Strategy for Plastics in a Circular Economy*”, which emphasizes the transition to a circular economy through the use of recycled materials. Another notable initiative is the New EU Own Resource mechanism, which links Member States’ contributions to the EU budget to the amount of non-recycled plastic packaging waste they generate. These developments underscore the increasing integration of fiscal policy with environmental objectives at the supranational level.

This thesis examines the role of taxation in advancing the ecological transition, with particular focus on the so-called plastic tax. The research is structured into three chapters, each addressing a specific dimension of the intersection between taxation, sustainability, and policy design.

Chapter I outlines the theoretical and legal foundations of environmental taxation within the broader framework of a circular economy. It examines the principles underpinning sound environmental taxation, rooted in the “*polluter pays principle*” and

explores how fiscal instruments can support sustainability objectives. Furthermore, the chapter provides an in-depth discussion of the European Union's influence on environmental fiscal policy and its legal frameworks designed to promote a circular economy.

Chapter II delves into the legal framework of the European Union's plastic tax. It analyzes the EU's approach to combating plastic pollution, focusing on the Plastic Tax as an Own Resource of the EU budget. This chapter explores the taxonomy and implications of the tax, comparing it with other revenue sources such as customs duties and excise taxes. It also addresses the challenges of balancing sustainability and competitiveness while maintaining legal consistency within the framework of a plastic tax. The chapter concludes with a comparative analysis of the tax's implementation across various EU Member States.

Chapter III narrows its focus to Italy, presenting a comprehensive examination of the Italian Plastic Tax. It discusses the tax within the national context of environmental and fiscal policy, analyzing its constitutional foundations and the complexities of its legal classification. The chapter also provides an in-depth analysis of the tax's legislative framework, operational challenges, and strategies for monitoring and evaluation. The Italian case study offers valuable insights into the practical implications of environmental taxation, highlighting both opportunities and limitations in achieving environmental and fiscal goals.

Through this analysis, the thesis aims to contribute to the broader debate on the role of fiscal policy in addressing contemporary environmental challenges. It seeks to integrate the characterization and analysis of the Italian Plastic Tax with European and theoretical perspectives, evaluating the effectiveness of environmental taxation in fostering the ecological transition. The thesis emphasizes the need for innovative, coordinated, and flexible approaches to address these complex issues effectively.

Overall, this research demonstrates the significant potential of fiscal interventions to shape sustainable development pathways. By reconciling ecological aspirations with economic realities, fiscal policies like the Plastic Tax can optimize collaboration among stakeholders and promote a collective transition toward sustainability.

Chapter I

Theoretical and legal frameworks of “*environmental taxation*” in the context of the “*circular economy*”

2.1. What is “*environmental taxation*”? Green taxes and internalizing environmental costs

The idea of “*environmental taxation*”, often referred to as “*green taxation*” or “*eco-taxation*”¹, dates back to the early 20th century and is based on the belief that individuals accountable for harming the environment should shoulder the expenses linked to its protection and improvement.

The plastic tax and similar levies embody the “*Polluter-Pays Principle*” (PPP). This principle aims to hold individuals or entities accountable for the damage they cause by internalizing the associated costs, such as pollution and depletion of resources, through taxation policies. These fiscal measures are designed to address market inefficiencies by incorporating the consequences of actions into the prices of products and services directly to encourage sustainable practices and support environmental conservation efforts.

The basis of this approach originates from the idea of Arthur Cecil Pigou – an economist from Britain – who first introduced the notion of “*Pigouvian taxes*” in his work “*The Economics of Welfare*” published in 1920. Pigou’s argument was centred around the idea that negative externalities, such as pollution, result in costs not considered in market prices. He suggested imposing taxes on polluters to ensure that the complete social cost of their actions is taken into account².

Pigouvian taxes may take various forms, each targeted at addressing a specific externality. Taxation operates within the efficiencies and imperfections that influence decisions made by businesses and consumers. The economic disincentives created by these taxes encourage industries and the general public to transition to cleaner energy sources and technologies, with the ultimate goal of mitigating climate change³.

¹ Huggett C., Hatch P., *Green tax or promoting environmentally friendly behavior*, Wolters Kluwer, Tax & Accounting, November 22, 2023.

² Pigou A.C., *The Economics of Welfare*, 4th ed., London, Macmillan, 1920.

³ Banzhaf H. S., *A History of Pricing Pollution (Or, Why Pigouvian Taxes are not Necessarily Pigouvian)*, National Bureau of Economic Research, Working Paper No. 27683, August 2020, pp. 1-34; Carlton D. W., and Glenn C. L., *The Limitations of Pigouvian Taxes as a Long-Run Remedy for Externalities*, in *The Quarterly Journal of Economics*, Vol. 95, No. 3, November 1980, pp. 559-566.

For instance, carbon taxes are imposed on the carbon content of fossil fuels, reducing greenhouse gas emissions by increasing the costs of carbon-intensive activities. This economic disincentive encourages both businesses and individuals to adopt clean energy sources and cleaner technologies, thereby working to mitigate climate change.

The plastic tax – the focus of this thesis – is, by definition, a tax imposed on the production or consumption of plastic products. This tax aims to reduce environmental degradation by disincentivizing the use of plastic and fostering the adoption of less harmful alternatives.

Furthermore, taxes on harmful products, such as tobacco and alcohol, serve a dual purpose: to deter consumption due to their adverse health implications and to offset public health costs associated with their use.

Traffic congestion charges, also referred to as congestion pricing, are implemented to alleviate vehicular congestion. These systems charge drivers fees during peak hours for using specific roads, discouraging traffic jams, encouraging greater use of public transport, and promoting more efficient urban mobility.

Noise taxes are imposed to mitigate noise pollution, especially in densely populated urban areas or near airports. By introducing financial costs for excessive noise, these taxes incentivize quieter practices and technologies.

Finally, water taxes are levied on excessive water consumption to promote the conservation of this essential resource. By making large-scale water use financially burdensome, these taxes encourage more sustainable consumption levels.

In summary, Pigouvian taxes provide a powerful tool for correcting market failures. They ensure that the prices of goods and services internalize social costs, thereby incentivizing sustainable and responsible behaviour. Ultimately, this approach enhances the efficiency and equity of market systems.

In other words, the above theoretical framework has had an impact on environmental policies by introducing measures, like carbon taxes and plastic taxes, to discourage actions that harm the environment.

The post-World War II period saw a transformation in tax systems mainly due to the growing global concern about environmental damage. These developments involved both comprehensive tax reforms and the introduction of specific environmental taxes. In the 1970s, developed countries began adopting green taxes to compensate for negative

industrial externalities, such as air and water pollution. These changes encompassed both broad tax policies and targeted levies. For instance, general tax reforms often included the introduction of value-added taxes (VAT), as well as the extension and amendment of existing tax structures to better address environmental concerns. At the same time, specific levies, such as carbon taxes, were introduced to directly target and mitigate particular environmental issues⁴.

The “*Organisation for Economic Co-operation and Development*” (OECD) played a crucial role in formalizing the PPP in its *Recommendation on Guiding Principles Concerning International Economic Aspects of Environmental Policies* (1972)⁵. This guideline laid the foundation for including expenses in strategies among Member States stressing the importance of holding polluters accountable for covering the entire cost of preventing or remedying environmental harm.

In the 1990s, countries around the globe began to embrace taxes as a strategy for advancing sustainability goals. In their publication “*Economics of Natural Resources and the Environment*” published in 1990, David Pearce and R. Kerry Turner expanded on Pigou’s ideas by establishing a connection between externalities and environmental issues. They argued that environmental taxes could play a crucial role in addressing the negative externalities of industrial activities, such as air and water pollution⁶. They highlighted the significance of levies in addressing the expenses related to pollution and dwindling resources internally. This approach is aimed at encouraging behaviours. Pearce and Turner’s contributions formed the basis for regulations implemented in the following years – especially those focused on cutting down carbon emissions and promoting better resource utilization practices.

Nowadays many people see taxes as tools for dealing with the side effects linked to environmental damage. These financial strategies aim to factor in the expenses related to pollution, depletion of resources, and harm to the environment into the prices of products and services. This encourages both buyers and sellers to choose eco-options.

⁴ Sandmo A., *Chapter 3: Environmental Taxation and Revenue for Development*, in *New Sources of Development Finance*, Oxford University Press, 2004, pp. 33-57.

⁵ Organisation for Economic Co-operation and Development (OECD), *Recommendation on Guiding Principles Concerning International Economic Aspects of Environmental Policies*, May 26, 1972.

⁶ Pearce D., Turner K. R., *Economics of Natural Resources and the Environment*, Johns Hopkins University Press, 1990.

The objective here is to fix market inefficiencies resulting from these side effects, where the costs of actions are not paid by those causing them but, by society, at large⁷.

Without implementing taxes in place for these expenses to be factored in within the cost structure itself, this results in polluters not taking responsibility for the consequences of their actions. The outcome is an increased production of goods while sustainable alternatives are not utilized effectively.

Environmental taxation aims to include these factors in the cost calculation and address this imbalance by encouraging an effective distribution of resources. This will be achieved, not only by adopting “new” taxes, such as the plastic tax, but also by adjusting existing taxes to align with environmental goals. A higher environmental solid fuel tax on carbon is a powerful instrument in this regard. Governments can charge higher taxes on fuels based on their carbon content to incentivize reductions in greenhouse gas emissions. This policy increases the price of carbon-intensive fuels and therefore encourages both businesses and consumers to switch to cleaner fuels.

Transforming property taxes to encourage green building practices provides another example. Property tax incentives could be offered to buildings that meet certain environmental standards, such as energy efficiency or the use of sustainable materials. For instance, tax credits or rebates could be granted to property owners for installing solar panels or using energy-efficient windows or other green technologies, thereby reducing the greenhouse gas emissions of buildings while promoting sustainable construction methods.

Such changes to existing taxes can supplement new environmental ones, creating a coherent fiscal strategy for promoting sustainability. In this way, both new and existing tax mechanisms can enable governments to address environmental challenges effectively and achieve a transition to a greener economy⁸.

Discussion around taxation within the shift towards an eco-friendly economy has gained traction in recent times. The United Nations Environment Programme (UNEP) in

⁷ Stiglitz J.E., *Economics of the Public Sector*, 4th ed., W.W. Norton, 2015, p. 431.

⁸ Fortini D., *Il mio giardino si chiama “pianeta”. La politica che non decide tra arretratezze e disuguaglianze*, in Corona G., Realfonzo R., *Le politiche per l’ambiente in Italia*, Scuola di Governo del Territorio, November 2017, pp. 65-70; G. Castaldi, *Environmental Taxation and global cooperation*, in Alfano R. e Bisogno M., *Insights and reflections on environmental taxation and policy, Proceedings of the Summer School in European Environmental Taxation*, Quaderno di perfezionamento in diritto dell’Unione Europea dell’Università di Napoli “Federico II”, 2024, pp. 97-106.

its *Green Economy Report* emphasizes how a “green economy” enhances welfare and equality while mitigating threats⁹. Moreover, in his work “*A Global Green New Deal*” published in 2009, Barbier asserts that incorporating taxes is crucial, for cutting down on carbon emissions and fostering lasting stability¹⁰.

Nevertheless, putting into effect environmental levies, like the plastic tax, presents its set of hurdles. A major challenge lies in deciding on the “tax rate”. In principle, the tax ought to be established at a point that mirrors the expense of the environmental harm stemming from plastic manufacture and disposal. In reality, pinpointing these expenses accurately is exceptionally tricky due to the nature of environmental repercussions and the ambiguity regarding lasting ecological harm¹¹. The issue is made complex by the reach of plastic pollution that transcends borders and impacts various ecosystems globally.

Therefore, national or regional taxes on plastics, like the EU plastic tax, need to be meticulously planned to prevent outcomes such as shifting production to areas with strict environmental rules (known as “carbon leakage”)¹². Additionally, it is crucial to consider the level of government involved, as both national and local authorities play a central role in the implementation and effectiveness of these policies. For instance, the European strategy for plastics emphasizes the importance of coordinated actions at different governmental levels to enhance the circular economy and reduce plastic waste¹³. Academic studies have shown that effective environmental taxation requires a multi-level governance framework to address the complexities of environmental impacts and economic activities¹⁴. Furthermore, research highlights that policies such as Extended

⁹ United Nations Environment Programme (UNEP), *Report: Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011, pp. 294-295.

¹⁰ Barbier B. E., *A Global Green New Deal – Executive Summary*, February 2009, p. 123.

¹¹ Helm D., *The Carbon Crunch: How We’re Getting Climate Change Wrong - and How to Fix It*, Yale University Press, 2012, pp. 93-96.

¹² Aldy J.E., and Stavins, R.N., *The Promise and Problems of Pricing Carbon: Theory and Experience*, *Journal of Environment and Development* 21, No. 2, 2012, pp. 152-156.

¹³ Fairbrass J., Jordan A., *Chapter 9: Multi-level Governance and Environmental Policy*, in *Multi-level Governance*, Oxford University Press., February 2004, pp. 147-164; Liaci M., *Strategia europea per la plastica e riflessi normativi e giurisprudenziali nell’ordinamento italiano*, in *Rivista Giuridica AmbienteDiritto.it*, Fascicolo 3/2021, pp. 4-5.

¹⁴ Paavola J., *Multi-Level Environmental Governance: Exploring the economic explanations*, in *Environmental Policy and Governance*, May 2016, pp. 144-152.

Producer Responsibility (EPR) and the “*Single-Use Plastics Directive*” are more effective when there is a strong collaboration between national and regional governments¹⁵.

Setting the tax rate can be tricky, due to its complexity, however when environmental taxes are properly crafted, they can bring about impacts on the economy and the environment as well: a concept known as the “*double dividend hypothesis*”¹⁶. This theory suggests that environmental taxes, like those on carbon or plastic, can offer two advantages. The first benefit is the advantage as these taxes promote actions that lessen pollution and conserve resources by accounting for the costs of environmental damage. The second advantage is linked to the benefit resulting from using the revenue generated by these taxes to lessen types of taxes that create distortions in the economy as income or payroll taxes do. This approach helps enhance the efficiency of the tax system by minimizing the disruptions usually brought about by taxing labour or capital¹⁷.

Critics raise concerns about taxes like the plastic tax due to their impact on different income groups – a key issue known as “*distributional effects*”. They argue that these taxes could hit lower-income families harder as they often allocate more of their earnings towards items that might be taxed. Sensitive items, such as plastic goods. Packaging costs might be transferred to consumers, leading to increased financial strain on those with limited resources¹⁸. In the case of the plastic tax, the higher costs of plastic packaging could be passed on to consumers, placing a greater financial burden on those least able to absorb it. Research has shown that environmental taxes come with the need, for measures like subsidies or tax breaks for lower-income individuals to balance out their potentially unequal impact despite their positive effects, on the environment¹⁹.

The wider economic consequences of taxes should not be underestimated as they can affect the competitiveness of industries too. There is a known concern, about “*carbon leakage*”, which occurs when industries facing taxes move to areas with less stringent

¹⁵ Dickinson H., Extended Producer Responsibility: A Critical Component for the Global Plastics Pollution Treaty, November 2024, in UNSW News.

¹⁶ Bovenberg A. L., de Mooij R. A., *Environmental Levies and Distortionary Taxation*, in American Economic Review, 84(4), 1994, pp. 1085-1089.

¹⁷ Bovenberg A.L. and de Mooij R.A., *Environmental Levies and Distortionary Taxation*, The American Economic Review, Vol. 84, No. 4, 1994, 1085–1089. The “*double dividend hypothesis*” suggests that environmental taxes can improve environmental outcomes while also enhancing economic efficiency.

¹⁸ Sterner T., *Fuel Taxes: An Important Instrument for Climate Policy*, Energy Policy 35, No. 6, 2007, pp. 3194-3202.

¹⁹ Cottarelli C., and Curto S., *Fiscal Policies for Environmental Sustainability*, IMF, 2019, 94-98.

environmental rules. This phenomenon can undermine the environmental objectives of the tax while simultaneously leading to job losses in the original taxing jurisdiction²⁰. To address these issues the EU has put in place measures such as the “*Carbon Border Adjustment Mechanism*” (CBAM). This aims to levy tariffs on products imported from nations with regulations to maintain fair competition, for local businesses²¹.

Despite the obstacles faced in this endeavour, the advantages of implementing a levy on plastics are significant, in safeguarding the environment and maintaining stability.

By linking incentives to objectives, the tax serves as a versatile and efficient mechanism for diminishing plastic pollution and encouraging the adoption of reusable or environmentally friendly substitutes.

Additionally, the revenues generated by the plastic tax can be reinvested in “*circular economy initiatives*”, further enhancing its impact²². For instance, EPR systems have played a crucial role in driving innovations in plastic recycling technologies. However, to maximize its effectiveness, the plastic tax should be part of a broader, integrated approach that includes regulatory measures, public awareness campaigns, and incentives for innovation in sustainable materials. Such an integrated approach is essential for fostering an environment that supports innovation and facilitates the transition to a circular economy²³.

Critically examining the issue, it is essential to recognize that the effectiveness of the tax hinges on how it can change people’s behaviour without causing too much financial strain or social difficulties. The tax alone won’t solve pollution issues; it needs to be part of a strategy that includes taxes and regulations as well, as corporate responsibility initiatives and public awareness campaigns²⁴.

²⁰ Grubb M., Hourcade J.C., Neuhoff K., *Planetary Economics: Energy, Climate Change, and the Three Domains of Sustainable Development*, Routledge, 2014.

²¹ European Commission, Proposal for a Carbon Border Adjustment Mechanism, COM(2021) 564 final.

²² European Environmental Agency (EEA), Plastic Waste and Recycling in the EU: The Circular Economy Approach, EEA Report No. 10/2019.

²³ OECD, Quantifying environmentally relevant and circular plastic innovation: Historical trends, current landscape and the role of policy, OECD Environment Working Papers No. 199, September 2022, pp. 33-38.

²⁴ Goulder L.H., and Schein A.R., *Carbon Taxes vs. Cap-and-Trade: A Critical Review*, Climate Policy 13, No. 2, 2013, pp. 203-219.

It is incumbent to policymakers to temper these goals - protecting the environment, enhancing economic development, and ensuring fairness - to legitimize the role of the plastic tax in furthering sustainability. Effective policies must blend economic sustainability and political feasibility, whereby environmental protection shall drive economic planning to foster sustainable balanced growth.

In conclusion, environmental taxation, and specifically the plastic tax, offers a powerful tool for addressing the environmental challenges posed by plastic waste. By internalizing the costs of pollution, these taxes help align private interests with public goods, encouraging the adoption of more sustainable practices. However, the effectiveness of initiatives relies on their thoughtful planning and execution balancing economic benefits with social considerations.

2.2. The PPP and the rise of Pigouvian taxes

Expanding on the idea of environmental taxation mentioned in the previous section of the text, the PPP acts as a crucial tool to guarantee that individuals accountable for environmental damage take on the expenses of fixing that damage, as stated formally in Article 191(2) of the Treaty on the Function of the European Union (TFEU).

This provision stresses addressing harm at its origin and mandates those causing pollution to shoulder the financial responsibility for remediation efforts²⁵.

A decision that upholds this idea can be seen in the *Commune de Mesquer v. Total France SA, Total International Ltd* ruling by the Court of Justice of the European Union (CJEU). In this case, the Court ruled that hydrocarbons accidentally spilled into the sea and combined with water and sediment should be categorized as waste according to Directive 75/442/EEC requirements. The Court clarified that, even if the product was originally intended for sale and use as fuel, once spilled and mixed with the environment, it became waste. Therefore, it falls on both the producer and the charterer to assume

²⁵ Article 191(2) TFEU, according to which “*Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay*”.

liability for its disposal in compliance with the fundamental principle of PPP – that those who cause pollution are accountable for addressing environmental harm²⁶.

The PPP reflects its manifestation through the notion of levies – coined after the economist who originated the concept of countering detrimental external effects via taxes; an example being the plastic tax in the EU, designed to combat the ecological repercussions linked to plastic waste disposal as a practical application of this theoretical framework.

One more instance of these taxes is the carbon tax, implemented in European nations such as Sweden, where this tax has been effectively integrated to show that aligning environmental costs with economic growth is achievable²⁷.

Nevertheless, there are obstacles when it comes to applying such taxes. One of the hurdles is figuring out the tax rate that properly accounts for the external costs associated with environmental harm resulting from a specific action. Estimating the worth of such external factors is intricate and can lead to debate. In a case involving *Commune de Mesquer v. Total France SA, Total International Lt* ruling, the CJEU upheld the “*Extended Producer Principle*” (EPR) by stating that entities accountable for waste disposal according to Directive 75/442/EEC may include “*previous holders*” or the “*producer of the product from which the waste came*”²⁸. This legal concept highlights the complexity of assigning accountability and expenses, a challenge that mirrors the difficulties in determining optimal Pigouvian tax rates.

Furthermore, the case of *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change* broadened the extent of EU authority in terms of environmental protection. It was decided by the Court that the EU had the

²⁶ Court of Justice of the European Union (CJEU), Case C-188/07, *Commune de Mesquer v. Total France SA and Total International Ltd*, Judgment of 24 June 2008, ECLI:EU:C:2008:359. In this ruling, the *Commune de Mesquer* requested reimbursement from *Total France SA and Total International Ltd* after a major oil spill occurred due to the sinking of a chartered ship. The CJEU determined that if hydrocarbons are unintentionally released into the ocean and combined with water and sediments, they should be considered as “waste” according to Directive 75/442 /EEC. Additionally, the Court decided that *Total France SA* and *Total International Ltd*, in their roles as the hydrocarbons manufacturer and the vessels charterer respectively, could bear responsibility for the cleanup expenses under the PPP.

²⁷ Andersson J. J., *Carbon Taxes and CO2 Emissions: Sweden as a Case Study*, American Economic Journal: Economic Policy, Vol. 11, No. 4, 2019, pp. 1-30. The study shows that Sweden’s implementation of a carbon tax effectively lowered CO₂ emissions across sectors, such as transportation, without impacting economic progress This study highlights the notion that integrating environmental costs into policies can align harmoniously with economic advancement.

²⁸ *Ibid.*

right to enforce regulations on flights coming to or leaving from EU airports when these flights traverse a part of their route outside EU airspace. The Court concluded that the EU had the jurisdiction to implement its regulations on airlines operating within its borders, despite objections claiming a violation of international legal obligations. This ruling has strengthened the EU's capacity to oversee entities that affect the environment within its territory and has expanded the reach of the PPP on a global scale by setting a precedent for the international application of environmental standards in alignment with EU regulations²⁹.

When it comes to issues such as pollution in our environment, the impact is far-reaching, affecting ecosystems, biodiversity, and the well-being of people in ways that are hard to measure accurately. While policymakers use taxes to try and change behaviours for the better, there is always a chance of setting the tax too high. If it is too low, people may not feel motivated to change their habits. If it is too high, it could place heavy burdens on both consumers and businesses alike. These obstacles are similar to the issues brought up in court when implementing the PPP program.

Finding a balance between environmental protection and economic considerations has been challenging. Experts in economics have pointed out this problem of balancing the impact of Pigouvian taxes with the practicalities faced by industries³⁰.

One issue to consider is how Pigouvian taxes can affect groups of people unequally based on their income levels and spending habits, especially when it comes to products subjected to taxes, like the plastic tax, which often results in consumers paying higher prices for everyday items due to the added costs of plastic packaging being passed down to them by manufacturers or retailers (see the previous Section 2.1 for a detailed discussion).

²⁹ Court of Justice of the European Union (CJEU), Case C-366/10, *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change*, Judgment of 21 December 2011, ECLI:EU:C:2011:864. This ruling involved a dispute brought by the *Air Transport Association of America* and various U.S. airlines, against Directive 2008/101/EC, that included aviation operations into the framework of the EU. The applicants claimed that the directive breached regulations such as the Chicago Convention and the concept of state sovereignty over airspace. According to the CJEU ruling the directive was in line with regulations because it only affected flights to or from EU airports and did not cover activities taking place outside EU borders. The decision confirmed that the European Union has the authority to control airplane emissions in accordance, with its goals.

³⁰ Stern N., *The Economics of Climate Change: The Stern Review*, Cambridge University Press, 2007, pp. 45-50.

Research indicates that environmental taxes often impact lower-income communities more significantly, since they may lack options for eco-friendly choices³¹. Creating a balance between environmental objectives and social fairness is vital in governmental decision-making processes regarding taxes³².

However, other studies noted that lower-income communities normally suffer the most from environmental taxes reduce taxes because they generally lack alternative choices that are more environmentally friendly. While creating fair opportunity and balancing environmental objectives within governmental decision-making processes regarding tax policies is crucial, studies also show that lower-income households tend to spend a larger share of their income on energy and fuels³³. This, therefore, would tend to increase their vulnerability to such taxes. Different scholars and policymakers came up with measures intended to bridge the gap and lessen the burden of taxes on poorer communities, including subsidies, tax deductions, or tax credits, specifically directed toward essential sectors or products³⁴. For instance, they would be able to provide values in the form of subsidies for energy-saving appliances or transportation improvements and would also provide tax deductions or credits in the case of investments in energies saving programs or construction improvements within residential buildings³⁵. The aim is to achieve environmental goals without creating more inequality in society.

Besides worrying about fairness and justice in society, the global impacts also need to be taken into account. Environmental destruction, such as pollution, is often not confined to one country's borders. When nations introduce levies like the plastic tax, businesses might move to countries with less stringent environmental rules. This leads to

³¹ Dresner S., Ekins P., *The Distributional Effects of Economic Instruments to Limit Greenhouse Gas Emissions from Transport*, PSI Research Discussion Series 19, Policy Studies Institute, UK, 2004; Ekins P., Dresner S., *Green Taxes and Charges: Reducing Their Impact on Low-income Households*, York (UK), Joseph Rowntree Foundation, 2004; Büchs M, Schnepf S.V., *Who Emits Most? Associations between Socio-Economic Factors and UK Households' Home Energy*, Transport, Indirect and Total CO2 Emissions, Ecological Economics, Vol. 90, 2013, pp. 114-123; OECD, *The Distributional Effects of Environmental Policy*, OECD Environment Policy Papers No. 21, 2018.

³² OECD, *The Distributional Effects of Environmental Policy*, OECD Environment Policy Papers No. 21, 2018; Ekins P., Dresner S., *Green Taxes and Charges: Reducing Their Impact on Low-income Households*, York (UK), Joseph Rowntree Foundation, 2004.

³³ Zatti A., *Environmental taxes and subsidies: some insights from the Italian experience*, in Environmental Economics, Volume 11, Issue 1, 2020, pp. 39-53.

³⁴ Di Rauso E., *Le politiche fiscali ad impatto ambientale*, in Innovazione e Diritto, March 2024.

³⁵ Orecchia C., Castaldi G., *The removal of fossil fuel subsidies in Italy and interactions with the 2030 EU climate and energy framework*, in Journal of Environmental Policy & Planning, 2020, pp. 143-140.

a situation known as pollution leakage, which weakens the effectiveness of the tax by transferring the burden rather than eliminating it.

In order to address this difficulty, the EU has aimed to create measures that can ensure environmental responsibility across different countries.

Regulations such as CBAM have been put in place to levy tariffs on goods coming from nations with lower environmental regulations. This initiative aims to stop businesses from avoiding environmental taxes through relocation and to create fair competition among companies operating in the EU³⁶. These steps are meant to safeguard the integrity of EU environmental guidelines and promote a level playing field for industries in the region.

Despite these difficulties, Pigouvian taxes still play a vital role in today's environmental financial strategy. The PPP establishes a lawful basis for these taxes because it supports the overarching objectives of environmental fairness by making polluters responsible for the damage they create. This connection to fairness is crucial for grasping the enduring effectiveness of taxes in financial policy.

However, it is worth emphasizing that financial strategies alone cannot fully tackle problems such as plastic pollution. Scholars focused on the environment have highlighted the importance of pairing taxes with other actions, like regulations and public awareness initiatives, along with investments in green technologies to create a comprehensive strategy that tackles both the economic and behavioural sides of environmental preservation effectively. Governments can successfully lead the shift towards a “*circular economy*” by merging financial incentives with regulations and societal measure³⁷.

The EU's involvement with Pigouvian taxes shows how public-private partnerships and such taxes can positively influence upcoming environmental policies, despite facing difficulties in equity and international collaborations. These taxes are vital for incorporating environmental costs and encouraging sustainable production and consumption habits.

³⁶ OECD, *Aligning Environmental Policies with Fiscal Measures*, OECD Environmental Policy Papers, No. 25, 2013.

³⁷ European Environment Agency, *Environmental Policies and Social Equity: A Review of the Literature*, EEA Report, 2020.

In the future, as environmental issues become more intricate on a global scale, enhancing taxes will be crucial for their continued significance and efficiency. It will be essential, for the long-term success of these taxes, to ensure they are crafted and put into effect in a manner that strikes a balance between effectiveness and fairness for all members of society³⁸.

2.3. *The EU's influence on environmental fiscal policy*

The EU has crafted environmental tax policies that have not been consistently implemented by all Member States across the board. Although there is support for the principle of levying charges on polluting activities, such as the PPP, within the EU to address environmental concerns, the challenge lies in implementing these taxes effectively across the diverse economies of Member States. Differing environmental tax standards among Member States could potentially cause tensions between countries and create uneven benefits³⁹

In 1991, Sweden introduced a law that imposed taxes on emissions – an initiative that has since set a benchmark for its strictness and is credited with significantly reducing emissions in various sectors, such as building construction, transport, and industry. In addition to the carbon tax system, a strategic focus on investing in low-carbon technologies has further bolstered Sweden's position as a leader in energy policies. This policy not only underscores Sweden's commitment to combating climate change on a global scale but also serves as a blueprint for other European Union countries to follow⁴⁰.

France implemented its carbon tax, called "*Contribution Climat-Énergie*" (CCE), in 2014 as part of its environmental strategy framework. The tax has gradually increased but encountered resistance, especially during the "*gilet jaunes*" demonstrations, where detractors claimed that the tax unfairly burdened lower-income families. Nevertheless, France persists in pursuing climate objectives, with the CCE serving as a tool in its financial strategy to lower carbon emissions⁴¹.

³⁸ Ellen MacArthur Foundation, *Completing the Picture: How the Circular Economy Tackles Climate Change*, 2019.

³⁹ Article 191 of the Treaty on the Functioning of the European Union (TFEU).

⁴⁰ Ackva J., Hoppe J., *The Carbon Tax in Sweden*, Adelphi/Ecofys, 2018; *Sweden's Carbon Tax – A World's First*, Government of Sweden, March 2023.

⁴¹ Ministère de la Transition écologique, *Fiscalité carbone en France*, 2017.

In 2021, Germany introduced a carbon tax as part of its “*National Emission Trading System*” (nEHS), where the cost of carbon gradually rises over time to strike a balance between competitiveness and environmental goals by offering support to low-income families and energy-intensive sectors. Germany’s incremental approach to the tax demonstrates its resolute dedication to shifting towards a “*circular economy*” while handling the social and economic consequences thoughtfully⁴².

A prime illustration of this issue is the implementation of the CBAM to address carbon leakage by levying tariffs on goods imported from nations with lower environmental standards. Nevertheless, this approach raises practical concerns regarding alignment with global trade regulations and its effects on developing economies⁴³.

In particular, the CBAM must adhere to the guidelines established by the “*World Trade Organization*” (WTO). There are worries that the CBAM might be viewed as conflicting with free trade principles and could potentially lead to disagreements at the WTO.

However, in accordance with the “*General Agreement on Tariffs and Trade*” (GATT), exceptions for protection may legitimize the EU’s strategy, enabling flexibility within the regulations when focused on upholding health or environmental concerns. This emphasizes the importance for the EU to guarantee that the CBAM is executed in a manner that harmonizes trade responsibilities with environmental goals to steer clear of protectionism risks⁴⁴.

The EU also needs to consider the effects on developing nations that may struggle to adhere to EU regulations and make sure that the CBAM doesn’t unfairly harm less economically advanced countries.

In order to tackle these issues successfully within the EU framework, it is crucial to find common ground between countries’ control over their finances and the collective push for environmental goals alignment.

The effectiveness of EU fiscal strategies hinges on more than just the intricate planning of levies, such as those on plastic products or carbon; it also relies on Member States’ commitment to enforcing these policies fairly and consistently. Without this

⁴² German Federal Ministry for the Environment, *Fuel Emissions Trading Act (BEHG)*, 2021.

⁴³ Carbon Border Adjustment Mechanism (CBAM), European Commission Communication 2021.

⁴⁴ De Orte Júlvez I., *EU Carbon Border Adjustment Mechanism Compliance With WTO Rules*, Australian Institute of International Affairs, 2021.

synchronization, the EU runs the risk of hindering its overarching aims for a “*circular economy*”⁴⁵.

After studying the PPP and discussing taxes earlier in the text, it's important to delve into how the EU has incorporated these fiscal ideas into its environmental management framework. As an authority, the EU advocates for tackling externalities internally while also managing the challenging job of aligning fiscal strategies among its Member States, all while respecting each nation's fiscal autonomy. Navigating this challenge highlights the tensions within multilevel governance systems, balancing the call for unified policy structures against local concerns and political dynamics.

The EU has had an impact on shaping fiscal policies by using its unique position to coordinate various fiscal systems effectively. Environmental fiscal actions of the EU are anchored in Article 191 of the TFEU⁴⁶, which outlines principles like precautionary measures, prevention approaches, and the PPP⁴⁷.

These principles serve as a foundation for the EU to introduce policies that aim to reduce environmental harm and support sustainable growth. However, the effectiveness of these policies often relies on how willing and capable individual Member States are in implementing and enforcing them.

One key fiscal instrument utilized by the EU is the plastic tax aimed at fostering a “*circular economy*” and cutting down on plastic waste generation⁴⁸. Consumers can expect to foot the bill for recycled plastic packaging as producers are targeted to bear the brunt of managing plastic waste under this regulation. Although this strategy is in line with the PPP model, variations in its execution have emerged among EU Member States, who are given leeway in tailoring and enforcing the tax based on national circumstances and political preferences.

Plastic taxes, among other fiscal tools used by the EU, place responsibility on consumers for the products they purchase while primarily targeting manufacturers to finance plastic waste management under this regulation. This creates a somewhat

⁴⁵ European Parliament and Council, Directive 2003/96/EC, Restructuring the Community framework for the taxation of energy products and electricity, 2003, OJ L 283/51.

⁴⁶ Article 191, Treaty on the Functioning of the European Union (TFEU).

⁴⁷ United Nations Environment Programme (UNEP), *Polluter Pays Principle*, UNEP Law and Environment Assistance Platform.

⁴⁸ European Commission, A European Strategy for Plastics in a Circular Economy, COM(2018) 28 final, 2018.

fictitious “*circular economy*” for waste generation. Such an approach aligns with the PPP model but allows for numerous variations in how these aspects of the tax are implemented across EU Member States, which have the flexibility to design and introduce the tax based on national preferences and circumstances.

These variations are evident in different cases: while Germany introduced a national plastic tax but subsequently postponed its implementation due to political and economic considerations, Portugal has expanded contributions for single-use packaging by revising rates and exemptions to better suit its context. Poland, on the other hand, has been the most proactive, imposing fees on certain single-use plastics and establishing deposit-refund schemes to promote recycling and reduce plastic waste⁴⁹. These examples show that different countries have different approaches in terms of law and regulation to combat plastic waste. This could lead to disunity within the market and may hinder the EU’s efforts towards sustainability goals⁵⁰.

Critically speaking, the plastic tax highlights the complexity of EU policy formation efforts. The goal may be praiseworthy, but differences in commitment levels among Member States can result in unintended consequences. Take, for example, how nations with stricter regulations might be at a disadvantage against those choosing minimal adherence. This scenario prompts inquiries into the EU’s strategy effectiveness, raising the question of whether a centralized structure could address these gaps.

One of the dilemmas facing the fiscal policy of the EU is how to balance harmonization with national sovereignty concerns. Despite the EU’s aim to establish a unified approach to environmental taxation policies, individual Member States retain authority over direct tax matters. This delicate equilibrium is especially apparent in the *Energy Taxation Directive 2003/96/EC*⁵¹, which establishes tax levels for energy products and electricity while granting Member States leeway in their implementation⁵².

⁴⁹ Żurawska W., de Tord I. B., *Tackling plastic pollution and waste at the European and national levels*, Plastic Taxation in Europe: Update 2024, WTS Global, May 2024.

⁵⁰ OECD, *The Polluter Pays Principle: Definition, Analysis, Implementation*, 2018.

⁵¹ Council Directive 2003/96/EC of 27 October 2003, *Restructuring the Community framework for the taxation of energy products and electricity*, Official Journal of the European Union No. L 283, 51, on 31 October 2003.

⁵² European Parliament and Council, Directive 2003/96/EC, *Restructuring the Community framework for the taxation of energy products and electricity*, 2003, OJ L 283/51.

While this flexibility allows countries to adapt their policies to national circumstances, it also raises doubts about the effectiveness of a system that is only partly standardized. Varying tax rates and regulations could skew competition and hinder the

EU's aim to establish environmental protection standards across the board⁵³.

Additionally, the CBAM showcases another aspect of the EU's strategy. With the aim of stopping carbon leakage and encouraging environmental standards, the CBAM imposes tariffs on imports from nations with lower environmental regulations. Yet, the execution of the CBAM has posed logistical obstacles, especially concerning adherence to WTO guidelines and its potential effects on developing nations. The EU needs to make sure that the CBAM does not unfairly harm economies that do not have the means to enforce rules in order to steer clear of accusations of “*green protectionism*”⁵⁴.

In other words, the CBAM is seen as a step that might push EU countries to implement carbon pricing and align with EU climate policies. Nonetheless, taking this stance could upset trade partners and hamper global climate talks based on cooperation. Ensuring that the CBAM functions as a tool for addressing climate issues without coming off as a protectionist tactic that might trigger responses from impacted nations is a significant hurdle.

The EU's environmental fiscal measures, like the plastic tax and CBAM, have triggered discussions on the boundaries of its control from a legal standpoint. Though the EU can make laws on environmental issues with authority, its jurisdiction over taxation is somewhat restricted.

In summary, the alignment of policies is a major hurdle for the EU to tackle. While the PPP plays a role in environmental endeavours, its execution differs greatly among Member States like Sweden, France, and Germany. These variations, influenced by the social landscapes of each nation, pose a threat to the unity of the market and could undermine the effectiveness of the EU's environmental fiscal policies overall.

In summary, the conformity of policies is a great challenge for the EU to address. Although the PPP provides the authority to pursue environmental objectives, its implementation varies vastly among Member States, such as Sweden, France, and

⁵³ World Bank Group, Environmental Taxes: An Overview.

⁵⁴ Pietras J., *Navigating the Carbon Border Adjustment Mechanism: The Dangers of Non-Compliance and Circumvention*, Wilfried Martens Centre for European Studies, 2022.

Germany. Such variations, influenced by social contexts and macroeconomic conditions specific to each nation, threaten the market integrity and risk undermining the overall effectiveness of environmental fiscal policies within the EU. These disparities can also be attributed to differences in economic structures and development levels across Member States.

More economically advanced countries, such as Germany and France, have greater resources to invest in comprehensive long-term environmental policies and advanced recycling systems. Conversely, economically underdeveloped countries may face difficulties in meeting the same goals due to budget constraints and competing priorities⁵⁵. Apart from the aforementioned causes, political priorities, and public sentiment play a major role. In some countries, strong public support for environmental agendas drives ambitious policies, while in others, political confrontation or economic challenges hinder the adoption of stringent environmental regulation⁵⁶.

These discrepancies contribute to the formation of groupings of States with shared interests and challenges. For instance, while countries in Northern Europe such as Sweden and Denmark position themselves as leaders in environmental innovation and stringent policies, countries in Southern and Eastern Europe tend to focus on economic growth and job creation, often adopting more flexible policies⁵⁷.

The EU should strike a balance between harmonization and flexibility in efforts to put effective and fair measures in place. This requires recognizing the different socio-economic situations throughout the Member States and establishing networks for cooperation in the formation of best practices, which would, in turn, enable poor regions to realize their environmental policies. By doing so, the EU will be empowered to strengthen the plastic tax as a relevant tool for the transition towards an ecological circular economy and to meet the ambitious goals of the European Green Deal.

⁵⁵ Selin H., VanDevee S.D., *Broader, Deeper and Greener: European Union Environmental Politics, Policies, and Outcomes*. Annual Review of Environment and Resources, July 2015 pp. 309-335.

⁵⁶ Haverland, M., *The Impact of the European Union on Environmental Policies*, in *The Politics of Europeanization*, Chapter 9, Oxford University Press, June 2003, pp. 203-222.

⁵⁷ Weale A., Pridham G., Cini M., Konstadakopulos D., Porter M., Flynn, B., *National Policies on the Environment: Evolution, Principles, and Style*, in *Environmental Governance in Europe: An Ever Closer Ecological Union?*, Chapter 5, Oxford Academic, October 2002, pp. 150-191; Žuk P., Polgar E. K., Savelin L., Diaz del Hoy, J. L., König, P., *Real convergence in central, eastern and south-eastern Europe*. European Central Bank Economic Bulletin, Issue 3/2018.

The effectiveness of programs such as CBAM and the plastic tax depends not only on their setup but also on whether Member States are willing to follow a unified strategy together politically. If there is no collaboration and alignment among countries in the EU, there is a danger of maintaining a system where different national policies work against broader sustainability aims. It is crucial to establish a synchronized approach to ensure that environmental taxes play a meaningful role in helping the EU achieve its goals of promoting a “*circular economy*” and long-term sustainability.

In this context, countries such as France and Germany are key players in shaping national policies that are in line with the broader goals of the EU; however, the diverse ways these policies are implemented across different Member States highlight the underlying fragmentation within the single market.

2.4. EU regulations are pushing toward the concept of a “circular economy”

The EU has always prided itself on being at the forefront of advocating for the “*circular economy*” – a model that aims to go beyond the linear system of “*take, make, dispose*”. This transformation is vital not only for cutting down on waste and pollution but also for enhancing resource efficiency and economic strength among Member States. However, achieving a “*circular economy*” necessitates a range of measures tailored to various facets of production, consumption, and waste handling.

One of the initiatives in this field is the “*Circular Economy Action Plan*”⁵⁸, which was revised in 2020 as a component of the “*European Green Deal*” agenda. This plan includes targets like making all packaging within the EU reusable or recyclable by 2030 and significantly cutting down waste production⁵⁹. It highlights eco-design principles, where products are crafted considering their lifecycle, starting from raw material

⁵⁸ European Commission, A New Circular Economy Action Plan for a Cleaner and More Competitive Europe, COM(2020) 98 final.

⁵⁹ The “*European Green Deal*” was initiated by the EU in December 2019 with the goal of transforming Europe into a climate-neutral continent by 2050. The plan includes targets such as lowering greenhouse gas emissions by 55 per cent by 2030 and promoting circular economy principles while shifting towards renewable energy sources. Additionally, it aims to safeguard biodiversity and promote sustainable practices in the agriculture and transportation sectors, while emphasizing the importance of modernizing industries and encouraging eco-friendly investments to harmonize economic development with environmental conservation efforts. This strategy primarily focuses on assisting areas and industries heavily impacted by the shift towards sustainability, while prioritizing economic equity.

extraction to disposal, to lessen their environmental footprint⁶⁰. The EU aims to decrease pollution by promoting durable products that can be repaired and recycled effectively, thus significantly contributing to reducing plastic pollution in particular.

The issue of pollution continues to be a focus of EU regulations, as demonstrated by the enactment of the “*Single-Use Plastics Directive*”⁶¹. This directive specifically addresses commonly found plastic items in marine debris, such as straws, cutlery, and plastic cups. It is part of an initiative to decrease waste and encourage the use of environmentally friendly alternatives. The effectiveness of this strategy hinges on its capacity to impact consumer choices and manufacturing practices by promoting the reduction of plastics and the wider use of eco-friendly alternatives.

The EU has not only put in place regulations specific to different sectors but has also established broad guidelines, such as the “*Waste Framework Directive*”⁶². This directive sets out the waste hierarchy principles that give priority to waste prevention and reuse before resorting to disposal methods like incineration or landfilling. Furthermore, the *Waste Framework Directive* incorporates EPR schemes, making producers accountable both financially and operationally for handling the waste generated by their goods. This method encourages manufacturers to create more sustainable products and helps ease the pressure on public waste disposal systems.

Despite having regulations in place for a “*circular economy*” across Member States, there are differences in how effectively these are put into practice due to economic gaps and infrastructure discrepancies among countries, resulting in uneven progress in adopting circular practices.

It is clear that some nations are leading in embracing circular practices, while others are falling short – emphasizing the importance of having fiscal policies alongside regulatory measures to encourage compliance through economic incentives. A unified environmental tax system could be essential for creating fair competition within the EU by encouraging eco-friendly behaviours and discouraging harmful ones.

⁶⁰ European Commission, A New Circular Economy Action Plan for a Cleaner and More Competitive Europe, COM(2020) 98 final.

⁶¹ Parliament and of the Council, *On the reduction of the impact of certain plastic products on the environment*, Directive (EU) 2019/904, June 5, 2019, Official Journal of the European Union L. 155/1, June 12, 2019.

⁶² European Parliament and Council, *Waste Framework Directive (2008/98/EC)*, November 19, 2008, Official Journal of the European Union L. 312/3, November 22, 2008.

Furthermore, the move towards a “*circular economy*” poses challenges that go beyond technical and regulatory elements, as witnessed in ongoing discussions surrounding climate justice and fair taxation.

This shift also results in significant social and economic impacts, particularly regarding the distribution of costs and benefits. For instance, the progress of new technologies and industries associated with the “*circular economy*” might disproportionately benefit more affluent nations and regions, potentially exacerbating existing inequalities, within the EU⁶³. Discussions surrounding climate equity often touch upon the distribution of resources and the lasting effects of pollution, as significant hurdles⁶⁴.

Nevertheless, it is crucial to consider the drawbacks of applying an approach across Member States with varying economic circumstances within the EU. Even though the EU’s regulatory system is well-intentioned, it should take into consideration the differences in capabilities and infrastructure, among its Member States.

More affluent countries might have the means to embrace state-of-the-art technologies and restructure their sectors to align with circular economy goals whereas prosperous nations could face difficulties in coping with the technical obstacles linked to such a transition.

The uneven distribution of the burden may cause increased rifts, within the EU; prosperous countries may enjoy the advantages of the changeover while affluent nations bear a share of the costs or lag in meeting requirements⁶⁵.

In this context, it is essential to highlight the importance of cohesion funds, like the “*European Social Fund*” (ESF) and the “*Just Transition Fund*” in ensuring that every Member State progress toward sustainability without being left behind⁶⁶.

Furthermore effective enforcement mechanisms are crucial to prevent disparities in implementation that could potentially hinder the EUs circular economy objectives. To

⁶³ Vergano L., Directorate-General for Economic and Financial Affairs, *Circular Economy: State of Play and Key Determinants of the EU Secondary Markets for Materials*, Discussion Paper 209, July 2024.

⁶⁴ Mager F., & Chaparro, S., *Delivering Climate Justice Using the Principles of Tax Justice*, June 2023.

⁶⁵ European Parliament, *Cohesion policy and climate change*, AT A GLANCE, Plenary – March II, 2021.

⁶⁶ In 2020 the “*Just Transition Fund*” was launched as part of the “*European Green Deal*” to help regions and industries shift towards an eco-economy during 2021 2027 period. It aims to improve workers’ skills, promote growth and encourage investment in renewable energy for an equitable transition that benefits all communities without leaving anyone behind.

fully realize its vision of an economy, in the EU requires ensuring that every Member State can equally engage in this transition, with the financial and technical support⁶⁷.

The EU needs to ensure that its sustainability regulations are effective and equitable in addressing economic impacts for all individuals and groups. Initiatives like the ESF play a role in guaranteeing that friendly employment opportunities and sustainable enterprises positively impact every community and demographic equally.

Prioritizing inclusivity and economic equity in strategies is essential for ensuring that the transition towards “*a circular economy*” benefits everyone, with a focus, on principles related to climate justice, not solely benefiting the affluent minority⁶⁸.

In the end, despite the EU’s efforts to promote a “*circular economy*” through measures, it is important to maintain ongoing initiatives to ensure their full implementation and address any social and economic disparities that may arise. Integrating a plan with enforcement mechanisms will be key to achieving the EU’s sustainability goals, in the future.

2.5. How fiscal measures support the accomplishment of sustainability objectives

Continuing from the actions mentioned earlier that focused on advancing the concept of “*circular economy*” through different laws and measures, it is crucial to consider how fiscal policies play a key role in aiding these initiatives. Though regulations establish the structure for achieving sustainability goals, fiscal policies offer motivations and deterrents to encourage adherence and push for a shift towards more sustainable behaviours. When it comes to EU measures, like taxes and subsidies, PPP plays a crucial role in supporting the EU’s initiatives towards environmental sustainability alongside regulatory measures.

The core of these initiatives revolves around the PPP, aimed at harmonizing actions with environmental conservation by making sure that those accountable for environmental damage cover the related expenses. This concept has been integrated into

⁶⁷ In this regard, the report titled “*Income-related environmental inequalities associated with air pollution in Europe*”, published by the European Environment Agency on 28 April 2023, delves into the effects of economic disparities during the transition to a more environmentally friendly economy.

⁶⁸ European Commission, European Social Fund Plus (ESF+) 2021-2027: Investing in People, 2021.

policies within the EU, such as the plastic tax initiative, which aims to minimize plastic pollution and encourage recycling efforts, throughout Member States⁶⁹.

The EU aims to encourage changes in behaviour among consumers and producers by using taxation to promote sustainability. It seeks to reduce the use of goods and encourage the shift towards technologies.

One notable instance of using strategies to promote protection is the implementation of CBAM. This approach aims to tackle the problem of “*carbon leakage*” – a situation where businesses move to nations with environmental rules to bypass carbon tax expenses by levying duties on goods imported from countries not complying with the EU’s environmental criteria. CBAM ensures that European industries stay competitive while upholding rigorous environmental norms⁷⁰.

However, the introduction of these measures brings up concerns regarding fairness and the potential adverse effects on developing nations that might find it tough to adhere to the strict environmental rules enforced by the EU⁷¹. To tackle these obstacles the EU needs to get involved in activities and programs that enhance the capacity of developing countries in enhancing their regulations and policies.

Financial strategies extend beyond taxes to include subsidies and rewards that encourage the use of eco-methods as well. The EU has put forth a range of strategies to back industries embracing approaches, such as funding for renewable energy ventures and perks for firms backing “*circular economy*” schemes⁷². These steps play a role in driving innovation and making sure that the shift towards an economic model remains financially feasible for businesses and appealing to investors.

While fiscal policies have shown some effects overall, there are still hurdles to overcome during their execution.

One significant issue revolves around the quality of taxes, which unfairly burden lower-income families. As the prices of necessities like energy and transportation rise due to these taxes, it hits harder on individuals who allocate a percentage of their earnings to

⁶⁹ European Commission, A New Circular Economy Action Plan for a Cleaner and More Competitive Europe, COM(2020) 98 final.

⁷⁰ European Commission, Proposal for a Carbon Border Adjustment Mechanism, COM(2021) 564 final.

⁷¹ Mager F., Chaparro, F., *Delivering Climate Justice Using the Principles of Tax Justice*, June 2023, p. 10.

⁷² European Commission, Green Deal Investment Plan: Investing in a Sustainable Future, COM(2020) 21 final.

these services. Many nations have introduced support measures, such as tax breaks or financial aid for low-income families, with incomes to address this problem and make sure that moving towards sustainability does not worsen disparities⁷³.

An insightful examination of the strategies employed by the EU uncovers both their strengths as well as their constraints. The plastic tax and CBAM demonstrate success in addressing issues; however, their impact can be maximized when coordinated within a comprehensive approach encompassing regulations, technological advancements, and public outreach initiatives. Relying solely on fiscal strategies is inadequate in instigating the shifts essential for attaining enduring sustainability. In the refinement of its strategies, the EU must consider a more holistic approach.

⁷³ Helm, D., *The Carbon Crunch: How We're Getting Climate Change Wrong-and How to Fix It*, Yale University Press, 2012, pp. 85-89.

Chapter II

The legal basis of the Plastic Tax in the EU legislation

3.1. Dealing with rules and regulations on plastic pollution

Plastic waste is a concern for the environment in the EU due to increased production and consumption trends, causing more harm than good to our surroundings. To address this pressing issue promptly and responsibly within the community's ecosystem of businesses and consumers, the EU has put in place rules and fiscal measures geared towards reducing plastic waste's impact on the environment while encouraging eco-friendly behaviours.

The EU has been actively enforcing regulations over time to tackle the issue of pollution effectively.

EU officials took action after realizing the effects of activities, particularly those involving plastics, on the environment. They identified plastic pollution as a problem and implemented a detailed set of laws to tackle the root causes and effects of plastic waste⁷⁴.

Nevertheless, even though these efforts are praiseworthy, there are factors to think about concerning how well they work and how they are put into practice that should be talked about.

The EU's efforts to combat plastic pollution started the "*Packaging and Packaging Waste Directive*" (PPWD), adopted in 1994⁷⁵. This directive provided a framework for managing packaging waste, prioritizing the reduction of its environmental impact, particularly regarding plastic⁷⁶.

⁷⁴ Tesauo G., *Diritto dell'Unione Europea*, 6th ed., Giappichelli, 2020, 189-193.

⁷⁵ European Parliament and Council, *Packaging and Packaging Waste Directive*, 94/62/EC, December 20, 1994, Official Journal of the European Communities No. L. 365/10, December 31, 1994.

⁷⁶ Packaging is key to every product throughout its lifecycle, from manufacturing through delivery. Packaging materials and formats have exploded in the last decade. In the EU total packaging waste increased by 20 per cent between 2009 and 2020. To address this growing issue, the PPWD Directive was introduced to reduce packaging waste and promote the reuse and recycling of packaging materials. The directive sets a minimum standard for what all packaging sold in the EU must achieve, with the ultimate ambition of reducing waste to landfill and supporting a circular economy. The European Commission in November 2022 proposed a revision of the PPWD as part of its wider set agenda, which includes plans for the *European Green Deal* and *New Circular Economy Action Plan*. This revision sets a goal for 2030 that all packaging will be reusable or recyclable in an economically cost-effective manner. The goal is to enhance the fundamental requirements for packaging, ensuring not just its recyclability and reuse but also boosting the use of recycled materials in new packaging. Another key aspect of the revision is to improve the enforcement of these requirements across Member States, tackling issues like over-packaging and excessive waste. On 4 March 2024, a provisional agreement on the new regulation was reached by the European Parliament and the Council. However, this agreement is still pending formal approval from both

Moreover, a key regulatory move was when the EU enacted the “*Marine Strategy Framework Directive*” (MSFD), paving the way for the use of resources and demonstrating a strong dedication to safeguarding marine ecosystems⁷⁷. The decision to implement this directive, in the EU Parliament and the EU Council was mainly influenced by the acknowledgment of waste as an environmental concern and understanding of its detrimental effects on marine ecosystems and ecosystem services⁷⁸.

The MSFD places an emphasis on the significance of attaining “*Good Environmental Status*” (GES) by the year 2020 and directly connects this goal to the decrease of plastic waste in Europe’s seas⁷⁹. The directive requires monitoring and reporting on the levels of marine litter and urging Member States to take targeted measures to reduce pollution and support the sustainable use of marine resources.

The MSFD is complemented by other legislative frameworks, such as the *Waste Framework Directive*⁸⁰, which outlines a preferred order for managing waste by emphasizing prevention and recycling before disposal methods⁸¹. This directive lays the groundwork for programs such as EPR, which makes producers responsible for their products’ entire life cycle, including post-consumer waste management.

EPR is a policy tool that plays a key role in improving product design sustainability and waste management practices. Encouraging manufacturers to be

bodies. Once implemented, the updated regulation will mark a significant advancement in the EU’s efforts to cut down on packaging waste and promote sustainability in product packaging. See, in this sense, European Parliament, *Revision of the Packaging and Packaging Waste Directive*, Briefing, EU Legislation in Progress, April 4, 2024.

⁷⁷ European Parliament and Council, *establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)*, 2008/56/EC, June 17, 2008, Official Journal of the European Union L. 165/19, June 25, 2008.

⁷⁸ Frantzi S., Brouwer R., Watkins E., Van Beukering P., Conceição Cunha M., Dijkstra H., Duijndam S., Hela Jaziri, Okoli I. K., Pantzar M., Rada Cotera I., Rehdanz K., Seidel K., Triantaphyllidis G., *Adoption and diffusion of marine litter clean-up technologies across European seas: Legal, institutional and financial drivers and barriers*, in *Marine Pollution Bulletin*, September 2021, Vol. 170, 112611. In this regard, it should be noted that, as early as the last years of the last century and the early 2000s, the majority of marine litter, accounting for approximately 75 per cent, was composed of persistent plastics. This further reinforces the evidence of the significant impact that plastic pollution has always had on marine ecosystems. See, in this sense, Barnes, D. K. A., Galgani F., Thompson R. C., and Barlaz M., *Accumulation and fragmentation of plastic debris in global environments*, in *Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences*, July 2009, Vol. 364, Issue 1526, pp. 1985-1998.

⁷⁹ Galgani F., Hanke G., Werner S., and De Vrees L., *Marine litter within the European Marine Strategy Framework Directive*, in *ICES Journal of Marine Science*, Volume 70, September 2013, Issue 6, pp. 1055-1064.

⁸⁰ European Parliament and Council, *Waste Framework Directive (2008/98/EC)*, November 19, 2008, Official Journal of the European Union L. 312/3, November 22, 2008.

⁸¹ *Ibid.*

accountable for managing their products at the end of their life cycle is an aspect of EPR initiatives that aim to promote eco-design and curb plastic pollution from the get-go effectively.

By requiring producers to bear the expenses linked to recycling and disposal, EPR policies establish a connection between economic incentives and environmental targets. This approach sets up a system where businesses are motivated to create products that are simpler to recycle and have environmental impacts throughout their lifespan⁸².

In 2015, the EU Commission adopted the first *Circular Economy Action Plan*, which is a comprehensive and ambitious strategy aimed at transitioning towards a more sustainable and resource-efficient economy. With this initiative, the EU Commission, being aware that “*increasing plastic recycling is essential for the transition to a circular economy*”, developed a “*strategy addressing the challenges posed by plastics throughout the value chain and taking into account their entire life-cycle*”⁸³.

In other words, the plan recognizes the need to shift away from the *linear model* of production and consumption, which involves the extraction of raw materials, manufacturing of goods, and disposal of waste. Instead, it promotes a *circular model* that aims to minimize waste generation and optimize resource utilization.

It represents a comprehensive plan to transform Europe’s economy into a more sustainable model. One of the main objectives was to address plastic waste and its environmental impact, especially in marine environments.

To this end, the considered *Circular Economy Action Plan*⁸⁴ is built upon four key objectives.

Firstly, it emphasizes the promotion of sustainable products, acknowledging the importance of encouraging the production and consumption of environmentally friendly goods. This objective entails initiatives focused on eco-design, which involves considering the environmental impact of products throughout their entire lifecycle, from

⁸² Vermeulen W., Campbell-Johnston K., Thapa K., *Extended Producer Responsibility and Circular Economy: Three Design Flaws*, *Ökologisches Wirtschaften*, February 2022, 37(1), pp. 21-23.

⁸³ European Commission, “*Closing the loop - An EU action plan for the Circular Economy*,” COM(2015) 614 final, December 2, 2015, pp. 13 and ss.

⁸⁴ European Commission, *A New Circular Economy Action Plan for a Cleaner and More Competitive Europe*, COM(2020) 98 final.

sourcing raw materials to their eventual disposal. The plan also supports the repair, refurbishment, and reuse of products to extend their lifespan and reduce waste.

Secondly, the plan aims to enhance resource efficiency across various economic sectors, such as manufacturing, construction, and agriculture. This objective is achieved through the promotion of renewable energy sources, the implementation of eco-efficiency measures, and the utilization of technological innovations to optimize resource utilization.

The third objective of the “*Circular Economy Action Plan*” is to close the loop on waste. It targets the reduction of waste generation and the promotion of material recovery and recycling. To achieve this, the plan includes initiatives to improve waste management systems, encourage separate collection and sorting of waste, and increase recycling rates for various materials, including plastics, metals, and electronic waste.

Lastly, the plan acknowledges the economic opportunities associated with the “*circular economy*” and aims to create a competitive and sustainable market. It recognizes the importance of a favourable business environment for the successful implementation of sustainable products and services. Thus, the plan includes measures to promote sustainable public procurement, support eco-innovation, and provide financing and assistance for “*circular economy*” initiatives.

The “*Circular Economy Action Plan*” lays out a comprehensive set of actions and targets to be implemented by EU Member States. It emphasizes collaboration between various stakeholders, including businesses, policymakers, and civil society, to drive the transition toward a “*circular economy*”. The ultimate goal of the plan is to reshape the EU’s economy by fostering environmental sustainability, maximizing resource efficiency, and promoting practices of sustainable consumption and production to address environmental challenges and stimulate economic growth.

Building on the “*Circular Economy Package*”, on January 16, 2018 the European Commission adopted the *EU Strategy for Plastics in a Circular Economy*⁸⁵. This strategy highlighted the need to reduce plastic waste, improve recycling, and promote sustainable alternatives. It set a target to make all plastic packaging recyclable by 2030 and

⁸⁵ European Commission, *A European Strategy for Plastics in a Circular Economy*, January 16, 2018, {SWD(2018) 16 final. This strategy is part of a broader initiative to advance a circular economy and stems from the 2015 *Circular Economy Action Plan*, which identified plastics as a key priority.

emphasized the need to reduce single-use plastics. The strategy also addressed the issue of marine plastic pollution directly, acknowledging the MSFD's role in tackling marine litter. This set the stage for introducing financial incentives like the plastic tax.

Subsequently, the “*Single-Use Plastics Directive*”⁸⁶ (SUP Directive), was proposed by the European Commission in May 2018 as part of the EU's efforts to combat plastic pollution. It was formally adopted in 2019 and entered into force on July 3, 2019⁸⁷.

This directive aims to address the issue of single-use plastic products that have a significant impact on the environment, particularly on marine ecosystems. It targets certain items that are frequently found in marine litter, and which are known to be difficult to recycle or have readily available alternatives, such as plastic straws (except those for medical use), cutlery (*i.e.* forks, knives, spoons, chopsticks), plates, beverage stirrers, balloon stick and polystyrene food containers, beverages containers and cups. Although not directly linked to the plastic tax, the *Single-Use Plastics Directive* strengthened the EU's commitment to curbing plastic pollution, paving the way for financial measures like the plastic levy.

The objectives of the *Single-Use Plastics Directive* are multifaceted. First and foremost, it aims to prevent and reduce the impact of certain single-use plastic products on the marine environment. By limiting their use, the directive seeks to protect marine organisms and preserve the health of ecosystems. Additionally, the directive aims to promote the transition from disposable plastic products to more sustainable alternatives, such as reusable items or materials that are easier to recycle.

Building upon these earlier interventions, the EU introduced the plastic tax as an additional measure to tackle plastic pollution. The proposal for the plastic tax framework

⁸⁶ European Parliament and Council of the European Union, Directive (EU) 2019/904, *On the reduction of the impact of certain plastic products on the environment*, Official Journal of the European Union L. 155/1, June 16, 2019.

⁸⁷ The SUP Directive is continually evolving, with each Member State adopting these regulations in slightly different manners, yet all are aligned with the common objectives of minimizing plastic waste and promoting more sustainable consumption habits. The new requirements under the SUP Directive, which include the mandatory use of tethered caps on beverage bottles, will take effect on 3 July 2024. These tethered caps are designed to stay attached to bottles during their use, aiming to cut down on plastic waste and prevent caps from becoming litter, a major environmental concern. In addition, new obligations introduced in mid-2024 will require businesses to provide consumers with products in reusable or alternative packaging materials, such as paper or wood. This initiative is part of a broader effort to foster a circular economy and decrease the consumption of single-use plastics throughout the EU. These actions build on previous implementations of the SUP Directive, including the bans on specific single-use plastic items that were enforced in 2021.

was put forward in May 2018 and was formally adopted in July 2021. The EU plastic tax was formally introduced as part of the *Next Generation EU* (NGEU) recovery package, which was adopted in response to the economic crisis triggered by the COVID-19 pandemic⁸⁸.

On July 21, 2020, the European Council agreed on a plastic levy (often referred to as a plastic tax), officially called a “*contribution on non-recycled plastic packaging waste*”. This levy was designed both to reduce plastic waste and to provide a new source of revenue for the EU budget, with the specific goal of financing the recovery and addressing environmental issues.

The tax came into effect on January 1, 2021, with Member States required to contribute €0.80 per kilogram of non-recycled plastic packaging waste. Although this levy is paid by governments, each Member State can decide how to collect the necessary funds, whether through national taxes or other mechanisms.

The plastic tax was legally formalized through the *Council Decision (EU, Euratom) 2020/2053*, adopted on December 14, 2020, which established the new system of Own Resources for the EU⁸⁹. This decision introduced the plastic levy as a new form of EU revenue, alongside other measures such as carbon border adjustment mechanisms. The decision mandated Member States to contribute based on the amount of non-recycled plastic packaging waste they generate, reinforcing the EU’s push toward a “*circular economy*” and a more sustainable waste management system.

Each Member State has the power to determine how to apply the levy, allowing them to choose whether to pass the cost onto consumers or industries through national plastic taxes or other approaches. However, it is important to note that the plastic tax acts as a contribution from governments to the EU budget, rather than being a direct tax on businesses or individuals⁹⁰. This flexibility has resulted in diverse implementations among Member States, with some countries establishing their national plastic taxes to fulfil EU requirements.⁹¹

⁸⁸ European Council, Conclusions of the Special European Council of 17-21 July 2020.

⁸⁹ Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom, Official Journal of the European Union L. 424/1, December 15, 2020.

⁹⁰ Ibid.

⁹¹ Żurawska W., De Tord I. B., *Plastic Taxation in Europe: Update 2024*, May 8, 2024, wts global.

The strategy of the EU in addressing plastic pollution has evolved significantly over time, with the introduction of the plastic tax being one of the most recent and impactful measures.

This tax has already resulted in higher recycling rates and a reduction in non-recycled plastic waste. However, its success is largely dependent on how well it is integrated with other critical policies, such as the *Circular Economy Action Plan*, which supports sustainable production and consumption. Furthermore, the ongoing commitment of Member States to invest in innovative technologies and sustainable practices is crucial for long-term effectiveness.

As the legislative landscape continues to change, with measures like the SUP Directive, the EU is well-positioned to enhance its leadership in combating plastic pollution and promoting a more circular and sustainable economic model.

3.2. Hypothesis on Exclusive Competence for EU on Environmental Taxes

How the EU has approached environmental competencies has changed remarkably over the years, with the gradual realization that environmental issues transcend national borders and require coordinated responses. For example, economic interests motivated the early design of common EU policies, in particular the need to harmonize standards as a means of allowing the common market to function smoothly. Differences in national environmental regulations were seen as barriers to trade and competition within the Community⁹².

However, the *Single European Act* in 1986 was a watershed event because it formally incorporated environmental protection among the objectives of the EU. Articles 130R, 130S, and 130T affirm principles that remain fundamental today: that is, preventive action, source-based damage correction, the PPP, and integration enforcing consideration of environmental concerns in all EU policy areas⁹³.

⁹² On the origins and evolution of the EU's competences in environmental matters, refer to Jazzetti A., *Politiche comunitarie a tutela dell'ambiente*, in *Rivista Giuridica dell'Ambiente*, 1995, p. 36 and ss.; Porchia O., *Tutela dell'ambiente e competenze dell'Unione europea*, in *Rivista Italiano di Diritto pubblico Comunitario*, 2006, p. 17 and ss.; Alfano R., *Tributi ambientali. Profili interni ed europei*, Giappichelli, Torino, 2012, pp. 7 and ss.

⁹³ Single European Act (SEA), signed in Luxembourg (Luxembourg) on 17 February 1986 and in The Hague (Netherlands) on 28 February 1986 and entered into force on 1 July 1987; it was published in the Official Journal of the European Communities L. 169/1, June 29, 1987.

This further integration of environmental objectives continued with the *Maastricht Treaty* of 1992, which provided a strong framework for regarding environmental protection as an explicit EU political goal while explicating the need for supranational measures to solve transboundary environmental issues. Articles 2 and 3(k) of the *Treaty on European Community* (TEC) thus serve to establish environmental protection as an integral part of the European integration project and an essential element of EU objectives⁹⁴.

This increasing focus on environmental issues was given further legitimacy by the *Amsterdam Treaty* of 1997, whereby sustainable development was introduced as a central objective of the EU, advocating a model explicitly reconciling economic growth with environmental protection⁹⁵. As asserted in Article 2 of the TEU⁹⁶, sustainable development itself emerged as a prime goal for the EU, linking economic and environmental purposes, thereby giving a firm foundation to project economic growth that does not endanger environmental integrity.

With the application of the *Lisbon Treaty* of 2009, environmental policy became more firmly embedded in the framework of the EU. Enhancing climate change as a priority for the auspices of the EU is further in line with this treaty, which affirms the need for high standards of environmental protection in the EU, noting that many environmental issues require solutions that cross borders and therefore require a unified approach⁹⁷. The commitment was established and concisely articulated in Article 3(3) of the TEU, providing that the EU should promote sustainable development in a balanced manner between economic growth and environmental protection, and hence environmental quality has been termed a cornerstone in the EU's agenda in the long run.

The principle of integration in Article 11 of the TFEU insists that environmental concerns must be taken into account in all policies addressed by the EU. Accordingly, this shows that sustainable development is an integrated process, and this means that

⁹⁴ Maastricht Treaty or Treaty on European Union (TEU), signed in Maastricht on 7 February 1992 and entered into force on 1 November 1993.

⁹⁵ Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and certain related acts, signed in Amsterdam (Netherlands) on 2 October 1997 and entered into force on 1 May 1999; it was published in the Official Journal of the European Communities C. 340/1, November 10, 1997.

⁹⁶ Article corresponding to the current Article 3 TEU.

⁹⁷ Lisbon Treaty, signed in Lisbon (Portugal) on 13 December 2007, and entered into force on 1 December 2009; it was published in Official Journal of the European Union C. 306/1, December 17, 2007.

environmental objectives should not be taken out of the context of other legislative and regulatory regimes in the EU.

Because environmental problems mostly have a transboundary character, an additional degree of coordination throughout the EU is required because otherwise, the weak points of national policies will undermine the ability to overcome common goals.

To realize these objectives, the legislative framework in the EU categorized competencies as exclusive, shared, and supported under the TFEU.

The EU has the sole right to adopt legislation in areas of exclusive competence, such as the customs union and competition policy, whereas its implementation remains the prerogative of the Member States.

However, environmental policy and taxation fall within the area of shared competencies, whereby it is permitted for both the EU and the Member States to legislate. Thus, in a field of shared competence, national action may only occur if the EU has not acted fully. This model, therefore, allows the EU to set the lowest environmental standards while giving Member States the latitude to impose stricter measures should they wish. This may lead to quite disparate implementations, illustrated by the example of the plastic tax: France has already accepted laws in this respect, and Italy has postponed its enactment, so far to 2026.

One aspect of shared competence is honoured under the principle of subsidiarity, expressed in Article 5 of the TEU. It was established in this context that action should only be taken at the Union level under conditions where the respective objectives of the EU cannot be adequately achieved by the Member States. An addition to that would be to treat it differently from any other regulation if the scale or effect of the action is most pronounced at the Union level.

In environmental policy, the principle of subsidiarity justifies EU intervention, especially in cases of transboundary pollution or any other environmental problems that exceed national borders. This principle underlines the inherent necessity of collective action on environmental issues, which usually demand coordinated actions to obviate regulatory fragmentation and achieve a coherent standard across the Union.

A case in point of an initiative that could reduce and curb cross-border pollution and create an equal playing field among Member States would be environmental taxes. However, this shared competence entails that while Member States have the competency

to legislate in environmental areas, they can only do so in the areas where the EU has not fully exercised its power. Yet, this flexibility can lead to diverging national constructions. Take for instance environmental taxes like the plastic tax, which is still half-implemented in different ways across Member States.

The CJEU has played a crucial role in consolidating the EU's environmental mandate, for example, by often seeing as a single market an environmental aim. In some cases – e.g. *Lesoochranárske zoskupenie VLK v. Ministerstvo životného prostredia Slovenskej republiky*⁹⁸ and *Raffinerie Mediterranee SpA (ERG), Polimeri Europa SpA, Syndial SpA v. Ministero dello Sviluppo Economico e a.*⁹⁹ – the CJEU ruled that while Member States are vested with discretion to implement environmental measures, such measures must be established with EU goals in mind and must not cause disruption to the internal market altogether. From these rulings, it follows that harmonized environmental policies, including possible taxation, might improve EU coordination in achieving climate goals.

⁹⁸ CJEU, Case C-240/09, *Lesoochranárske zoskupenie VLK v. Ministerstvo životného prostredia Slovenskej republiky*, Judgment of 8 March 2011, ECLI:EU:C:2011:125. In this ruling, CJEU addressed the issue of access to justice in environmental matters for environmental protection organizations. The case came to pass when the Slovakian organization *Lesoochranárske zoskupenie VLK* contested a national administrative decision that the organization claimed violated EU environmental law. The European Court referred to Article 9(3) of the Aarhus Convention, which provides for the right to access justice to challenge acts or omissions constituting a violation of environmental law. The European Judges held that Article 9(3) does not confer on individuals a right of direct action within EU law; they underscored that the national courts should, as far as possible, interpret national procedural rules in light of the objectives of the Aarhus Convention to guarantee adequate protection of environmental rights provided for in EU law. The CJEU stated that “[i]t is, however, for the referring court to interpret, to the fullest extent possible, the procedural rules relating to the conditions to be met in order to bring administrative or judicial proceedings in accordance with the objectives of Article 9(3) of that convention and the objective of effective judicial protection of the rights conferred by European Union law” (para. 55).

⁹⁹ CJEU, Joined cases C-379/08 C-380/08 *Raffinerie Mediterranee SpA (ERG), Polimeri Europa SpA, Syndial SpA v. Ministero dello Sviluppo Economico e a.*, Judgment of 9 March 2010, ECLI:EU:C:2010:127. In these joint cases, the CJEU considered the interpretation of Directive 2004/35 on environmental liability, concerning the application of the PPP and the authority of the national authorities in enforcing remedial actions. The Court held that national authorities may unilaterally modify previously approved environmental remediation measures to further environmental objectives, as long as they afford operators the right to be heard and unless immediate action is warranted by an urgent environmental situation. The European Judges stated that “[a]rticles 7 and 11(4) of Directive 2004/35, in conjunction with Annex II to the directive, must be interpreted as permitting the competent authority to alter substantially measures for remedying environmental damage (...). However, in order to adopt such a decision, that authority: - is required to give the operators on whom such measures are imposed the opportunity to be heard, except where the urgency of the environmental situation requires immediate action on the part of the competent authority” (para. 67).

The EU's ambitious initiatives within a framework shaped by the rationale for achieving functions for the *European Green Deal*¹⁰⁰ took the lead in utilizing instruments of taxing as part of an incentive structure to achieve environmental ends, signalling a growing recognition of the role that public finance can play in supporting environmental policy. The overarching aim of the *European Green Deal*, aimed at achieving a climate-neutral sector by 2050, calls for the alignment of economic policies with environmental sustainability to encourage Member States to embrace emission reduction strategies with fruitful goals.

The plastic tax, a part of the NGEU scheme, is a good example of linking fiscal policy with environmental objectives, even if it is under the discretion of the Member States. In the NGEU recovery package, the EU stresses the idea of greater coordination when financing sustainable development, showing how coalescing fiscal policies may catalyze the ecological transition across the Union.

This coordinated approach exhibits flexibility but exposes challenges related to the framework of shared competence, especially in the case of environmental taxation. One of those challenges has to do with “*free-riding*”: a practice by which some Member States benefit from the environmental actions of others but do not incur the same proportion of costs. The resulting imbalance thus affects not only fairness but also the attainment of collective goals. A common environmental tax, such as a common plastic tax, could mitigate “*free-riding*” by making sure that contributions are fair and competitive disparities between the more heavily regulated and the less regulated Member States do not occur¹⁰¹.

The environmental federalism considered in the frameworks of the United States and European Union shows distinct features.

In the U.S., California has independently taken the steps to enact more stringent automobile emission standards that pose a model that can inspire other states to pursue standards that are very different from federal policies. This approach allows regulatory

¹⁰⁰ European Commission, Communication from the Commission to the European Parliament, the European Council, The Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, COM(2019) 640 final, December 11, 2019.

¹⁰¹ Chistyakova M., Mahenc P., *Free-Riding on Environmental Taxation*, LAMETA, University of Montpellier, August 24, 2015.

variety at the state level but could create conflict by producing disjointed federal standards.

The EU, on the other hand, has sought a much more centralized route in areas like automobile emissions and packaging waste, whereby minimum standards, through EU directives, set forth the values for single market performance. Germany was the first member state to set strict standards for packaging waste, which thereafter found their way into the EU's policies, thus promoting recycling goals along with unity in the internal market. This framework illustrates the balance between flexibility and harmonization by the other states to put innovative environmental policies within the national States without losing sight of the larger objectives of the EU¹⁰².

While some basic lines and rules are imposed from the center to avoid the fragmentation of the respective goods and services markets, this is balanced by allowing Member States considerable discretion in inflicting it, with a robust thrust toward EU policies for environmental protection found in both shared and supporting competencies in environmental policy.

Article 192 of the TFEU provides the legal basis on which EU environmental action is grounded, yet it leaves mainly substance in the ambit of Member States, thereby resulting in a variety of approaches.

The concept of subsidiarity, stated herein in Article 5 of the TEU, is one of the significant factors in determining when the EU should take a larger role within its shared competencies.

Environmental taxation captures the attention as an explicit subject of cross-border pollution; so much so that a case can even be made for a common EU approach that might allow one to hold out for EU competencies to expand toward conferring exclusive powers in this area. A regimented scheme might rationalize environmental taxes across Member States, ensuring uniformity and preventing any regulatory race that might deter EU environmental goals.

Given that the EU cannot independently introduce environmental taxes, Article 113 of the TFEU provides a grounding from which tax laws about indirect taxation by the Member States can be harmonized to assist in the establishment and effective

¹⁰² Vogel D., Toffel M., Post D., Uludere Aragon Z. N., *Environmental Federalism in the European Union and the United States*, Working Paper, February 21, 2010, Harvard Business School.

functioning of the internal market. Although this provision paves the way for a certain amount of tax coordination, it fails to include direct mention of pollution-based taxes.

Article 191 of the TFEU further sets out EU environmental objectives to protect and improve the environment, protect human health, use natural resources wisely, and promote international cooperation. The realization of these objectives indicates the recognition of EU Member States to be serious about environmental protection, though fiscal issues have remained a sensitive entity among Member States' jurisdictions.

The emergence of a tax on plastic as part of the NGEU recovery package is a model showing the possibility of fiscal policy reacting to environmental goals in support of the EU's wide approach.

A country's discretion could also apply to the implementation of the €0.80 levy on non-recycled plastic waste according to national contexts; however, a harmonized approach is likely to ensure fairness in contributions toward EU environmental objectives. This could neutralize any competitive advantage for operators of businesses from less regulated sectors against operators working in more regulated environments with stricter environmental standards.

While lessons learned from federal models suggest "*dual sovereignty*" may, as in the case of the federal United States, provide a practicable solution for the EU whereby Union-level harmonized environmental taxes coexist with national tax sovereignty, this model balances EU-wide standards with the autonomy of Member States¹⁰³. This suggests that the meaningful pursuit of environmental objectives can occur along with national control over tax policies.

Therefore, it is viewed that if such taxes were to be passed onto the EU roadmap, they could bring about real control of the distinct fiscal policies of all Member States. It could enforce common quick environmental standards, and it could put a shield against "*free-riding*", one benefit from an EU-led environmental initiative in which others disproportionately endure the expense.

Nevertheless, the road to exclusive competence in environmental taxation is fraught with difficulties; fiscal sovereignty forms the crux of national governance, and

¹⁰³ Bizioli G., *Building the EU Tax Sovereignty: Lessons from Federalism*, World Tax Journal, 2022, V. 14, No. 3, July 28, 2022.

individual Member States are likely to fight against reducing their power in direct taxation.

Learning from federal models, like the United States, may provide guidelines for the EU to achieve dual sovereignty, where the harmonization of environmental taxes by the EU does not intrude (to any appreciable degree) on national tax sovereignty, supporting both environmental and economic objectives.

3.3. The Plastic Tax as an Own Resource of the EU: an analysis of its taxonomy and implications

3.3.1 The EU's own resources system: a comparative analysis of "traditional" and "new" revenue sources

Over the years, the EU has made a case for its funding through a structured system of its own resources¹⁰⁴, which refers to and draws financing from its budget. This path toward auto-financing was exposed when the enlargement of the EU occurred. Initially, EU finances will depend on state contributions, therefore later its funding was made entirely self-regulatory. The pathway to auto-financing was, however, defined readership which concerned EU policy. This system is regulated by the *Council Decision on the System of Own Resources of the European Union*, lastly modified by *Council Decision (EU, Euratom) 2020/2053*.

Whereas Articles 310 and 311 of the TFEU establish the legal basis of the EU's budgetary structure, they serve different purposes.

Article 310 sets forth the principles of accountability, transparency, and budgetary balance, prescribing that the EU should not operate with debts. This principle of equilibrium reinforces financial discipline, contrary to what national governments often do with budget deficits, ensuring that EU expenditures do not exceed revenues. This means that the budget must be proficiently balanced, as outlined so that the EU does not run into debt. Such a principle of equilibrium only reinforces financial discipline within

¹⁰⁴ For a definition of "own resource", Strasser provides a clear explanation, according to which "a tax borne directly by Community taxpayers which is included under revenue in the general budget of European Communities and does not appear in the budgets of the Member States". Refer to: Strasser D., *The Finances of Europe: The Budgetary and Financial Law of the European Communities*, Office of Official Publications of the European Communities, Luxembourg, 1992, page 91, mentioned in Cipriani G., *Financing the EU Budget: Moving Forward or Backwards?*, Centre for European Policy Studies, Brussels, 2014, p. 7.

the EU, by ensuring that expenditures shall not surpass what revenues the EU can leverage and that the EU does not plunge into deficits the way national governments do¹⁰⁵.

The following Article 311 of TFUE gives power to the EU to establish and decide on its own resources. This allows the EU by law to “*provide itself with the means necessary to attain its objectives and carry through its policies*”¹⁰⁶. Under the provisions of this article, the Council, acting by a special legislative procedure, can adopt decisions whereby they define and adjust the sources of EU revenue. This special legislative procedure includes consultation with the European Parliament and is ratified by all Member States, thereby ensuring that the European financial architecture incorporates both a democratic as well as an intergovernmental dimension. This flexibility allows the EU to modify itself according to changing needs, which is very crucial for its ability to achieve long-term aims, including sustainability and digitization, and put itself in a position to effectively counter modern challenges.

The concept of own resources has a long history dating back to the founding treaties.

Under the *Treaty Establishing the European Coal and Steel Community*¹⁰⁷, the High Authority was financed through a direct imposition on coal and steel production, marking what could be considered the first instance of European taxation.

Through the Treaty of Rome signed in 1957, a transitional period was established in which contributions from the States financed the European Economic Community (EEC). Article 201 of the Treaty of Rome foresaw a future system of its own resources whereby the Common Customs Tariff would play a major role, which it did: this was a significant step towards fiscal autonomy for the Community. In the first phase from 1958 to 1974, the financing of the EEC relied more on financial contributions agreed between States rather than objective economic data, such as Gross Domestic Products.

In 1970 the EU Council greatly modified its building by passing a decision to substitute national contributions with its own resources, covering customs duties,

¹⁰⁵ Traversa E., *Chapter 11: The Reform of EU Own Resources from a Tax Nexus Perspective: Which Fiscal Federalism for the European Union*, in *Tax Nexus and Jurisdiction in International and EU Law*, Books IBFD, 2022.

¹⁰⁶ Article 311, para. 1, TFUE.

¹⁰⁷ The *Treaty Establishing the European Coal and Steel Community* was signed in Paris on 18 April 1951 and came into force on 23 July 1952.

and agricultural levies, and later providing for a value-added tax-based contribution (VAT-based contribution)¹⁰⁸. This reform was an important step toward the establishment of a financial system that would allow the Union to have a reasonable degree of fiscal autonomy. Taxation in the form of customs duties embodies the EU's regulation of external borders and trade policy, imposed on goods outside of the EU as a source of revenue and protecting the EU market. It reflects the ability of the EU to earn revenues straightforwardly from its policies, showcasing financial autonomy through trade regulation.

The 1980s introduced the Gross National Income-based contribution (GNI-based contribution), whereby the contributions were based instead on the economic weight of every Member State to allow a more balanced and fair structure. This contribution also played a crucial role in stabilizing the EU budget, particularly during occasions when customs revenue became unpredictable due to trade liberalization.

The ongoing structure has been amended by the Treaty of Lisbon (rather than the Treaty Establishing the European Community (TEC), as was prevailing in the earlier Articles 269), thus 311 TFEU was left with no consequent effect on the *ratio* of proportionality to be awarded to the financial contribution of the EU.

To support this structure, the Council adopted, on 26th May 2014, Decision 2014/335/EU, Euratom that sets the legal framework for the revenue side of the EU. This decision of 2014 started speaking of traditional sources of financing with customs duties, VAT-based contributions, and GNI-based contributions.

Customs duties are traditional EU budgetary resources erected across the EU external borders as the concrete exercise of the integrated market; levied on goods departing from outside of the EU, such duties are revenue sources charged to goods coming from outside the EU for subsequent transfer into the EU budget after deduction under the principles allowing covering the costs of collection. These contributions, while complex, do complement customs duties by linking EU revenue to consumption levels within Member States¹⁰⁹. This connects customs duties to foreign trade and reflects the

¹⁰⁸ European Council, Decision of 21 April 1970 *on the Replacement of Financial Contributions from Member States by the Communities' own Resources*, Official Journal of the European Communities No. L. 94/19, April 28, 1970.

¹⁰⁹ Traversa E., *Chapter 11: The Reform of EU Own Resources from a Tax Nexus Perspective: Which Fiscal Federalism for the European Union*, in *Tax Nexus and Jurisdiction in International and EU Law*, Books IBFD, 2022.

EU's fiscal integration, allowing it to be a stable, yet fluctuating, another source of revenue that corresponds directly to patterns of consumption and volumes of international trade.

Meanwhile, the GNI is a dual-purpose contribution: it allows adjusting the contributions by all Member States based on economic capacity and provides a stabilizing influence, especially the most important within the customs revenue changes that account to the dynamics of world trade. This approach has really helped guarantee the predictability and resilience of the EU's finances, particularly since early 2000¹¹⁰.

The release of the NGEU fund with post-Covid response signified a watershed moment in EU fiscal policy; embedded within Council Regulation (EU) 2020/2094, NGEU is a €750 billion recovery fund financed by EU borrowing in financial markets and represents the first significant time at which the EU relied on debt financing to help aid recovery efforts. Under Council Decision (EU, Euratom) 2020/2053, new types of own resources were proposed to cover this debt in accordance with environmental and sustainability goals.

One of the key innovations of the 2020 Decision is the introduction of the contribution to non-recycled plastic packaging waste-also known as the “plastic tax”. This contribution will provide an incentive for Member States to reduce plastic waste through a charge of €0.80 per kilogram of non-recycled plastic and thus restore the primacy of environmental objectives promoted here by the European Green Deal.

To this extent, the plastic tax functions as a hybrid tax, both an instrument for revenue generation and sustainable waste management, in the additional sense of supporting the NGEU debt service. In addition to the plastic tax, the EU is looking at other new ways to modernize its tax structure. Other proposed mechanisms may include a carbon border adjustment¹¹¹ and a digital services tax¹¹².

These novel revenue sources illustrate the EU's emerging trend in financing toward a fiscal construction that respects the sovereignty of the Member States, at the

¹¹⁰ Garbarino G., *Tax Convergence and Next Generation European Union*, in *European Taxation*, August 2022.

¹¹¹ The carbon border adjustment would impose a levy on imports from countries with lower environmental standards-encouraging greener behaviour globally.

¹¹² Its purpose is to ensure that digital enterprises contribute fairly and equitably to the EU economy by plugging the loopholes remaining with traditional tax systems in a digital world.

same time forming a coherent and harmonized fiscal policy for common goals. Through the enhancement of its funding programs with sustainability and digitalization, the EU confirms its ambition for a robust and future-proof budgetary framework that focuses on 21st-century challenges.

By integrating sustainability and digitalization into its revenue-raising instruments, the EU is further evidence of its commitment to a sound, forward-looking budgetary framework. To round up, this transformation – the displacement from the 2014 Decision into the NGEU – is exemplary of the radical change in EU fiscal policy.

The revenue sources, along the lines of the plastic tax targeting sustainability and independence from national budgets, have greatly prepared the EU to achieve both national goals in the short and long term. That is the evolution of the EU resource system that signifies an exceptional combination of flexibility and joint accountability that supports its ability to drive the ambitious policy framework of the Union.

3.3.2 Customs Duties and Excise Taxes: are they a suitable model for the Plastic Tax?

The shift that the EU undertook towards self-financing was already discussed in the previous section. In this sense, the plastic tax raises the possibility of a potential “new” source of revenue function.

Over the years, the EU has traditionally supported its budget with customs duties and excise taxes to meet budgetary requirements while still upholding the underlying public policy objectives. For example, customs duties have been adopted for regulating trade across the external borders of the Union and ensuring that imports comply with certain standards to strengthen the internal market. Excise taxes serve the dual purpose of addressing public health concerns and solving environmental costs, discouraging the consumption of harmful products in the EU.

As such, the plastic tax is considered a blend of the two approaches as it generates revenue while catering to environmental objectives, in line with the principles of the European Green Deal.

One of the distinguishing characteristics of the EU is its range of fiscal tools, each designed to address particular economic, environmental, or social issues. Customs duties and excise taxes have long served as cornerstones of tax policy empowering the Union’s fiscal independence while advancing public health and environmental protection.

Traditionally, customs duties are levied on imports as a means to regulate trade flows while supporting the EU's internal market against imports from outside the Union, protecting local industries, and supporting the economic independence of the Union. Excise taxes are designed to discourage the consumption of products judged harmful, such as alcohol, tobacco, and fossil fuels, with a focus on public health and environmental objectives.

The plastic tax is, in many ways, a natural evolution of these instruments. Like customs duties, it targets specific goods – in this case, non-recycled plastic packaging – and thus affects the trade balance as well as incentivizing alternatives that support sustainability. However, the customs duties, which are applicable only to goods imported into the EU Member States, the plastic tax operates as an internal environmental levy.

This, on the one hand, complies with Article 30 of the TFEU, which prohibits customs duties and charges of equivalent effect among the Member States, ensuring that the plastic tax does not disrupt the movement of goods within the internal market. EU legislation imposes limits on the imposition of customs duties or equivalent charges solely for environmental purposes, reinforcing the principle that environmental taxes must strike a careful balance to avoid functioning as improper trade and barriers or protectionist measures. The central intent of the EU fiscal measures attempting to promote environmental objectives is in accordance with more recent trends in environmental policy, where fiscal tools are increasingly an effective lever for encouraging sustainable economic functioning while reducing dependency on harmful resources¹¹³. In this respect, the plastic tax provides a source of revenue allocation that can be directly directed to environmental projects across the EU, thereby bolstering the EU's self-financing capability while promoting sustainability.

On the other hand, the plastic tax reflects the intent that is characteristic of excise duties to discourage consumption patterns that contribute to environmental harm, such as the overutilization of single-use plastics. Hence, this duality in purpose endows the plastic tax with the capacity to influence production and consumer behaviour while supporting the EU Green Deal's objective of making Europe climate-neutral by 2050.

¹¹³ Barbier B. E., *A Global Green New Deal – Executive Summary*, February 2009. Barbier discusses the role of fiscal measures in promoting sustainable economic practices, with a focus on reducing carbon dependency.

The legal basis for customs duties is expressed in Article 28 of the TFEU, which provides for the establishment of the customs union and the regulation of duties on imports from countries outside the EU. This principle is further outlined in Article 29 of the TFEU, which mandates that goods imported from third countries must satisfy customs formalities and duties to gain free circulation within the EU.

The principle has been reinforced by the CJEU in its ruling on the *Commission v. Italian Republic* case, emphasizing the need to balance the free movement of goods with the fiscal autonomy of Member States¹¹⁴. The Court highlighted that customs duties were not merely revenue-generating tools but also a protective mechanism that ensures fair competition inside the EU by preventing an influx of low-priced goods from non-EU countries. Nevertheless, EU legislation limits the use of customs duties or charges having equivalent effects to purely economic purposes, as it has consistently held that customs duties are primarily meant to control trade across borders and do not serve environmental purposes, given that environmental taxes must fall within the internal taxation scope to avoid being veiled trade barriers or protectionist measures.

The harmonization of excise taxes is addressed in Article 113 of the TFEU to prevent distortion of the market within the EU.

Past rulings, such as *Michel Humblot v. Directeur des services fiscaux*, have insisted on the equal application of excise taxes across Member States to avert fragmentation in the market, thus enhancing the argument that fiscal instruments must respond to a shared European challenge¹¹⁵. This same challenge is reflected in the goals of the plastic tax: to reduce rather than increase environmental costs whilst somewhat preserving market togetherness.

¹¹⁴ Court of Justice of the European Union (CJEU), Case C-173/05 *Commission v. Italian Republic*, Judgment of 21 June 2007, ECLI:EU:C:2007:362. This judgment emphasizes that the prohibition of customs duties and charges having an equivalent effect between Member States is intended to ensure the free movement of goods within the EU's internal market. The CJEU states that “charges having equivalent effect to customs duties are prohibited irrespective of the purpose for which they were introduced and the destination of the revenue from them” (para. 42), reaffirming that the application of taxes should not create an obstacle to the free movement of goods within the European single market.

¹¹⁵ Court of Justice of the European Union (CJEU), Case C-112/84 *Michel Humblot v. Directeur des services fiscaux*, Judgment of 9 May 1985, ECLI:EU:C:1985:185. The CJEU in its decision established that a domestic taxation system is compatible with Article 95 of the EEC Treaty only if it is free from discriminatory or protective effects, concluding that the imposition of a special, fixed tax on vehicles with power exceeding a certain level – significantly higher than the progressive tax on lower-powered vehicles – constituted indirect discrimination against imported vehicles, thereby violating the principle of fiscal neutrality (para. 14).

It has been observed that the EU's increasing reliance on environmental taxes aligns with broader sustainability objectives. Excise taxes on tobacco, alcohol, and fossil fuels, for example, have had a direct impact on public health and have influenced behaviour, proving effective in reducing consumption. The plastic tax follows a similar rationale: implementing a fee on non-recycled plastics aims to discourage their usage by reducing plastic waste and promoting a circular economy¹¹⁶.

Reflecting on past experiences with customs duties and excise taxes, the EU could develop processes that ensure the effective implementation of the plastic tax. This includes establishing strict rules for business and importer liability, developing effective collection systems, and applying sanctions for noncompliance. As emphasized in the ruling of *European Communities v. Kingdom of Denmark*, compliance with EU environmental standards must align with internal market principles, ensuring that environmental measures do not constitute an undue obstacle to trade within the EU¹¹⁷. Effective compliance mechanisms and clear criteria are essential to avoid potential conflicts with EU trade laws when imposing environmental taxes.

The case could help provide guidance on the enforcement of the plastic tax, with a specific focus on cross-border issues and the need to ensure that imported plastic goods meet EU sustainability standards. Similar to other environmental taxes, the plastic tax should adhere to non-discriminatory trade practices to prevent imports from being unfairly disadvantaged, even when different rates are applied for the environment's sake.

The plastic tax should also be adaptable to technological innovation and changing environmental needs to maintain relevance in a dynamic global market. This is to say that a flexible structure would allow the EU to modify the tax in response to future developments, such as in recycling technology or consumer preferences. Such evolution would align with the EU's environmental policy, contributing to the sustainable goals of the European Green Deal.

Through the internalization of principles and mechanisms borrowed from customs duties and excise taxes, the plastic tax offers opportunities for both revenue generation and strengthening the European ecological commitments. The revenues from the plastic

¹¹⁶ Vysochnya A. et al., *Convergence trends of environmental taxation in European countries*, E3S WEB CONF. 1, 2, 2020.

¹¹⁷ Court of Justice of the European Union (CJEU), Case C-302/86 *European Communities v. Kingdom of Denmark*, Judgment of 20 September 1988, ECLI:EU:C:1988:421.

tax would support environmental goals and support sustainability initiatives, merging fiscal policy with ecological responsibility.

3.3.3 Comparison between the mechanism of the Plastic Tax and Value Added Tax: single-stage Tax and applicability to imports

The above analysis regarding customs duties and excise taxes indicates that the plastic tax represents an innovative fiscal mechanism, capable of functioning as EU own resources. Special attention has been paid to comparisons regarding the VAT, mainly related to its single-stage nature and applicability to imports, in order to gain insights into how the structure of the plastic tax could support the EU's financial independence in accordance with the sustainability goals established under the Green Deal.

The main distinction with respect to the single-stage nature of the plastic tax is based on the fact that it is only levied once, either at the production point within EU territory or, for imports, on plastic packaging that does not contain recycled content. This makes it more closely resemble a single-stage excise tax rather than the multi-staged nature of VAT.

Single-stage environmental taxes are considered simpler due to their streamlined process of tax collection while also achieving a behavioural change in line with sustainability objectives¹¹⁸. The plastic tax, then, can be viewed as a single-stage tax because, in providing a streamlined and administratively efficient model, it aligns well with the EU's sustainability and fiscal economy objectives.

From an environmental perspective, the plastic tax diverges from traditional excise duties, which typically address social costs associated with goods such as alcohol and tobacco. Instead, it stands firmly within the ambit of the principle very often dubbed “*polluter pays*”, as enshrined in Article 191 TFEU, which calls for internalizing environmental costs to stimulate sustainable behaviour. The CJEU has constantly upheld the legitimacy of this principle as a basis for environmental taxation. For instance, in the *Outokumpu Oy* ruling, the European Judges stated that “[t]he first paragraph of Article 95 of the EC Treaty precludes an excise duty which forms part of a national system of taxation on sources of energy from being levied on electricity of domestic origin at rates

¹¹⁸ Milios L., *Towards a Circular Economy Taxation Framework: Expectations and Challenges of Implementation*, in *Circular Economy and Sustainability*, 1, 2021, 477-498.

*which vary according to its method of production while being levied on imported electricity, whatever its method of production, at a flat rate which, although lower than the highest rate applicable to electricity of domestic origin, leads, if only in certain cases, to higher taxation being imposed on imported electricity”*¹¹⁹. Here, the Court expressly lays it down that internal taxes must be so designed as not to discriminate, directly or indirectly, against imported products, setting up an important principle of non-discrimination in environmental taxes. This interpretation further strengthens the argument that single-stage environmental taxes – such as the plastic tax – must be applied equitably to domestic and imported products to prevent such levies from creating unfair barriers in trade within the internal market.

Further, the charge on imports is a very crucial part of assessing the possibility of it being taken for an EU’s own resource. Owing to the fact that VAT is being applied for the purposes of equal competition in the single market – as applied to domestic production and imports – the plastic tax shall also be levied on imported and domestically produced plastic packaging. The principle of equal ranking is essential for the sustenance of competitiveness with EU producers so that imports are subjected to equivalent environmental requirements, thus upholding the EU’s commitments under international trade treaties. The use of environmental taxes uniformly on imports is vital in curbing any form of covert protectionism and for compliance with WTO rules.

This is another important consideration in the assessment of its suitability to be an EU own resource: the connection of the plastic tax with imports. Much like VAT is levied on domestic, as well as all imports, in that both are expected to provide a level playing space – exactly the same when it comes to levies – the plastic tax does hold similar obligations on plastic packaging realized from imports and production alike. Equal treatment, relating to imports and domestic producers, is required for the competitiveness of EU producers in an environment where imports are held to the same standard when it comes to environmental protection. Because of this, the EU can pursue its international

¹¹⁹ Court of Justice of the European Union (CJEU), Case C-213/96 *Outokumpu Oy*, Judgment of 2 April 1998, ECLI:EU:C:1998:155, para. 43. According to its judgment, the CJEU concluded that Article 95 of the EC Treaty (now Article 110 TFEU) prohibits a discriminatory internal tax on energy sources, whereby domestic products are favoured over imports. The European Court rejected a variable tax rate applicable to domestic electricity, varying with the production method, but a single flat rate applied to imported electricity. Such a differential tax system is discriminatory against imports. This case affirmed the supremacy of the principle of non-discrimination and internal taxation by upholding that such taxes ought not to act as indirect trade barriers erected in respect to imports.

trade commitments more robustly. Adopting different environmental tax regimes in relation to imports would otherwise lead to disguised protectionism, which will face scrutiny by the WTO, in particular.

Moreover, the judgment of the CJEU in *European Commission v. Greenpeace Nederland and PAN Europe* upheld that environmental protection is a fundamental goal of the EU, and tax measures transposing those goals are legal in that they conform to the principles of equity and consistency with EU objectives¹²⁰. This judgment reiterates that the EU is permitted to levy taxes for environmental purposes provided that such imposition satisfies the non-discrimination standards and advances the common EU objectives.

The connection of the plastic tax to EU environmental objectives holds its identity as its own resource, as opposed to VAT, which is earmarked for the support of the general budget needs. Revenues from the plastic tax ought to be reserved strictly for ecological initiatives across the EU that blend the need for sustainability with the EU budgetary capabilities. Dedicated earmarking of environmental tax revenues towards environmental projects thus enhances the credibility and efficacy of such taxes in inducing behavioural change and fostering ecological protection. Hence, a clear connection between the revenue generation from the plastic tax and the strategic goal of the EU paves the way for a sustainable fiscal channel that makes the PPP an operational reality across the EU.

The expression of structural similarities between VAT and plastic taxation thereby gives credence to advancing the latter for a spot on the list of EU's own resources in consideration of their duty exemptions on imports and single-stage feature. Under the guiding principles of non-discrimination and equal treatment, the packaging tax is being designed as a one-stage tax, and this combination would make it possible for it to be a pro-sustainable source of revenue. This will create an economic channel for the EU whose funds will go directly toward environmental objectives, thereby fusing fiscal policy with

¹²⁰ Court of Justice of the European Union (CJEU), Case C-673/13 P *Commission v. Greenpeace Nederland and PAN Europe*, Judgment of 23 November 2016, ECLI:EU:C:2016:889. This decision underlined the importance of access to environmental justice within the EU. The CJEU held that the concept of “*information relating to emissions into the environment*” should be interpreted broadly, supporting public access to data on foreseeable emissions under normal usage conditions. Such an interpretation is vital for transparency regarding environmental issues and public verification of emission assessments, upon which authorities have based their authorizations. The judgment also guarantees that financial or regulatory means with environmental consequences are in accordance with EU transparency requirements and aims to promote environmental protection.

environmental responsibility while furthering the EU's climate neutrality ambitions by 2050.

3.3.4 *Methods for assessment, recovery, and collection of the Plastic Tax in the EU*

In the previous section, the types of structure of the plastic tax were analyzed, stressing both its similarities to VAT and its prospective standing as an EU resource. The single-stage nature of the tax, in conjunction with its general application to imports, was described in such a way as to illustrate how it would serve to contribute to the EU's sustainability goals and financial independence.

This section sets out to discuss the common practices in assessment recovery, collection, and distribution of the plastic tax within the EU. Their aim is to shed light on how those procedures could strengthen their role as an own resource to guarantee the effectiveness and efficiency of the tax system.

The assessment of plastic tax in the EU is based mainly on the amount of non-recycled plastic packaging waste generated within each Member State¹²¹. This approach, explicitly linked to the environmental objectives, encourages not only a reduction in plastic waste but also an increase in recycling, contributing directly to the principles outlined in the European Green Deal¹²². The method of assessment makes use of data collected by Eurostat, which Member States already need to submit under obligations of current reporting. Under this system, there will be a level playing field when it comes to calculating contributions at a national level, and the tax amounts to a uniformly applied rate per kilogram of non-recycled plastic packaging waste¹²³.

This assessment method was chosen for its ease of use and transparency in allowing Member States to calculate their annual contributions to the EU budget

¹²¹ Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom, Official Journal of the European Union L. 424/1, December 15, 2020.

¹²² Walker T., Gramlich D. & Dumont-Bergeron, A., *The Case for a Plastic Tax: A Review of Its Benefits and Disadvantages Within a Circular Economy*, in D.M. Wasieleski & J. Weber (Eds.), *Sustainability (Business and Society 360, Vol. 4, pp. 185-211)*, Emerald Publishing Limited, 2020.

¹²³ Eurostat reports indicate that there were 83.4 million metric tonnes of packaging waste generated across the EU in 2022, of which 19.4 per cent was plastic. Such information indicates a great quantity of plastic wastes produced and the necessity for effective recycling measures toward achieving EU environmental goals.

See, in this sense, Eurostat, *Packaging waste statistics - Statistics Explained*, data extracted on 10 October 2024, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Packaging_waste_statistics.

accurately. Nevertheless, discrepancies in data quality and reporting systems across Member States necessitate mechanisms for harmonization and standardization, such as adopting unified reporting templates and frequent audits. To avoid very large regressive features in national contributions, an adjustment mechanism with annual reduction amounts was implemented for certain Member States. For example, low gross domestic product (GDP) per capita countries shall be compensated with reductions as defined in Council Decision (EU, Euratom) 2020/2053.

The assessment of plastic tax also involves periodic reviews and updates to ensure that both the rate of tax and assessment criteria remain effective and are in line with the EU's environmental goals. These reviews are conducted jointly by the Member States and relevant stakeholders on behalf of the European Commission. The scope is to broaden the tax framework to address market dynamics, improve traceability, and integrate technological advances in recycling processes.

Before the assessment is made, mechanisms are provided to deal with variations in data reporting and any concerns about noncompliance. For example, Member States are to implement robust data verification systems that, regarding the amount of non-recycled plastic packaging waste, rely on cross-referencing datasets, third-party audits, and digital technologies like AI-driven data analysis to improve accuracy.

Recovery of the tax on plastic varies from Member State to Member State, depending on the existing national systems of taxation, fiscal structures, and policy preferences. Some Member States, like Sweden, finance the contribution to the plastic tax directly from their national budgets without establishing any domestic tax collection system¹²⁴. Other Member States have developed particular national tax laws to collect the

¹²⁴ Government of Sweden, *Sweden commits to reduction of plastic pollution by adopting a National Plastic Action plan with goals and concrete actions*, available <https://sdgs.un.org/partnerships/sweden-commits-reduction-plastic-pollution-adopting-national-plastic-action-plan-goals>.

The Government of Sweden confirms that the funding for the plastic tax contribution will be procured directly from the national budget and that there will not be any domestic tax collection system in place. This is one of the steps that fall under Sweden's broader commitment to tackle plastic pollution as part of a National Plastic Action Plan. Launched on 21 February 2022, it set itself several ambitious goals: by 2025, to limit people to a maximum of 40 plastic bags each; by 2026, to reduce the consumption of single-use plastic cups and food containers by 50 per cent and increase reusable packaging in market by 20 per cent; by 2027, to recover at least 20 per cent of waste from fisheries equipment; by 2030, to reduce littering of single-use plastic packaging by 50 per cent, to prohibit littering with balloons or wet wipes outdoors, and to reduce littering of cigarette butts and Snus by 50 per cent. In addition, by 2030, plastic packaging must contain at least 30 per cent recycled raw material on average. The plan also sets a goal to achieve net-zero emissions of greenhouse gases by 2045, followed by negative emissions.

plastic tax from certain taxpayers. These national tax collection systems vary substantially in terms of taxed products, collection mechanisms, and refund options. For example, the United Kingdom has implemented a Plastic Packaging Tax that applies to plastic packaging with less than 30 per cent recycled content, demonstrating how such measures can complement EU-level obligations while addressing national circumstance¹²⁵.

Apart from direct financing from national budgets and specific national tax laws, some Member States have generic approaches to recovering the plastics tax, for example through direct finance combined with targeted taxation. That implies that while a section of the contribution to the plastic tax is funded through general budget funds, the other portion is raised through a levy placed on plastic packaging producers, such as in Germany¹²⁶. This hybrid approach provides greater flexibility and a fairer distribution of financial burdens across industries, while also discouraging excessive plastic waste and encouraging the use of recycled material.

The process of collection of the plastic tax is made simpler through the introduction of digital e-platforms that streamline tax declaration and payment processes. Many Member States have developed online portals for taxpayers to declare their plastic-related contributions and access detailed guidance. These portals enhance administrative efficiency and reduce compliance burdens for businesses and authorities alike. Moreover, emerging technologies, such as blockchain, are being explored to increase transparency and traceability in plastic waste management. Blockchain's immutable nature offers a credible method for tracking the lifecycle of plastic materials from production to recycling, ensuring reliable claims regarding recycled content.

¹²⁵ The Plastic Packaging Tax has been conceived in the UK, which applies to plastic packaging that contains no less than 30 per cent recycled content. The tax was implemented on 1st April 2022 to influence businesses to start using recycled plastic in plastic packaging, thus increasing demand for recycled materials and stimulating levels of recycling and collection of plastic waste to a higher extent. See, in this sense, <https://www.gov.uk/government/publications/introduction-of-plastic-packaging-tax-from-april-2022/introduction-of-plastic-packaging-tax-2021>.

¹²⁶ Under the “*Einwegkunststofffondsgesetz*” (“*EWKFondsG*”, also known as “*Single-Use Plastics Fund Act*”), which will come into force on 1st January 2024, Germany has taken a hybrid approach towards its plastic tax. This requires manufacturers of certain single-use plastic products to contribute to a fund covering the costs incurred when plastic waste is managed. In effect, this is a combination of direct Federal budget financing and a specific levy on plastic producers. Enders B., Mönch L.M., Friedrich-Schmidt F., *Update on the Single-Use Plastics Fund Act: “Plastic tax” in Germany came into force on 1 January 2024*.

The appropriate organization and structure of the plastic tax influence its impact as an EU own resource. A well-designed and properly run system can ensure that the plastic tax provides stable and predictable revenues to the EU budget, with contributions made towards its financial independence. Furthermore, standardized tax administration practices across Member States are critical to prevent market distortions and ensure fairness for all European producers.

By creating its own credibility in meeting and fulfilling environmental commitments, the plastic tax can help build momentum for the EU in international negotiations and foster similar approaches and policies in other regions. In conclusion, the methods of assessment, recovery, and collection of the plastic tax must hold fundamental importance in determining its success as an EU own resource. Through periodic reviews, technological advancements, and transparent administrative systems, the plastic tax can significantly contribute to both the EU's sustainability objectives and its fiscal autonomy.

3.4. Balancing sustainability, competitiveness, and legal consistency in the Plastic Tax framework

The economic effects of the plastic tax are multiple, shaping business operations through increased costs, shifts in competitiveness, and significant compliance challenges within the EU legislative framework. As a corrective fiscal instrument, the tax seeks to internalize environmental costs associated with plastic waste, incentivizing businesses to adopt sustainable practices while contributing to the EU's circular economy goals. However, its implementation generates additional costs, particularly for industries heavily reliant on plastic packaging. These costs arise not only from the tax itself but also from compliance obligations, including extensive data reporting, audits, and the transition to alternative materials.

The incidence of the tax is influenced by market structure and strategic business responses. In many cases, producers and importers transfer a portion of the tax burden down the supply chain, leading to higher retail prices for consumers. However, in competitive markets, businesses may absorb part of the tax burden to maintain their market position, potentially impacting profit margins. Disparities in the availability and affordability of recycled plastic across Member States exacerbate discrepancies, creating

significant challenges to fair competition and threatening the integrity of the single market.

For instance, Spain's non-reusable plastic packaging tax was implemented on January 1, 2023, with an amount of €0.45 per kilogram. However, Italy has deferred many times; it is expected to come into force on July 1, 2026, with the same amount of €0.45 per kilogram. These temporal and structural differences in the tax's implementation represent a significant source of competitive distortions among businesses operating in different Member States.

In addition to economic and competitive challenges, these disparities highlight critical legal issues regarding compliance with EU law, particularly the principles of free movement of goods and non-discrimination.

Competition, a cornerstone of EU law, plays a crucial role in shaping the tax's impact. The principle of undistorted competition, as enshrined in Articles 101 to 109 of TFEU¹²⁷, seeks to ensure equal conditions within the internal market. Divergent national implementations of the plastic tax – resulting from differing tax rates, exemptions, or administrative practices – undermine this principle, creating unequal terms of competition that place businesses in certain Member States at a disadvantage. For instance, a company operating in a country with limited recycling infrastructure may face significantly higher compliance costs compared to competitors in countries where recycled materials are more readily available and affordable. Germany is often cited as an example, boasting a well-developed infrastructure for recycling, with a municipal waste recycling rate exceeding

¹²⁷ Articles 101-109 of TFEU establish the framework for EU competition law, aimed at ensuring the proper functioning of the internal market by preventing anti-competitive practices. They are based on Article 101 which prohibits agreements between undertakings, decisions by associations of undertakings, and concerted practices that as their object or effect might affect trade between Member States and prevent, restrict, or distort competition, taking into account exceptions that promote innovation or consumer's interests. Article 102 prohibits the abuse of a dominant position within the internal market or a substantial part of it, including for instance excessive pricing, limitation of production, to the detriment of consumers, or refusal to allow access to essential goods or services. Article 103 provides for the legal basis on which the regulation and decisions for the application of Articles 101 and 102 may be undertaken, including definition of penalties for violations; Article 104 entrusts the Member States with guarding compliance with competition rules until enactment of such measures; Article 105 empowers the European Commission with supervisory powers to check into and act against breaches of Articles 101 and 102. Article 106 extended competition rules would apply to public undertakings or undertakings with special or exclusive rights only if justified by its objectives of general economic interest. Article 107 prohibits State aid that distorts or threatens to distort competition by favouring certain undertakings or sectors, except in specified instances; Article 108 outlines the procedure whereby the Commission monitors and assesses State aid, requiring Member States to notify the Commission prior to implementing such measures. At last, Article 109 empowers the Council to enact regulations for application of Articles 107 and 108, together with conditions under which specific State aid could be exempted.

65 percent, whereas in Romania, only around 3 percent of municipal waste is being recycled. As a result, in Germany, access to recycled materials is more affordable and logistically straightforward, while companies in Romania must contend with higher costs and greater challenges¹²⁸. These disparities risk creating substantial barriers, thereby undermining the principle of equal opportunities and fair competition within the internal market.

The plastic tax must be consistent with the free movement of goods under Articles 34 and 35 TFUE¹²⁹ and discrimination-based taxation prohibition under Article 110 TFUE¹³⁰.

Articles 34 and 35 TFUE are particularly relevant to the implementation of the plastic tax, as national measures could potentially impede trade if they impose higher obligations on goods crossing borders than on domestic goods. For example, requiring more onerous reporting obligations or stricter recycled content levels for imports than for domestic products constituted a measure of equivalent effect under Article 34 TFUE.

¹²⁸ Zanetti M., Panepinto D., *What is Waste, and How We Manage in Europe*, in Tribaudino M., Vollprecht D., Pavese A. (eds) *Minerals and Waste*. Earth and Environmental Sciences Library. Springer, pp. 21-37, March 16, 2023.

¹²⁹ According to Articles 34 and 35 of TFEU, the general principle of free movement of goods within the internal market is established with the prohibition of quantitative restrictions on imports and exports along with equivalent measures.

The importance of avoiding such distortions has been underscored by the CJEU. In Case C-8/74 *Procureur du Roi v Benoît and Gustave Dassonville*, Judgment of 11 July 1974, ECLI:EU:C:1974:82, the CJEU clarified that any measure which is capable of obstructing intra-EU trade, directly or indirectly, actually or potentially, constitutes a breach of the Articles 34 and 35. This principle is particularly relevant in the case of fiscal measures like the plastic tax. In the context of fiscal instruments, the judgment of the CJEU in Case C-110/05 *Commission of the European Communities v. Italian Republic*, regarding the restrictions on the export of scrap metal, has illustrated how disproportionate national requirements interfere with the free movement of goods.

¹³⁰ Under Article 110 of TFEU, no Member State may impose internal taxes upon products from other Member States more heavily than similar taxation on domestic products. The intent of this provision is to ensure that taxation systems do not discriminate against imported goods and thereby offer protection of the principle of non-discrimination and a level playing field in the internal market. In this context, Article 110 TFUE is considered particularly relevant when the Member States adopt measures creating a distinction between imported goods and domestic goods in regard to tax rates or compliance obligations. For instance, stricter recycled content requirements or elevated tax rates imposed on imported goods versus equivalent domestic products may be deemed breaches of Article 110 upon the argument that they constitute indirect discrimination.

The CJEU broadly interpreted Article 110, emphasizing in Case C-168-78 *Commission of the European Communities v. French Republic*, Judgment of 27 February 1980, ECLI:EU:C:1980:51, that the principle applies not only to identical products but also to products that are in competition, even if they are not strictly similar. Consistent with this ruling, the court took a turn and made clear that any tax regime with a protective effect on domestic products to the detriment of imports would be inconsistent with the provisions of Article 110 TFUE.

Similarly, Article 35 would apply if export restrictions, such as additional standards for recycled content in exported goods, are imposed without equivalent domestic standards.

In the context of Article 110 TFEU, tax measures must be designed to promote sustainability while avoiding barriers to trade or distortions of competition. For instance, tax exemptions or reduced rates for certain types of plastic packaging produced domestically, combined with stricter requirements on imported equivalents, may violate Article 110 by creating discriminatory effects. Therefore, it is crucial that Member States design plastic tax policies that treat similar domestic and imported products equally, both in terms of tax base and applicable rates. To this end, EU level harmonization is essential.

Harmonization at the EU level is essential to address the risks outlined above, including potential breaches of Article 110 TFEU. Uniform definitions of taxable products, consistent recycled content thresholds, and clear reporting channels would reduce the likelihood of national implementation of plastic tax creating any discriminatory effect. Such measures are necessary not only to uphold the principle of non-discrimination but also to maintain the coherence of the internal market while achieving the environmental purposes of the tax.

National measures implementing the plastic tax must avoid indirect discrimination against products from other Member States. For example, if Member States adopt stricter standards for recycled content calculation than others, this could lead to trade barriers incompatible with EU law. The CJEU has constantly found that such measures must be proportionate and necessary to pursue legitimate objectives, such as environmental protection¹³¹. When evaluating the compatibility of the tax with EU competition rules, its

¹³¹ The principle of proportionality provides an important basis for balancing environmental objectives and internal market considerations in the EU context. This balance has been discussed about the CJEU decisions regarding national measures that restrict the free movement of goods for environmental purposes, with few exceptions. The two key judgments in which this particular principle is invoked to ascertain the compliance of national controls with EU law are Case C-2-90 *Commission of the European Communities v Kingdom of Belgium*, Judgment of 9 July 1992, ECLI:EU:C:1992:310, and Case C-302-86, *Commission of the European Communities v Kingdom of Denmark*, Judgment of 20 September 1988, ECLI:EU:C:1988:421. *Commission of the European Communities v Kingdom of Belgium* concerned the imposition of a new waste charge on goods imported into Belgium. The CJEU maintained that the Member States might take measures to ensure environmental protection; however, they had to comply with EU law, particularly the principle of proportionality. It was concluded that the charges placed an unwarranted restriction on the free movement of goods in violation of Article 34 TFEU due to Belgium's failure to prove that the measures were necessary or that they constituted the least restrictive means available to achieve the environmental objectives sought. This reasoning highlights the necessity that Member States must fulfil to strike a balance between environmental protection and the other duties arising from the internal market. In the case of *Commission of the European Communities v Kingdom of Denmark*, better known as the "Danish Bottles" case, the CJEU was concerned with Denmark's system of deposit-and-return for beverage

effects on imports and exports must also be considered. Discriminatory treatment of imported products compared to domestic counterparts could violate not only EU internal market rules but also GATT commitments.

Despite these challenges, the plastic tax presents significant opportunities for innovation and the advancement of sustainable practices. By making non-recycled plastic more expensive, the tax incentivized businesses to invest in alternative materials, such as biodegradable plastics, and to adopt circular economy models. These benefits, however, are contingent upon adequate support mechanisms, such as subsidies for research and development or investments in recycling infrastructure. Without such measures, the tax risks amplifying existing inequalities between businesses and Member States, particularly affecting Small and Medium-sized Enterprises (SMEs), which play a vital role in the EU economy.

Continuous monitoring and evaluation of the tax's current and anticipated impacts are essential. These assessments would enable the identification of unintended effects, the implementation of necessary amendments, and the alignment of the tax with fairness, competitive principles, and sustainability objectives.

On a broader level, the plastic tax represents an additional EU-specific resource, contributing to the EU's fiscal autonomy while advancing sustainability objectives. However, realizing these objectives requires a delicate balance between economic, environmental, and legal priorities. Active collaboration among EU institutions, Member States, and businesses will be critical to resolving contradictions and maximizing the tax's potential as a driver of sustainable innovation and market integration. In other words, the plastic tax not only represents a step toward fiscal autonomy for the EU but also serves as a blueprint for balancing sustainability with market integration and legal consistency. By addressing its current challenges, the EU can set a precedent for future environmental fiscal instruments that drive innovation and equitable economic transformation.

containers that discriminated in favour of reusable products over disposable packaging. The CJEU acknowledged the legitimacy of the environmental objectives and stated that such measures could justify limits on the free movement of goods. However, the restrictions must be non-discriminatory and proportional. In that case, the deposit-and-return system was deemed valid, but the court ruled that any national measure must remain within the constraint of being necessary for the achievement of its goal without discriminating against products from other Member States.

These cases make it clear that environmental measures and controls have to respect the principle of proportionality and the freedoms of the internal market and act in the interest of the operator when deciding on sustainable tax and commercialization measures.

3.5. *The role of fiscal nudges in enhancing compliance and behavioural changes*

As explored in the previous paragraph, achieving harmonization and sustainability within the plastic tax framework demands innovative approaches that extend beyond conventional regulatory measures. Among these, fiscal nudges represent a unique mechanism to influence behaviour while preserving individual freedom of choice. Nudges work through the deliberate design of “*choice architecture*”, encouraging decisions that align with societal objectives, such as environmental sustainability, without imposing mandatory requirements or significant economic burdens.

Richard Thaler and Cass Sunstein, pioneers of the concept, define a nudge as “*any aspect of the choice architecture (...) that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives*”¹³². This definition is central to the “*libertarian paternalism*” movement, which emphasizes guiding individuals toward socially beneficial behaviours without compromising their freedom of choice. Central to this approach are two key principles: (i) the nudge should maintain the individual’s freedom to choose, and (ii) it should operate through non-monetary or indirect incentives. This makes nudges distinct from traditional regulatory instruments, such as taxes and fines, which rely on direct economic impacts. For instance, while plastic taxes impose financial penalties for the use of unrecyclable materials, a nudge might encourage the same outcome by making recycled options more accessible, visible, or socially desirable.

Recent studies emphasize that nudging has evolved to address various sustainability challenges, including waste management, energy conservation, and public health¹³³. An example of the enforcement of the fiscal nudge in the context of the plastic tax is the deposit-refund system. This system incorporates an upfront deposit with a refund incentive, encouraging consumers to return used products or packaging for recycling. Historically, deposit-refund systems have been implemented successfully in

¹³² Thaler R.H., & Sunstein, C. R., *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press, 2008, p. 6.

¹³³ Amiri B., Jafarian A., Abdi Z., *Nudging towards sustainability: a comprehensive review of behavioral approaches to eco-friendly choice*, in *Discover Sustainability*, November 28, 2024.

various regions to address waste management challenges. For instance, the “*Oregon Bottle Bill*” of 1971 introduced one of the first large-scale deposit refund programs in the United States, serving as a model for other jurisdictions¹³⁴. In the European context, such systems have proven effective in increasing recycling rates and reducing litter, aligning consumer behaviour with sustainability goals by embedding the environmental cost of plastic into its lifecycle¹³⁵.

Fiscal nudges have become another highly effective method through the implementation of eco-labeling schemes that benefit both producers and consumers when paired with fiscal incentives¹³⁶. For instance, a company selling products in recyclable or biodegradable packaging that complies with specific environmental criteria may qualify for tax benefits or subsidies. This approach not only reduces costs for businesses but also enhances their reputation, making them more appealing to eco-conscious consumers in the market.

Eco-labels simplify the selection process for consumers by clearly identifying eco-friendly items. They assure customers that these products have minimal environmental impact, offering an easy way to align purchasing decisions with sustainability goals. Consumers reinforcing the idea of sustainability come from diverse backgrounds; however, eco-label plays a crucial role in embedding social norms about

¹³⁴ Walls M., *Deposit-Refund Systems in Practice and Theory*, in Resources for the Future Discussion Paper No. 11-47, November 23, 2011. The “*Oregon Bottle Bill*”, introduced in 1971, was the first bottle bill enacted in the United States of America. It aimed to address the increasing litter affecting beaches, streets, parks, and other public spaces in Oregon. The law requires consumers who buy any beverage containers to pay a deposit, which is refundable upon returning the container for recycling. The initial deposit amounted to only 5 cents, but it was increased to 10 cents in 2017 to ensure higher return rates. Since its introduction, the law has been modified and upgraded several times to include a wider range of beverage containers and to adapt to the ever-changing beverage market. The success of the “*Oregon Bottle Bill*” has inspired many States and even foreign countries to establish similar legislation, greatly contributing to waste reduction and promoting recycling practices.

¹³⁵ Numata D., *Policy mix in deposit-refund systems – From schemes in Finland and Norway*, in Waste Management, 2016. In his study, Daisuke Numata analyzes the effectiveness of the deposit-refund systems (DRSs) implemented by Finland and Norway. These deposit systems are introduced as effective instruments alongside other mechanisms, such as container taxes, where a deposit is charged at the time of purchase and refunded upon the return of used products. Numata’s findings reveal that DRSs offer financial incentives that significantly enhance return and recycling rates. The study highlights that the success of these systems depends on the cooperation of various stakeholders including manufacturers, retailers, and consumers. Furthermore, Numata argues that while DRSs can, in many respects, reduce litter and encourage increased recycling, their success depends heavily on the economic conditions and the availability of local infrastructure for their effective and acceptable application.

¹³⁶ Englander G., Stevens A. W., Taylor R. L. C., and Villas-Boas S. B., *The Impact of Ecolabels and Green Taxes on Market Outcomes*, March 30, 2023, in: Garcia M.d.G., Cortês A., (eds) Blue Planet Law. Sustainable Development Goals Series. Springer, Cham., pp. 159-171.

sustainability, reminding individuals that environmentally friendly or nature-based products have positive attributes and benefits¹³⁷.

The eco-labeling scheme may also be connected with the plastic tax schemes. The plastic tax is another revenue scheme aimed at reducing plastic waste through the use of taxes imposed on plastics that cannot be recycled if used in non-recycled plastic packaging. Indeed, combining eco-labeling with the plastic tax provides an integrated approach to tackling plastic pollution. For instance, products that are made from recycled plastic or have a lower environmental impact could be excluded from the plastic tax or the tax rates could be lowered as a means of eco-labeling. Such incentives would provide a clear monetary reason for manufacturers to use recycled materials and implement sustainable practices. In addition, eco-labels enhance consumer awareness of the benefits of products containing recycled content, which would further increase the demand for sustainable options.

The overall cost-benefit analysis indicates that, while fiscal nudges require some upfront investments in infrastructure and monitoring systems, their benefits in the long run far outweigh such costs – a case in point being deposit-refund systems, which involve investments in collection points and tracking mechanisms. These systems drastically cut down on litter and boost recycling rates, engendering considerable savings for municipalities.

The incorporation of technologies such as blockchain for tracking recycled materials or mobile applications for engaging consumers can improve the efficacy and transparency of approaches to fiscal nudging. These technologies facilitate tracking and engage consumer input through real-time feedback and incentives¹³⁸.

In order for fiscal nudges to be effective, continuous monitoring against key performance indicators (KPIs) – such as recycling rates and reductions in non-recyclable

¹³⁷ De-loyde K., Pilling M. A., Thornton A., Spencer G., and Maynard O. M., *Promoting sustainable diets using eco-labelling and social nudges: a randomised online experiment*, in BPP Behavioural Public Policy, September 5, 2022, published online by Cambridge University Press.

¹³⁸ The technology of blockchain enables decentralized consensus and enhances the transparency and traceability of transactions in the supply chain, which is particularly useful for verifying the recycled content of products. For instance, blockchain can guarantee that each step of the recycling process is recorded and verified, making it easier to track the lifecycle of recycled materials and allowing consumers to engage with recycling programs and other sustainable practices. Moreover, dedicated mobile applications can inform users about recycling opportunities, help them track their recycling habits, and reward consistent efforts within a given subscriber base.

plastic use – is imperative. Regular evaluations allow strategies to be adjusted to improve outcomes and ensure that nudges remain effective and fair over time¹³⁹.

Cultural differences across Member States may affect the perception and effectiveness of nudges. While societies with strong environmental awareness may be more responsive to eco-labels, countries with less developed environmental policies may require additional educational campaigns to achieve maximum impact. Tailoring nudges to fit the particular socio-cultural context of each Member State is therefore essential.

Fiscal nudges, however, directly correlate with the PPP. This principle ensures that environmental costs are borne by the responsible producers while catalyzing such operators to charge for environmental offsets throughout their product life cycles. Such measures invest transparency and accountability into the management of environmental impacts, thereby promoting fairness and encouraging sustainable practices.

The successful implementation of fiscal nudges would depend on robust data collection systems capable of effectively capturing behavioural and environmental outcomes. Depending upon the economic and infrastructural conditions that differ from one Member State to another, the methodological approaches to ensure equity and effective nudges have also varied. Fiscal nudges built on deposit-refund systems and eco-labelling incentives can strengthen the EU's ability to achieve environmental goals by promoting justice and inclusiveness. By adopting fiscal nudges, the European Green Deal can effectively drive behavioural change and accelerate the transition to a circular economy.

¹³⁹ A growing body of research supports the relevance of nudges in different contexts, emphasizing the strong need for proper data collection and continuous evaluation to maximize the behavioural impact of interventions. For instance, Bird K. A. et. al. in “*Nudging at Scale: Experimental Evidence from FAFSA Completion Campaigns*”, in National Bureau of Economic Research, August 2019, highlight the importance of assessing the effectiveness of nudges through KPIs. The researchers found that continuous assessment is vital to understanding how nudges influence behaviour and how necessary adjustments can be made to optimize their effectiveness. Applying this principle within the plastic tax paradigm allows governments to use KPIs to measure the success of fiscal nudges, such as deposit-refund systems and eco-labelling schemes, in reducing plastic litter and bolstering recycling initiatives. By implementing this kind of monitoring, policymakers can ensure that fiscal nudges are effective and remain relevant to evolving environmental goals as time progresses. This feedback loop allows nudges to stay aligned with the broader objectives of the plastic tax that support the transition to a circular economy.

3.6. *A comparative analysis of the implementation of the Plastic Tax in EU Member States*

The previous Section 2.3. provided a generalized overview of the framework and variations in implementing the plastic tax across different EU Member States. This Section, on the other hand, offers a deeper comparative analysis of how such variations manifest themselves in specific countries while looking at the policy design, scope, and effectiveness of the plastic tax in Denmark, Hungary, Spain, Italy, France, and Germany. These countries have been chosen due to their varied approaches toward and great experiences with plastic taxation, thus providing valuable insight into the obstacles and opportunities that exist in creating such policies. Denmark and Hungary illustrate the early adopting countries with long-standing measures, while Spain and Italy illustrate the more recent strategies which seem to be in evolution. France and Germany shed light upon two different approaches, one with an undergirding comprehensive legislative framework and the latter with an advanced recycling system. Such analyses will deepen the understanding of the implications that emanate from various policy options and thus highlight necessary practices for attaining environmental objectives within the EU.

The implementation of the plastic tax across the EU varies greatly in terms of policy design, scope, and effectiveness. While the common goals of reducing plastic pollution and building a circular economy are embraced by most Member States, the methods adopted differ remarkably due to economic structure, political priorities, and infrastructural competencies. This lack of standardization gives rise to key issues related to equity, market competition, and the feasibility of achieving collective environmentally focused aims in the EU.

In 1994, Denmark became the first country to introduce a tax on plastic carrier bags, significantly reducing their use and setting a precedent that has served as a model for other EU countries¹⁴⁰.

¹⁴⁰ Xanthos D., Walker, T. R., *International Policies to reduce plastic marine pollution from single-use plastics (plastic and microbeads): A review*, in *Marine Pollution Bulletin* 18(1–2), 2017, pp. 17-26; Newman S., Watkins E., Famer A., Ten Brink P., Schweitzer, J. P., *The economics of marine litter*, in Bergmann M., Gutow L., Klages M. (eds.), *Marine Anthropogenic Litter*, 2015, pp. 367–394, Springer, Berlin.

The Danish plastic bag tax law has evolved over the years, aligning with new EU directives and emerging environmental needs. These amendments primarily sought to adjust the tax framework to ensure compliance with the broader environmental goals established by the EU.

Similarly, Hungary introduced a tax on single-use plastic products in 2011. The tax applies to various plastic items such as plastic bags and packaging, and the rates have been increasing annually in order to encourage compliance. In Hungary, taxation and EPR plans are combined so that producers bear the cost of waste management associated with their products¹⁴¹.

More recently, Spain has become a prime example of all-encompassing plastic tax policy. Beginning on January 1, 2023, the tax levies €0.45 per kilogram on non-reusable plastic packaging, targeting manufacturers, importers, and intra-EU acquirers. This measure aims to improve the uptake of recyclable alternatives and significantly mitigating the environmental burdens of packaging. Reporting obligations are stringent under the Spanish framework, requiring companies to disclose the weight and composition of the plastic they use¹⁴².

In the case of Italy, the introduction of the plastic tax has faced significant delays, moving the implementation date beyond the original stipulation of 2020 to July 1, 2026¹⁴³. The rate for this tax will remain the same at €0.45 per kilogram, applying to new plastic materials only and excluding compostable plastics and recycled materials. This exclusion was intended to balance environmental aims with the demands of key industrial

¹⁴¹ The Environmental Protection Product Charge Act (Act LXXXV of 2011) was Hungary's first national plastic tax, effective from September 1, 2011. This tax applies to a wide range of single-use plastic products, including plastic bags and packaging. Input taxes are typically calculated based on the weight of the targeted products, aiming to reduce plastic waste and encourage the adoption of more sustainable alternatives. Furthermore, Hungary introduced an EPR system on July 1, 2023, transferring the costs of waste management to producers.

¹⁴² The current procedural framework for the implementation of Spain's plastic tax came into effect on January 1, 2023. The national tax, known as the "*Impuesto Especial sobre los Envases de Plástico no Reutilizables*", imposes a levy of €0.45 per kilogram on non-reusable plastic packaging. The tax applies to manufacturers, importers, and intra-EU purchasers of such packaging, with the aim of reducing plastic waste and encouraging more sustainable alternatives. Importantly, exemptions are provided for compostable plastics as well as certain medical products, striking a balance between environmental objectives and practical necessities.

The Spanish tax also requires companies to report in detail on the weight and composition of the plastic used in their packaging, a measure aligned with Spain's overarching environmental policy and the European Green Deal. This fiscal measure positions Spain as one of the leading EU Member States in the fight against plastic pollution. Nevertheless, considerable discussion remains on the costs of ensuring compliance for companies and the effectiveness of enforcement mechanisms.

¹⁴³ The Italian Plastic Tax has been postponed once again, with its implementation now scheduled to take effect following the approval of the Legislative Decree of 10 May 2024, No. 39 (the so-called "*Superbonus Decree*"). First introduced by the 2020 Budget Law, the tax mandates a levy of €0.45 per kilogram on single-use plastic manufactured goods ("*MACSI*"). After several delays, the tax is now set to become effective on July 1, 2026, marking the most recent in a series of postponements. These repeated delays highlight the persistent challenges in finalizing the necessary enabling measures and addressing concerns raised by major industry stakeholders.

sectors. Each subsequent delay, however, is seen by critics as eroding confidence in the policy and postponing necessary investments to enhance recycling capacities.

Plastic taxation in France is entrenched in a wider legislative framework that aims to promote a circular economy. The French government punishes firms that use non-recyclable packaging through an eco-modulation of EPR fees, while companies using sustainable alternatives receive monetary incentives. France also promotes the development of bioplastics, having set ambitious targets to eliminate the use of single-use plastics by 2040¹⁴⁴.

In an interesting contrast, Germany has yet to introduce a designated plastic tax, despite its reputation for operating an advanced recycling system. Instead, the nation relies on its well-established EPR schemes and the “*Verpackungsgesetz*” (“*VerpackG*”, also known as “*Packaging Act*”). Producers are mandated to finance the collection and recycling of packaging waste. This indirect method has achieved impressive recycling figures but may limit Germany’s ability to encourage more responsible consumer behaviour¹⁴⁵.

¹⁴⁴ With regard to contributions from Member States based on non-recycled plastic packaging waste, the EU’s 2021-2027 budget highlights that France has not yet implemented any measures to fund its plastic levy obligations through a national plastic tax. France has instead aligned its policies with the Single-Use Plastics Directive by restricting certain single-use plastic products. This includes the double packaging of fruits and vegetables and disposable tableware in fast-food outlets. Additionally, the sale of medical devices containing microplastics has been banned as of January 1, 2024. France also envisions a complete ban on all single-use plastic packaging by 2040. The law concerning waste management and the circular economy in France expands EPR in line with the PPP. The regime requires importers and producers to pay eco-contributions, based either on the weight or quantity of their products, to eco-organizations responsible for managing recycling systems. Currently, EPR applies only to waste and household packaging, covering five main materials: cardboard, plastic, steel, aluminum, and glass. However, starting January 1, 2025, EPR obligations will also extend to industrial and commercial packaging, including reuse and recycling. Further details on the practical arrangements are expected later this year.

¹⁴⁵ Germany’s approach to plastic taxation and waste management reflects a combination of national initiatives and compliance with European Union objectives. While a dedicated plastic tax is set to be introduced on January 1, 2025, targeting non-recycled plastics in packaging waste, details regarding its allocation and coverage remain under discussion. The Federal Ministry of Finance estimates that this measure will generate approximately €1.4 billion annually. Additionally, effective January 1, 2024, the “*Einwegkunststofffondsgesetz*” (EWKFondsG) imposes levies on manufacturers and importers of specific single-use plastic products. Rates vary by product type, with levies such as €3.801 per kilogram for light plastic carrier bags and €4.34 per kilogram for balloons. Revenue from these levies will be allocated to municipalities to finance waste management, with the first payments expected in autumn 2025. Germany’s existing “*Verpackungsgesetz*” (Packaging Act), enforced since 2019, mandates extended producer responsibility (EPR) for all packaging. By incorporating eco-modulated participation fees, this law incentivizes manufacturers to prioritize recyclable materials and adhere closely to sustainable norms established in Europe and under the European Green Deal. However, despite Germany’s very high recycling rates, some critics argue that the existing system lacks sufficient incentives to actively reduce single-use plastics, potentially necessitating further policy development.

Differences in implementation among EU Member States signal major problems for harmonizing environmental policies. Countries like Spain and France have used the plastic tax to incentivize innovation and sustainability. Others, such as Italy, have been hindered by political and economic barriers. Differences in plastic tax policies create risks of distortions within the EU's internal market, since companies based in more regulated countries incur higher production costs compared to those in less regulated jurisdictions. This raises important questions about compliance with the EU principle of proportionality and non-discrimination¹⁴⁶. The fact that different countries have implemented varied forms of plastic taxes, at different times, constitutes an impediment to the free movement of goods and a distortion of competition, undermining the objectives of the European Green Deal.

To address these challenges, the European Commission has proposed guidelines for implementing plastic taxes across Member States. This would provide a single definition of taxable materials, a uniform reporting requirement, and minimum threshold for recycled content. Once enough harmonization is achieved, fairness and equity between competing companies are expected, and the aggregate capacity of the EU to achieve its environmental goals would improve. In addition, comparisons can help identify good practices, such as linking fiscal measures with public awareness campaigns and financing recycling infrastructures. Studies have shown that countries where a large share of the population is engaged in environmental initiatives, such as Denmark and France, achieve higher compliance rates and greater public willingness to support these policies. On the other hand, countries like Italy struggle to realize their potential due to a lack of infrastructure or political resistance, highlighting the need for tailored solutions that consider the economic and social contexts of each Member State.

In conclusion, the implementation of plastic taxes in the EU presents a series of interconnected opportunities and challenges. While the different approaches highlight the flexibility of Member States to address their unique local conditions, they also underline the pressing need for a better-coordinated approach at the EU level. By harmonizing policies and sharing best practices, the EU can strengthen the plastic tax as an essential tool for the transition to a circular economy and fulfilment of the ambitious goals of the

¹⁴⁶ Consider, in this regard, the judgment of the CJEU in Case C-2-90 *Commission of the European Communities v Kingdom of Belgium*, Judgment of 9 July 1992, ECLI:EU:C:1992:310.

European Green Deal. The varied approaches to plastic taxation across the EU highlight the significant challenges of achieving uniform environmental policies within a union characterized by diverse economic and political landscapes. While this flexibility enables Member States to tailor their strategies to local contexts, it presents considerable difficulties in ensuring equal opportunities across the internal market. Other factors contribute to market distortions and implementation disparities, creating tension between the values of national sovereignty and the EU's shared environmental objectives. Moving forward, it is essential for the EU to strike a balance between harmonization and flexibility, ensuring that measures are both effective and fair in terms of their environmental impact. Achieving this balance will be pivotal in fostering innovation, ensuring fair competition, and ultimately attaining the EU's ambitious environmental goals. The effectiveness of the plastic tax as a tool for environmental sustainability will largely depend on the EU's ability to navigate these complexities and foster a collaborative approach among its Member States.

Chapter III

The Plastic Tax in Italy: legal and fiscal perspective

4.1. The national context of environmental issues and promotional fiscal policy interventions

4.1.1. Overview of Italy's environmental challenges, national policies and fiscal measures

Italy faces challenges in multiple areas of environmental concern that demand a concerted effort in the form of political and available fiscal measures. These challenges encompass environmental problems on a planetary scale, including air pollution, waste management problems, marine litter, and climate change-related issues. Each of these problems entails serious public health risks, threats to the ecosystem, and significant impacts on the quality of life due to externalities that necessitate internalization through fiscal policy interventions.

The dual intention of tax law concerning environmental challenges, in general, lies in the dual goals of revenue collection and the formulation of policies aimed at promoting public accountability through programs designed to achieve sustainability. On one level, environmental measures are targeted tools for revenue generation to fund public programs with sustainability objectives. On another level, they function as regulatory mechanisms intended to discourage environmentally harmful behaviour, fully aligned with the objectives of fiscal neutrality and the PPP. The PPP is enshrined in Article 191 of the TFEU and is reflected in Italian constitutional and administrative law. This principle provides the basis for the measures described below, illustrating the legal obligation of polluters to bear the cost of the damage they cause.

Air pollution is among the many other environmental hazards the country faces, particularly in industrial regions such as the Po Valley. In this area, the concentration of particulate matter (PM10 and PM2.5) consistently exceeds the levels deemed safe for human health by the EU, presenting a serious public health threat. Literature has documented the potentially grave public health consequences of air pollution, particularly its effects on respiratory and cardiovascular health, and emphasizes the pressing need for

effective regulation¹⁴⁷. The Italian National Institute for Environmental Protection and Research (ISPRA) has highlighted the persistent urban air quality problem, calling for stronger regulatory measures¹⁴⁸. The allocation of fiscal responsibility in this context underscores the importance of linking environmental taxation to the principle of ability to pay provided by Article 53 of the Italian Constitution.

Another major issue is waste management. While there have been some improvements in this area, issues such as illegal dumping persist, and a lack of adequate disposal and recycling infrastructure continues to affect southern regions in particular. In this regard, there is a definite need for tougher policies to combat illegal dumping and promote recycling, in alignment with circular economy principles. The implementation of circular economy principles is a key step, according to the EU, toward sustainable waste management.

Plastic pollution is another urgent problem, with large quantities of plastic waste in the Mediterranean Sea. This pollution not only poses a danger to marine life but also has broader ecological implications. The introduction of the plastic tax is strategically aimed at reducing the use of single-use plastics and encouraging the adoption of sustainable material use. As already examined in the previous chapter of this thesis, extensive research on plastic pollution's impact on marine ecosystems has underscored the absolute necessity of such initiatives.

With rising temperatures, altered precipitation patterns, and increasingly extreme weather events, Italy is particularly vulnerable to the effects of climate change. These climate changes bring significant repercussions for agriculture, water resources, and biodiversity. Research sheds light on regional climate change effects and the urgent need for adaptation measures.

These environmental challenges highlight the urgency of implementing strong national policies and economic incentives to promote sustainable development and safeguard public health. The very fact that environmental protection was integrated into

¹⁴⁷ Fuzzi S., Baltensperger U., Carslaw K., Decesari S., Denier van der Gon H., Facchini M.C., Fowler D., Koren I., Langford B., Lohmann U., Nemitz E., Pandis S., Riipinen I., Rudich Y., Schaap M., Slowik J. G., Spracklen D.V., Vignati E., Wild M., Williams M., and Gilardoni S., *Particulate matter, air quality and climate: lessons learned and future needs*, Atmospheric Chemistry and Physics, Vol. 15, 8217–8299, <https://doi.org/10.5194/acp-15-8217-2015>, 2015.

¹⁴⁸ ISPRA, Italy and Environment: Status, Prospects and Scenarios, ISPRA Reports, 2023.

the Italian Constitution in 2022 reflects a growing recognition of the need for coordinated action to tackle these specific issues. This constitutional amendment, which enshrines protection for the environment, biodiversity, and ecosystems, is a significant step toward securing Italy's sustainable future¹⁴⁹.

The introduction of a plastic tax in Italy directly responds to the urgent issue of plastic pollution. The tax proposal, scheduled for implementation in 2026, is formulated to reduce the consumption of single-use plastics through a levy on plastic products. It strives to spur companies and consumers to adopt greener alternatives, with the ultimate aim of diminishing environmental harm caused by plastic waste. The plastic tax fits into the bigger picture of enabling Italy's fiscal system to meet its environmental agenda, advancing the tenets of a circular economy, and reducing the impact of economic activity on the environment.

Moreover, the introduction of the plastic tax echoes key provisions in the Italian Constitution, namely the duty of the State to safeguard the environment for posterity. By melding fiscal measures with environmental objectives, Italy aims to develop a sustainable and resilient economy. The tax is expected to generate considerable revenue that can be allocated to environmental programs and the enhancement of green technologies.

Italy's environmental challenges are multifaceted and require a concerted approach that fuses regulatory measures, fiscal policies, and public awareness. The plastic

¹⁴⁹ Greco D., *The 2022 "Environmental Reform" of the Italian Constitution and International Law*, in *Italian Yearbook of International Law*, Vol. 32, n. 1, 2022, pp. 263-279; Minetti B.M, *Environment and Sustainability in the Italian Constitutional Reform: A New Perspective on Labour Law*, in *Industrial Law Journal*, September 2024.

On February 8, 2022, the Italian Parliament approved Constitutional Law A.C. 3156, amending Articles 9 and 41 of the Constitution to include environmental protection among its fundamental principles. This marked the conclusion of a legislative process that began in 2019 and reflects the growing recognition of the need for coordinated action to address environmental challenges. Article 9, previously focused on conserving the nation's landscape and historical and artistic heritage, has been expanded to encompass protecting the environment, biodiversity, and ecosystems. It also introduces guarantees for the protection of animals. Article 41 now explicitly states that economic activity must not harm health or the environment. These amendments represent a significant shift, elevating environmental protection to a value enshrined in constitutional law, founded on fundamental, pivotal, and indisputable public interests, and reaffirm a conditional commitment to the principle of solidarity provided by Article 2 of the Italian Constitution, which reflects the positive aspect of environmental taxes by allocating the costs of environmental degradation to those most responsible for it. Moreover, this change aligns Italy with other European countries that have similarly integrated environmental protection into their constitutional frameworks, such as Spain, the Netherlands, Germany, and France.

tax represents an essential piece of this arrangement, targeting plastic pollution as part of a broader strategy to address environmental challenges in the future. To understand the context of this policy, it is important to look at the historical fiscal measures Italy has employed to address environmental issues.

Historically, Italy faced several economic sanctions related to environmental violations. In the 1990s, the country introduced various sector-specific environmental taxes and fees, such as the Tax on Solid Waste Disposal (TARSU) and increased excise duties on fuels and energy with environmental objectives¹⁵⁰. These measures, aligned with environmentally focused European directives, aimed to address issues like waste management and resource consumption. However, they did not contribute to the development of a comprehensive environmental taxation framework.

In the early 2000s, Italy started implementing a series of fiscal measures aimed at transferring the tax burden from labour to pollution, in line with the broader aims of the EU within the framework of the PPP¹⁵¹. The principle, already discussed in previous chapters, lies at the heart of current environmental economics: it aims to internalize the environmental costs of the activities of economic agents by putting the financial burden of pollution on the entities responsible for it. Italy, through this measure, aimed to encourage businesses and individuals to shift towards more sustainable practices.

During this period, one of the most notable fiscal measures introduced was the implementation of levies on energy consumption. The excise duty on fossil fuels, in particular on gasoline and diesel, was raised to discourage their use; in addition, taxes on electricity consumption, especially from non-renewable sources, were introduced to disincentivize the use of polluting forms of energy¹⁵². Waste management policies also underwent significant changes. The TARSU, introduced in the 1990s, was gradually

¹⁵⁰ Italy introduced the TARSU under Legislative Decree No. 507/1993, primarily intended to cover waste management costs. In the early 2000s, fiscal measures evolved to include more incentives for sustainable waste management, such as the TIA (Environmental Hygiene Fee) and other related measures. OECD, *Environmental Performance Reviews: Italy 2002*, OECD Publishing, January 2003, pp. 86-87. Zatti A., *Environmental taxes and subsidies: some insights from the Italian experience*, in *Environmental Economics*, Vol. 11, Issue 1, May 2020, pp. 39-53.

¹⁵¹ Scarascia Mugnozza S., *Fiscalità ambientale e green economy: profili evolutivi*, Cacucci Editore, 2021, p. 109; Zatti A., *Per una riforma ecologica del fisco italiano: strumenti, prospettive e incognite*, European Climate Change Observatory (ECCO), December 2020, pp. 7-15.

¹⁵² OECD, *Environmental Performance Reviews: Italy 2002*, OECD Publishing, 2002, p. 121 and p. 135.

phased out and replaced by the TIA¹⁵³. This strategy, by linking the costs of waste disposal directly to the amount of waste generated, incentivized both individuals and businesses to reduce their waste and improve recycling practices. Italy introduced a limited carbon tax in 1998 under Article 8 of Law No. 448 of 23 December 1998 (Budget Law 1999), aimed at taxing CO₂ emissions from certain energy products. However, this measure had a restricted scope and was gradually overshadowed by the EU's "*Emissions Trading System*" (ETS), which Italy has actively participated in since its inception in 2005¹⁵⁴. The ETS is a market-based scheme designed to cap and reduce greenhouse gas emissions across major industrial sectors. These measures illustrate the interdependencies between direct taxation (tax on carbon emissions) and market-based mechanisms (ETS) which aim to achieve the environmental targets of EU law by reducing greenhouse gas emissions while adhering to principles of non-discrimination and free movement.

In addition to these measures, Italy implemented subsidies and support measures for renewable energy and energy efficiency improvements. The most notable example was the "*Conto Energia*" program, launched in 2005, which offered feed-in tariffs for photovoltaic installations. This program allowed Italy to not only increase renewable energy production but also to position itself among the European leaders in the field of solar energy deployment¹⁵⁵. Likewise, the *Ecobonus* tax deductions were introduced for

¹⁵³ The TIA was introduced by Legislative Decree No. 22 of February 5, 1997, "Implementation of Directives 91/156/EEC on waste, 91/689/EEC on hazardous waste, and 94/62/EC on packaging and packaging waste" (also known as "Decreto Ronchi"), which established the PPP in Italian waste management law. The implementation framework for the TIA was subsequently defined by Presidential Decree No. 158 of April 27, 1999, "Regulation laying down rules for the standard methodology to define the environmental hygiene fee in accordance with Article 49 of Legislative Decree No. 22 of February 5, 1997", which provided guidelines for municipalities to transition from the TARSU. However, its adoption was gradual, with many municipalities integrating the TIA progressively during the early 2000s.

¹⁵⁴ Mongelli I., Tassielli G., Notarnicola B., *Chapter 18: Carbon Tax and its Short-Term Effects in Italy: An Evaluation Through the Input-Output Model*. In: Suh, S. (eds) *Handbook of Input-Output Economics in Industrial Ecology. Eco-Efficiency in Industry and Science*, Vol 23. Springer, Dordrecht, pp. 357-377; Verde S.F., Borghesi S., *The International Dimension of the EU Emissions Trading System: Bringing the Pieces Together*, in *Environmental and Resource Economics* (2022) 83:23-46, July 2022, pp. 23-25.

¹⁵⁵ The "*Conto Energia*" program was introduced in Italy through the Ministerial Decree of July 28, 2005, which established the criteria for providing incentives for electricity production through the photovoltaic conversion of solar energy. This decree, later amended by the Ministerial Decree of February 6, 2006, granted incentives for photovoltaic installations through feed-in tariffs based on the energy produced. Bonifaci P., Copiello S., *Incentive Policies for Residential Buildings Energy Retrofit: An Analysis of Tax Rebate Programs in Italy*, in: Bisello A., Vettorato D., Laconte P., Costa, S. (eds) *Smart and Sustainable Planning for Cities and Regions. SSPCR 2017. Green Energy and Technology*, 2018, pp. 267-279; Martini C., *The Ecobonus Incentive Scheme and Energy Poverty: Is Energy Efficiency for All?* in: Bisello A.,

building renovations aimed at achieving energy efficiency¹⁵⁶. These incentives included thermal insulation, the replacement of windows to the installation of high-efficiency heating systems, bringing benefits to both the environment and the economy. In addition, the Superbonus 110 per cent, introduced in 2020, provided further significant incentives for energy efficiency upgrades and the implementation of seismic risk reduction in buildings. This measure allowed homeowners to deduct 110 per cent of the expenses incurred for various interventions, including thermal insulation, the installation of photovoltaic systems, and the replacement of heating systems with more efficient alternatives¹⁵⁷. It significantly boosted the construction industry and also enhanced Italy's quest for sustainable construction with improved environmental and economic outcomes. Similarly, the Plastic Tax is a scheme designed to encourage reduced production and consumption of single-use plastic products (MACSI) through taxation on these items. The tax supports Italy's strategic goal of promoting a circular economy while minimizing plastic waste, aligning with the environmental objectives of other incentive programs. The Plastic Tax discourages the use of single-use plastics and promotes sustainable alternatives, working in tandem with renewable energy and energy efficiency incentives. Such measures reflect Italy's commitment to integrating environmental sustainability into fiscal policies, fostering innovation, and encouraging the growth of green economies.

These fiscal measures demonstrated how Italy began to seriously integrate environmental concerns into its economic framework. While at the time they lacked the comprehensiveness and systematic approach of the ecological tax reforms put in place in countries like Germany, they nonetheless represented a considerable step forward in addressing environmental problems through careful fiscal policies. Through taxation and subsidies, Italy sought not only to develop new technologies but also to promote green innovation and facilitate the transition to a sustainable economy.

Vettorato D., Haarstad H., Borsboom-van Beurden J. (eds) *Smart and Sustainable Planning for Cities and Regions*. SSPCR. Green Energy and Technology, 2021, pp. 497-510.

¹⁵⁶ In Italy, the “*Ecobonus*” tax deductions were introduced to incentivize energy-efficient renovations of buildings, such as thermal insulation, window replacement, and the installation of high-efficiency heating systems. The main purpose of these tax deductions is to reduce both energy consumption and environmental pollution while also generating economic benefits. The “*Ecobonus*” scheme is enshrined in Decree-Law No. 63 of June 4, 2013, which was converted into law with amendments by Law No. 90 of August 3, 2013.

¹⁵⁷ The “*Superbonus 110 per cent*” was introduced by Decree-Law No. 34 of May 19, 2020 (also known as “*Decreto Rilancio*”), converted with amendments by Law No. 77 of July 17, 2020.

In recent years, Italy has built on its fiscal policies, intending to be progressively aligned with its environmental ambitions. The “*National Recovery and Resilience Plan*” (NRRP) provided significant resources to the ecological transition in response to the Covid-19 pandemic¹⁵⁸. Green initiatives, which involve investments in renewable energy, energy efficiency, sustainable mobility, and the circular economy, are allocated approximately €70 billion, or about 30 per cent of the total resources.

The core current fiscal policy includes the forthcoming tax on plastic, scheduled for 2026, aimed at reducing the consumption of single-use plastic products. It is expected that a tax on plastic goods will spur more environmentally friendly practices, hence leading to a reduction in plastic use and subsequent pollution. The funds raised through this tax are expected to be employed in environmental programs and green technology research and development.

Additionally, Italy committed to eliminating environmentally harmful subsidies, including fossil fuel subsidies, and substituting them with environmentally friendly funding initiatives¹⁵⁹. This approach is consistent with the EU-wide goals of the European Green Deal and the Recovery Fund under the Next Generation EU.

The evolution of the fiscal policy context of Italy represents a larger trend that integrates environmental concerns into economic planning. The transition from labour to environmental taxes in the early 2000s was quite a progression in this direction. By making environmentally damaging acts more expensive, Italy has aimed to create economic incentives for both corporations and individuals to embrace sustainable practices. This is aligned with the PPP, forming a pillar of environmental economics.

The plastic tax is yet another continuation of this. Italy’s targeting of single-use plastics is tackling one of the biggest environmental problems of our day. It has severe consequences for marine health and human wellbeing; hence, reduction in plastic waste is essential for sustainability goals. The plastic tax is effective in curbing plastic

¹⁵⁸ The “*National Recovery and Resilience Plan*” (NRRP) began with Italy as a part of the “*Next Generation EU*” (NGEU) program-funding agreement that was negotiated by the EU in response to the Covid-19 pandemic. On April 26, 2021, the NRRP was presented and approved by the government of Italy and subsequently approved by the European Commission on June 22, 2021. The resources for the NRRP allocation by decree were provided by Decree-Law No. 59 of May 6, 2021, which established the Complementary Fund for financing the measures of the plan.

¹⁵⁹ OECD, Opportunities and challenges of Environmental Fiscal Reform in Italy, 2021, pp. 5-6.

consumption, with another side aim mentioned, which is to stimulate innovation in the formation of sustainable materials and products.

The phase-out of dirty subsidies is another major component of Italy's fiscal policy at the moment. Subsidies for fossil fuels have, for a long time, been criticized for promoting their wasteful consumption and blocking the transition to renewable forms of energy. Redirecting such funds toward alternative energies can fast-track the process of moving to a low-carbon economy and the development of green technologies.

The advantage of this taxation scheme concerning sustainability is also supported by academic research. It has been shown that environmental taxes are promising tools capable of reducing pollution and promoting the adoption of cleaner technologies. For instance, in its report on environmental fiscal reform, the OECD discusses the dual advantages of such taxes: helping to internalize the environmental costs of economic activities while generating revenues that can be put into sustainable initiatives¹⁶⁰.

Integrating environmental protection into national development strategies is another level that creates a broad framework in which these measures can operate. This includes ensuring environmental considerations are taken into account in governance and economic planning. Italian fiscal policy tightly encompasses the fittingness of the country, with reference to international commitments to the Paris Agreement and towards the United Nations (UN) Sustainable Development Goals, acceding to the sustainability province in the longer term¹⁶¹.

4.2. The constitutional foundations of environmental fiscal policy

4.2.1. Environmental protection in the Italian Constitution

The incorporation of environmental protection into the Italian Constitution through Constitutional Law No. 1 on February 11, 2022, marks a significant development in Italy's legal framework.

This amendment provides autonomous constitutional status to the safeguarding of the environment, biodiversity, and ecosystems. It thereby enhances the importance of

¹⁶⁰ OECD, *Chapter 1: Environmental Fiscal Reform for Poverty Reduction*, DAC Guidelines and Reference Series, OECD Publishing, 2005, p. 24.

¹⁶¹ OECD, *Opportunities and challenges of Environmental Fiscal Reform in Italy*, 2021, p. 4.

sustainability and aligns Italy with other progressive European legal systems¹⁶². Before this reform took place, environmental protection was already implicitly acknowledged within a fragmented system comprising various constitutional provisions. In particular, during the 2001 revision of Title V of the Italian Constitution, lawmakers recognized environmental protection for the first time by granting exclusive legislative authority to the State concerning “*environmental protection, ecosystem management, and cultural heritage*” (Article 117, para. 2, *lett. s*), Italian Constitution). The Italian Constitutional Court interpreted this as an acknowledgment of the environment’s overarching nature; it could not be restricted to a singular legal domain but must be considered a fundamental public interest that unifies both State and regional jurisdictions. In Judgment No. 85 of April 9, 2013, the Court addressed the balance between environmental protection and industrial activities, emphasizing that environmental protection must be harmonized with economic and social needs, particularly in cases involving industrial facilities of strategic national interest. However, without an explicit mention of environmental concerns in its foundational principles, challenges arose in case law and ordinary legislation, especially regarding how to balance rights related to environmental protection with other constitutionally guaranteed interests such as economic freedom (Article 41 Italian Constitution) and private property rights (Article 42 Italian Constitution)¹⁶³. In this regard, the Italian Constitutional Court, in judgment No. 641 of December 30, 1987, declared that “[t]he environment is protected as a determinant element of the quality of life. Its protection does not pursue abstract naturalistic or aesthetic goals but rather expresses the need for a natural habitat in which humans live and act, which is necessary for the community and, through it, for the citizens, according to widely felt values. It is primarily imposed by constitutional precepts (Articles 9 and 32 of the Constitution), thus it rises to the status of a primary and absolute value”. In other words, the protection of the environment must be considered a primary constitutional value, which can justify limitations on economic freedom and private property rights when necessary to protect public health and the environment. Furthermore, in Judgment No. 378 of November 14, 2007, the Court defined the “*environment*” as a “*transversal matter*”, meaning that

¹⁶² Uricchio A.F., *I tributi ambientali e la fiscalità circolare*, in *Diritto e Pratica tributaria*, No. 5/2017, p. 1581 and ss.

¹⁶³ Guido V., *I tributi ambientali. Capacità contributiva del potere e proposte per il Legislatore*, La Sapienza Editrice, Roma, 2020, p. 45.

different interests converge on the same object: the interest in environmental conservation and those related to its uses”.

The reforms enacted in 2022 modified Article 9 to explicitly state that protecting the environment is imperative for future generations as well as a shift that introduces an important temporal perspective linked to intergenerational equity principles reflected in international standards like those found in the Report of the World Commission on Environment and Development entitled “*Our common future*” of 1987 (also known as “*Brundtland Report*”)¹⁶⁴ and further emphasized in the Lisbon Treaty of 2009. This change transcends symbolism; it actively creates a responsibility for legislators and public agencies to develop policies aligned with sustainable practices. Additionally, amendments were made to Article 41 stating that respect for environmental considerations now serves as a constraint on private economic initiatives. This update underscores that economic growth must coincide with sustainability benchmarks while enhancing governmental regulation to promote environmentally friendly economies.

Despite these advancements being instituted at a constitutional level, ongoing scholarly discussions question their actual effectiveness in driving legislative and administrative transformations. While recognizing environmental care within core constitutional texts may lead to enhanced coherence among public policies – facilitating fiscal measures such as carbon taxes grounded firmly within constitutional legality – it simultaneously raises critical inquiries about how this focus will coexist with other essential civil liberties amid challenges posed by post-pandemic recovery efforts. Ongoing academic debates cast doubt on the actual effectiveness of these constitutional provisions in driving necessary legislative and administrative transformations, especially when countered by institutional resistance and various competing priorities at both national and regional levels.

A prominent example illustrating these dilemmas is found in waste management policies. Despite recent constitutional reforms aimed at enhancing environmental

¹⁶⁴ The “*Brundtland Report*”, named after the Chairwoman of the Commission, Gro Harlem Brundtland, established principles for pursuing sustainable development. It indicated that major global environmental dilemmas were rooted in extreme poverty in the Global South, coupled with unsustainable levels of consumption and production in the Global North. The report advocated for an approach combining development and the environment, coining the term “*sustainable development*”, defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In 1989 the report was subjected to debate at the UN General Assembly which subsequently decided to convene a UN Conference on Environment and Development

protection and Italy's formal commitment to EU directives, infringements have been consistently raised by the European Commission for Italy's failure to comply with mandated waste management practices and landfill standards under EU Directive 2008/98/EC. For instance, in the judgment *European Commission v. Italian Republic*, the CJEU ruled that Italy failed to meet its obligations due to ongoing operations of non-compliant landfills; this underscores a notable disconnect between constitutional commitments and their enforcement¹⁶⁵.

Air quality management reveals another dimension of institutional obstacles. Although recognized by the Italian Constitutional Court as a “*transversal matter*” linking environmental protection with public health and economic factors¹⁶⁶, Italy has not met air quality benchmarks established by EU Directive 2008/50/EC. This inadequacy has resulted in several judgments against Italy by the CJEU, including in Case C-644/18 *European Commission v. Italian Republic*, which confirmed that insufficient measures were taken to ensure compliance with PM10 concentration limits on both daily and annual bases. These instances highlight the difficulties of translating constitutional ideals into actionable policy frameworks when administrative capacity falls short.

Additionally, disparities exist in the enforcement of environmental laws across different Italian regions due to decentralization driven by the 2001 constitutional reform of Title V of the Italian Constitution¹⁶⁷. Regions in southern Italy frequently experience setbacks caused by limited resources and governance inefficiencies compared to their northern counterparts; this geographic imbalance complicates the uniform

¹⁶⁵ Court of Justice of the European Union (CJEU), Case C-196/13 *European Commission v. Italian Republic*, Judgment of 2 December 2014, ECLI:EU:C:2014:2407. In this judgment the European Judges stated that Member States are obliged, under Article 4 of Directive 75/442, to ensure that waste is either recovered or disposed of without endangering human health or using methods that may harm the environment (more precisely, using the words of the Court “(...) a deterioration in the environment is inherent in the presence of waste in a landfill irrespective of the nature of the waste in question, and that merely closing down a landfill, or covering waste with earth and rubble, cannot suffice for compliance with the obligations arising in particular under Article 4 of Directive 75/442 (see, to that effect, judgment in *Commission v Portugal*, EU:C:2010:331, paragraph 37)”) (para. 52). This decision highlights Italy's failure to comply with earlier obligations established in Case C-135/05 *Commission of the European Communities v. Italian Republic*, Judgment of 26 April 2007, ECLI:EU:C:2007:250, and underscores the systematic nature of the infringement, which stems from a lack of enforcement and remediation measures.

¹⁶⁶ Italian Constitutional Court, Judgment No. 378 of November 14, 2007.

¹⁶⁷ Cipollina S., *Fiscalità e tutela del paesaggio*, in *Rivista di Diritto Finanziario e Scienza della Finanze*, Vol. 4, parte I, 2008, p. 552 and ss.

implementation of key constitutional principles like intergenerational equity introduced in the 2022 reforms.

These cases illustrate an urgent need for robust administrative structures and increased institutional accountability to reconcile lofty constitutional goals with practical realities on the ground. Absent such improvements, there exists a real risk that the critical transformational potential embedded within these reforms will be compromised by persistent systemic breakdowns and conflicting interests across multiple layers of governance.

Nevertheless, the 2022 constitutional reform represents a significant step forward, and its viability will depend on the ability of Italian institutions to translate constitutional principles into tangible policies that balance environmental protection with the need for economic development¹⁶⁸. This, in turn, operationalizes broader European initiatives, such as the Green Deal and the Next Generation EU Programme, which emphasize sustainability and environmental protection as central to economic recovery and growth. This alignment will be of great significance for Italy in fulfilling its international commitments, such as those arising from the Paris Agreement and the UN Sustainable Development Goals.

Apart from that, the reform has consequences for various branches, notably labour law¹⁶⁹. Articles 9 and 41 connect environmental objectives to the social ends toward which public and private economic activity can be oriented. This opens up the possibility of extending the scope of employers' health and safety obligations to include a safe and healthy environment. The incorporation of environmental sustainability into the

¹⁶⁸ Greco D., *The 2022 "Environmental Reform" of the Italian Constitution and International Law*, in *Italian Yearbook of International Law*, Vol. 32, n. 1, 2022, pp. 263-279.

¹⁶⁹ Ultimately, integrating environmental sustainability into labour law coincides with the more encompassing notion of "*climate justice*", which refers to the fair distribution of the burdens and benefits of climate policies across diverse social groups. This vision challenges the traditional approach to labour law, redefining the role of employers to incorporate ecological considerations in order to maintain a secure and healthy working environment. Equally, it ensures that communities impacted by business operations also benefit from improved environmental conditions. Corporate social responsibility (CSR) complements this by promoting best practices that go beyond mere regulatory compliance. Labor law, climate justice, and CSR intersect with a growing realization that environmental and social issues are interconnected and require integrated solutions. Sustainable practices in labour law can reduce a firm's carbon footprint while enhancing employee well-being and advancing both social and environmental objectives. This perspective is gaining traction through the advent of international normative frameworks such as the UN Guiding Principles on Business and Human Rights and European Union legislation on corporate sustainability due diligence.

regulation of labour reflects a growing awareness that environmental and social issues cannot be understood in isolation.

In delivering these amendments, as anticipated in the previous paragraphs, the Constitutional Court has emphasized the “*transversal*” character of environmental protection. The Court highlights that, despite environmental protection being commonly viewed as a single area of regulation, its provisions must necessarily be spread over several legal fields and policies. This interpretation lends credence to a view of environmental governance modelled after holism, whereby environmental considerations permeate all aspects of public and private decision-making. Accordingly, the 2022 constitutional reform represents a key development in the Italian legal framework for environmental protection that may contribute to sustainable development and intergenerational equity. The implementation of these principles, however, would still require ceaseless nurturing and harmonized cooperation among all Italian institutions, along with a continuous and sustained examination of contemporary international and European legal standards.

4.2.2. Challenges in balancing Environmental Taxation and the Ability to Pay Principle

The principle of ability to pay is inscribed in Article 53 of the Italian Constitution and is closely linked to solidarity and substantive equality, established by Articles 2 and 3 respectively¹⁷⁰. It forms one of the pillars of the Italian tax system, requiring tax laws to be proportionate and equitably applied according to the economic capability of individual taxpayers. The principle provides guarantees of a two-fold nature: one to the State, devising tax regimes on the basis of genuine economic indicators; and the other to the taxpayer, protecting against unwarranted or disproportionate fiscal burdens. In essence, the principle is both a safeguard for taxpayers and a constitutional limitation on legislative powers, requiring tax laws to be justified by specific, measurable indicators of economic capacity.

¹⁷⁰ Tesauro F., *Compendio di diritto tributario*, 4^a ed., Milano, 2010, p. 66; Bastinoni Ferrara F., *Capacità contributiva*, in Enc. dir., Agg., III, Milano, 1999, pp. 345 and ss; Gallo F., *Le ragioni del fisco*, Bologna, 2017, pp. 59 and ss., Fedele A., *Diritto tributario (principi)*, in Enc. dir., Annali, II, 2, Milano, 2008, pp. 447 and ss; Falsitta F., *I principi di capacità contributiva e di eguaglianza tributaria nel diritto comunitario e nel diritto italiano tra “ragioni del fisco” e diritti fondamentali della persona*, in Rivista di Diritto Tributario., No. 5, 2011, I, pp. 519 and ss.; Bastinoni Ferrara F., *Eguaglianza e capacità contributiva*, in Rivista di Diritto Tributario., No. 6, 2008, I, pp. 477 and ss.

The application of the ability to pay principle with regard to environmental taxes, for instance, the planned tax on plastics in Italy, raises substantial constitutional and practical dilemmas. Environmental taxes typically differ from traditional income or wealth taxes, which are based on established indicators of income, profit, or wealth. Instead, they are frequently linked to behaviours such as the consumption of single-use plastics or the emission of greenhouse gases. These taxes aim to internalize externalities and meet the requirements of the PPP, as embodied in Article 191 of the TFEU. However, the interaction between the PPP and the ability to pay principle often leads to complex debates. The challenge lies in ensuring these measures are not only effective but also equitable.

As discussed in previous chapters, environmental taxes are not merely fiscal instruments to raise revenue but also tools to achieve broader social goals, including influencing behaviour and fostering environmental improvements. An important point of contention involves the compatibility of these taxes with the principle of ability to pay, as set forth in Article 53 of the Italian Constitution. The proposed plastic tax in Italy, for example, aims to reduce the consumption of single-use plastics while funding environmental initiatives. This reintroduces a fundamental question: whether and how such a tax can be made progressive to address the economic capacity of taxpayers without placing an undue burden on the least-advantaged members of society. Consequently, ensuring that environmental taxes align with measurable benchmarks of economic capacity – such as income or consumption – is crucial to defending their constitutional validity and equitable application.

The doctrinal debate surrounding the compatibility of environmental taxes with the ability to pay principle has produced conflicting interpretations. A traditional view, firmly grounded in the solidaristic interpretation of the principle, contends that the imposition of any tax or fiscal obligation must stem from specific and measurable wealth indicators, including income, assets, production, or consumption¹⁷¹. Polluting activities, in and of themselves, do not constitute sufficient economic capacity to justify taxation under Article 53 of the Constitution. Consequently, this interpretation confines

¹⁷¹ Falsitta G., *I principi di capacità contributiva e di eguaglianza tributaria nel diritto comunitario e nel diritto italiano tra "ragioni del fisco" e diritti fondamentali della persona*, in *Rivista di Diritto Tributario*, Vol. No. 5/2011, I, p. 519 and ss; Alfano R., *Tributi Ambientali: profili interni ed europei*, Torino, 2012, p. 57.

environmental taxes to those levies tied to economic activities generating assessable wealth, thereby precluding the direct taxation of pollution levels unless framed as extra fiscal instruments.

On the other hand, alternative interpretations argue that the use or depletion of scarce environmental resources can serve as an independent basis for economic capacity. This perspective arises from the notion that actions resulting in polluting products or scarce environmental resources can be compared to the general concept of the consumption of goods. Authoritative doctrine, in an attempt to reconcile the conventional interpretation of the ability to pay principle with the European model of environmental taxation, has proposed interpreting environmental degradation as a form of consumption that falls within one of the three traditional indicators of economic capacity: income, assets, or consumption¹⁷².

Under this logic, pollution and resource exploitation are viewed as manifestations of the taxpayer's economic advantage conferred by society in a monopolistic sense. This perspective legitimizes the fiscal burden on taxpayers as a mechanism for accounting for the environmental costs imposed on the broader community. Consequently, environmental taxes are aligned with the traditional interpretation of the ability to pay principle. If pollution is interpreted as a form of consumption, this approach renders environmental taxation consistent with constitutional principles of equity, particularly when the tax rate is calibrated to the degree of environmental damage caused or the depletion of shared environmental resources.

In this context, the principle of equality, as articulated through the ability to pay principle enshrined in Article 53 of the Italian Constitution, gains a new dimension. The Italian debate surrounding the compatibility of environmental taxes with the ability to pay principle reflects a parallel discussion at the European level regarding the dual role of the PPP. As in the European debate on Article 174 of the TFEU the complex issue of constitutional justification for environmental taxation in Italy has been approached from two perspectives.

First, some legal arguments frame environmental taxes as fundamentally compensatory in nature. According to this perspective, the rationale lies in individual

¹⁷² Gallo F., Marchetti F., *I presupposti della tassazione ambientale*, in *Rassegna Tributaria*, Vol. No. 1, 1999, p. 120.

responsibility to compensate for the public expenditure required to restore or remedy environmental harm caused by specific actions. The allocation criterion here is based on the specific benefit enjoyed by the taxpayer through the public service of environmental restoration or remediation¹⁷³. However, a critical limitation of this approach is the difficulty in precisely quantifying the benefit derived from these services, which complicates the determination of a fair tax burden.

In the other case, the connection between the basis of environmental taxation and Article 53 of the Italian Constitution is found in the concept of “*compensation for external economies and diseconomies*”. Thus, whenever an individual benefits from committing an act or engaging in behaviour that harms the community and necessitates government intervention to remedy or compensate for the resulting damage, this benefit can be considered evidence of the individual’s ability to pay. The benefit an individual derives from actions that harm the public justifies a proportional contribution to the cost of repairing the damage. While this approach shifts the focus from the harm caused to the benefits received, it risks legitimizing polluting activities and fails to address the coercive nature of taxation. Therefore, the individual’s impact on the environment serves as a valid measure of their ability to pay taxes.

Both approaches, however, fail to fully address the core issue in the European model of environmental taxation: the challenge of deriving indicators for taxation from situations of mere advantage or utility, which are often difficult to reconcile with traditional benchmarks of economic capacity under Article 53.

The broader interpretation of economic capacity constructed here extends wealth indicators beyond the conventional to encompass behaviours that confer economic and social advantages through the use or depletion of limited resources. This conceptualization not only complies with Article 3 of the Italian Constitution, which emphasizes substantive equality but also supports the constitutional principle of social solidarity enshrined in Article 2. In addition, linking environmental taxes with the principles of a circular economy can strengthen their role in sustainable development. Tax incentives that promote circular economic practices could internalize external costs while encouraging resource efficiency and waste reduction. A major challenge is mitigating the regressivity of environmental taxes, especially for small and medium-sized

¹⁷³ Del Federico L., *Tasse, tributi paracommutativi e prezzi pubblici*, Torino 2000, pp. 102 and ss.

enterprises and economically unstable regions. To address this, the ability to pay principle provides a framework for designing progressive rates or targeted exemptions that minimize the burden on vulnerable groups while ensuring polluters contribute their fair share to the costs of restoration.

Thus, this framework paves the way for environmental taxes that, while being economically viable and adhering to established fiscal principles, also impose responsibility on polluters and address urgent ecological challenges¹⁷⁴. Beyond discouraging the use of single-use plastics, the tax demonstrates the potential of environmental taxes to align sustainability with fiscal policies, addressing both local and global environmental goals.

Italy's planned plastic tax exemplifies these challenges. The measure aims to discourage the use of single-use plastics while simultaneously generating revenue to fund environmental programs, in alignment with the PPP and Italy's sustainability agenda. However, concerns have been raised about its potential regressiveness, particularly for SMEs and economically fragile regions such as southern Italy. SMEs, often lacking the resources to invest in sustainable alternatives, could bear a disproportionate share of the tax burden. Similarly, businesses in economically disadvantaged regions may face unfair disadvantages due to uniform tax rates that fail to account for regional inequalities. To address these concerns, exemptions and reductions have been proposed for specific products and activities, such as plastics intended for medical use. Additionally, scholars have suggested that environmental taxes could be calibrated to reflect the economic advantage derived from resource consumption, with higher tax rates imposed on pollution-intensive production methods, as justified by Articles 32 and 44 of the Italian Constitution, which support the orientation of private economic activity toward social and environmental objectives¹⁷⁵.

Equally significant is the consideration of how revenues from environmental taxes are allocated. Article 2 of the Italian Constitution emphasizes social solidarity, while EU directives underscore the necessity of transparency in the use of revenues from environmental taxes. Allocating funds to projects promoting environmental objectives,

¹⁷⁴ Rosembuj T.R., *La capacità contributiva del non fare*, in *Diritto e Pratica tributaria* Vol. No. 6/2012, p. 1295 and ss.

¹⁷⁵ Gallo F., Marchetti F., *I presupposti della tassazione ambientale*, in *Rassegna Tributaria*, Vol. I, 1999, p. 146.

such as subsidies for renewable energy or public awareness campaigns, can reinforce public trust and ensure that these taxes are perceived as tools for environmental protection rather than mere revenue-generating measures.

The classification of environmental taxes as either taxes or fees also presents significant challenges. The Italian Constitutional Court has clarified that the ability to pay principle applies exclusively to taxes, which serve as contributions to public needs, while fees are instead linked to specific services under the logic of “*do ut des*”¹⁷⁶.

Environmental taxes are therefore less problematic when properly categorized, yet their design should be guided by specific objectives, which can be viewed in light of constitutional provisions while serving extra fiscal aims. Environmental taxes create new forms of fairness, distinct from those inherent in traditional income taxation. Specifically, the consumption or depletion of limited environmental resources, coupled with the corresponding economic benefits, can justify taxation. This approach aligns with the European model of environmental taxation, which stresses that the extent of environmental damage or resource depletion should determine the tax rate.

The effects of Italy’s plastic tax within this broader framework offer insight into balancing constitutional protections with environmental objectives. By adopting creative strategies for tax design and enforcement – for example, linking tax rates with the anticipated environmental costs of production methods or consumption patterns – Italy can set a precedent for integrating fiscal justice with ecological responsibility.

Environmental taxes, if effectively designed and enforced, can internalize environmental externalities and promote sustainable behaviours without imposing disproportionate costs on vulnerable taxpayers or economically weaker regions. Ensuring transparent use of revenues and implementing robust enforcement measures are critical for these taxes to achieve their intended goals of environmental sustainability and fairness.

¹⁷⁶ See, in this sense, Italian Constitutional Court, judgments No. 39 of May 13, 1964, and No. 23 of April 3, 1968.

4.3. Complexities in the legal qualification of environmental taxes: the case of the Italian Plastic Tax

4.3.1. *Imposta, Tassa or Tributo?*

The legal classification of the plastic tax, whether as an “*imposta*”, “*tassa*” or “*tributo*” offers critical insights into its fiscal and legal connotations within the Italian tax system. This distinction is significant not only for administrative structuring but also for understanding the constitutional and policy foundations underlying such measures. An “*imposta*” is a tax levied to fund public expenditures without any direct link to services received by the taxpayer, such as income tax or VAT. By contrast, a “*tassa*” corresponds to a specific public service or activity, requiring a corresponding payment, such as waste collection fees. The broader term “*tributo*” encompasses both “*imposte*” and “*tasse*” and generally refers to any fiscal obligation imposed by the State.

Environmental taxes, including the plastic tax, complicate this framework due to their extra fiscal objectives. These aim to promote behavioural changes and environmental sustainability rather than merely generate revenue. For instance, the plastic tax does not directly benefit taxpayers and aligns more closely with the characteristics of an “*imposta*”. It imposes obligations on producers and consumers of single-use plastics to take responsibility for their environmental impact.

Structurally the defined “*tributi ambientali in senso stretto*”, also known as “*tributi strutturalmente ambientali*” are characterized by a direct causal link between the taxable event and environmental degradation¹⁷⁷. The taxable base is determined by

¹⁷⁷ V. Stefani, *Finalità e limiti della tassazione ambientale*, in Bollettino Tributario, No. 20, 1999, p. 1493; Esposito De Falco S., *L'armonizzazione fiscale e le tasse ecologiche*, in Rivista Giuridica dell'Ambiente No. 5, 2004, p. 658; Cipollina S., *Fiscalità e tutela del paesaggio*, in Rivista di Diritto Finanziario e Scienza delle Finanze No. 4, 2008, I, p. 560; Cipollina S., *Osservazioni sulla fiscalità ambientale nella prospettiva del federalismo fiscale*, in Rivista di Diritto Finanziario e Scienza delle Finanze No. 4, 2009, I, p. 578; Gallo F., *Profili critici della tassazione ambientale*, in Rassegna Tributaria, No. 2, 2010, p. 303; Uricchio V., *Le frontiere dell'imposizione tra evoluzione tecnologica e nuovi assetti istituzionali*, Bari, 2010, p. 184; Uricchio V., *Prelievo fiscale e emergenze ambientali*, in *Studi in onore di Lelio Barbiera*, in Pennasilico, p. 1490; Procopio M., *La natura non commutativa dei tributi ambientali e la loro compatibilità con il principio di capacità contributiva*, in Diritto e Pratica Tributaria, No. 5, pp. 1168-1169; Dorigo S., *I tributi ambientali nel sistema costituzionale italiano*, in Dorigo-Mastellone, *La Fiscalità per l'ambiente. Attualità e prospettive della tassazione ambientale*, p. 154 ss.; Guido V., *La Consulta frena i primi entusiasmi federalisti in materia di fiscalità ambientale; spunti per una riflessione in tema di fiscalità locale*, in Rivista Trimestrale di Diritto Tributario, No. 1, 2013, p. 224; Parente S.A., *Tax tools of environmental protection*, in Sitek-Terem-Wójcicka (eds.), *Collective human rights in the first half of the 21st century*, Józefów, 2015, p. 333; Strianese, *Fini extrafiscali del tributo e protezione dell'ambiente nel contesto globale e nazionale. La prospettiva italiana*, in F. Amatucci-Alfano, *Ordinamenti tributari a confronto. Problematiche comuni*

measurable physical units, such as pollutant emissions or resource depletion¹⁷⁸. For instance, taxes on greenhouse gas emissions, noise pollution, or resource extraction fall within this category, as they establish a clear connection between the harmful activity and the tax imposed¹⁷⁹. However, this category raises significant challenges. Structurally environmental taxes often lack the abstraction typical of traditional taxes, as they prioritize environmental functions. The explicit incorporation of environmental goals within the taxable event aligns with the PPP, but the inverse correlation between behavioural and fiscal effects creates a dilemma: the more effective the tax is at promoting environmentally friendly behaviour, the less revenue it generates¹⁸⁰.

In contrast, the “*tributi ambientali in senso lato*” or “*tributi con finalità ambientali*” rely on traditional taxable bases such as income, consumption, or wealth but include environmental protection as a secondary goal¹⁸¹. These taxes aim to encourage or discourage specific behaviours or the use of environmentally friendly products. In this context, the environment is external to the taxable event and serves as an extra fiscal value or goal¹⁸². For example, increasing the cost of environmentally harmful goods aims to shift consumer preferences towards more sustainable alternatives. However, the marginal role of environmental protection in these taxes has been criticized as merely a pretext to

e aspetti procedurali. Italia, Spagna e Colombia, Giappichelli, Torino, 2017, p. 397 e 408; Uricchio V., *I tributi ambientali e la fiscalità circolare*, in *Diritto e Pratica Tributaria*, No. 5, 2017, p. 1851; Uricchio V., *Classificazioni tradizionali e classificazioni innovative dei tributi*, in Uricchio-Peragine-Aulenta, *Manuale di scienza delle finanze, diritto finanziario e contabilità pubblica*, Bari, 2017, p. 229; Parente-Kisiel, *Sensibilità culturale, educazione all'ambiente e leva fiscale*, in Pagano, *Cultura e saperi per un nuovo umanesimo*, Taranto, 2018, p. 175; Dorigo-Mastellone, *La declinazione di “ambiente” e la tassazione ambientale oggi*, in Ficari, *I nuovi elementi di capacità contributiva. L'ambiente*, Canterano (RM), 2018, p. 58 and ss.; Boria P., *Diritto tributario*, II ed., Torino, 2019, pp. 215-216.

¹⁷⁸ Cipollina S., *Fiscalità e tutela del paesaggio*, cit., p. 560.

¹⁷⁹ Gallo F., *Profili critici della tassazione ambientale*, cit., p. 303; Procopio M., *La natura non commutativa dei tributi ambientali e la loro compatibilità con il principio di capacità contributiva*, cit., pp. 1168-1169; Parente S.A., *Tassazione ambientale e politiche d'intervento: principi, rimedi e forme di prelievo*. Parte prima., in *Rivista Trimestrale di Diritto Tributario*, No. 3, 2020, p. 643.

¹⁸⁰ Verrigni V., *La rilevanza del principio “chi inquina paga” nei tributi ambientali*, in *Rassegna Tributaria*, No. 5, 2003, p. 1621.

¹⁸¹ Cipollina V., *Osservazioni sulla fiscalità ambientale nella prospettiva del federalismo fiscale*, cit., p. 578; Gallo F., *Profili critici della tassazione ambientale*, cit., p. 303; Dorigo S., *I tributi ambientali nel sistema costituzionale italiano*, cit., p. 152 and ss.; Guido V., *La Consulta frena i primi entusiasmi federalisti in materia di fiscalità ambientale; spunti per una riflessione in tema di fiscalità locale*, cit., p. 224; Uricchio, *I tributi ambientali e la fiscalità circolare*, cit., p. 1851.

¹⁸² Perfetti L.R., *Premesse alle nozioni giuridiche di ambiente e paesaggio. Cose, beni, diritti e simboli*, in *Rivista Giuridica dell'Ambiente*, 2009, p. 35 and ss.; Canfora I., *Agricoltura, tutela del paesaggio e sviluppo delle energie alternative*, in *Studi in onore di Lelio Barbiera*, Pennasilico, Napoli, 2012, p. 227 and ss.

justify revenue collection¹⁸³. Unlike structurally environmental taxes, this category prioritizes revenue generation, relegating environmental objectives to a secondary status.

The doctrinal debate surrounding the classification of environmental taxes reflect broader tensions in environmental taxation.

Some argue that these taxes resemble a “*tassa*” as they are tied to specific services like environmental remediation. In more detail, this perspective considers them as a “*tassa*”. This perspective reflects the idea of environmental taxes possessing a commutative nature, which essentially means that there exists a direct link between the taxes levied and the provision of a certain service or benefit, as manifest in either waste management or the rehabilitation of the environment¹⁸⁴. The qualification of the environmental taxes as a “*tassa*” suggests that the principle of ability to pay, as outlined in Article 53 of the Italian Constitution, does not directly apply. The principle of ability to pay requires that taxes should be proportionate to the taxpayers’ economic capacity, thereby ensuring equity in the fiscal liabilities imposed. However, commutative charge – unrelated to varying privileges or needs – do not invoke equity considerations, as the principles and assessments of taxation are based not on one's wealth or income but rather on the costs of the service rendered. In fact, criticism along these lines highlights how simplistic this interpretation is when it comes to environmental taxes. Unlike classical taxes, environmental taxes focus on inducing behaviour change to internalize externalities; that is to say, they aim beyond merely funding the cost of providing specific services. Additionally, determining the actual benefit to the taxpayer is a challenging task, thus undermining the legitimacy and coherence of labeling such taxes as “*tasse*”.

Others classify the plastic tax as an “*imposta*”, consistent with the constitutional principle of the ability to pay. Moreover, this perspective aligns with the PPP, as the tax seeks to internalize environmental externalities by imposing fiscal obligations proportional to the societal costs of environmental damage. This approach reinforces the

¹⁸³ V. Cipollina, Osservazioni sulla fiscalità ambientale nella prospettiva del federalismo fiscale, cit., p. 592.

¹⁸⁴ Falsitta G., *Considerazioni conclusive*, in Studi in onore di Gaspare Falsitta, Padova, 2012, p. 271 and ss; Moschetti F., “*Interesse fiscale*” e “*ragioni del fisco*” nel prisma della capacità contributiva, in Studi in onore di Gaspare Falsitta, cit., p. 157 and ss.

principle of ability to pay by linking fiscal responsibility to the taxpayer's contribution to environmental harm¹⁸⁵.

The Italian Constitution imposes strict requirements for all taxes, regardless of their nomenclature. These must comply with principles of proportionality and non-discrimination. In this context, the plastic tax exemplifies the challenges inherent in classifying environmental taxes. Although it shares traits with both “*imposta*” and “*tassa*”, its alignment with the PPP and its focus on societal welfare suggest that it is best classified as an “*imposta*”. This classification allows the tax to transcend purely fiscal objectives while ensuring conformity with constitutional principles under Article 53 of the Italian Constitution.

Nevertheless, the hybrid nature of such taxes underscores the need for clear legislative intent and robust administrative frameworks. Policymakers should aim to refine the definitions and boundaries of environmental taxes to enhance their efficiency and public support. Clarifying the distinction between fiscal measures and sanctions represents a critical step toward achieving environmental and social objectives.

4.4. The Italian Plastic Tax: an analysis of its framework and operational challenges

4.4.1. Legislative Foundations, Scope, Taxable Event and Compliance Obligations

The Italian Plastic Tax, as outlined in Article 1, paragraphs 634–658, of the 2020 Budget Law (Law No. 160 of December 27, 2019), marks a significant milestone in Italy's climate strategy. Its aim is to mitigate the environmental impact of single-use plastics while fostering alignment with the principles of a circular economy. In line with the European Union's environmental directives, including the “*European Strategy for Plastics in a Circular Economy*” (COM/2018/028)¹⁸⁶, the tax seeks to reduce the burden plastics place on the environment and encourage sustainable practices.

¹⁸⁵ Gallo F., *Profili critici della tassazione ambientale*, cit., p. 309 and ss.; Gallo F., Marchetti F., *I presupposti della tassazione ambientale*, cit., p. 157 and ss.

¹⁸⁶ European Commission, *European Strategy for Plastics in a Circular Economy*, COM(2018) 28 final, Brussels, January 16, 2018.

Initially set to take effect in January 2020, the Plastic Tax has experienced repeated delays. It was first postponed to January 1, 2021, by the Law Decree No. 34 of May 19, 2020 (also known as “*Decreto Rilancio*”). Subsequent delays followed: the 2021 Budget Law (Law No. 178 of December 30, 2020) deferred its implementation to July 1, 2021; the Law Decree No. 73 of May 25, 2021 (named as “*Decreto Sostegni-bis*”) postponed it further to January 1, 2022; the 2022 Budget Law (Law No. 234 of December 30, 2021) moved it to January 1, 2023; and the 2023 Budget Law (Law No. 197 of December 29, 2022) shifted the date to January 1, 2024. Most recently, the tax’s implementation was deferred to July 1, 2024, by the 2024 Budget Law (Law No. 213 of December 30, 2023), and further postponed to July 1, 2026, under the Law Decree No. 39 of March 29, 2024 (“*Decreto Salva Conti*”). This latest amendment, established through Article 9-bis of the *Decreto Superbonus* and coordinated with the conversion law No. 67 of May 23, 2024.

These successive delays reflect the challenges of reconciling environmental imperatives with economic considerations and highlight the complexities of integrating sustainability into fiscal policy.

The Italian Plastic Tax applies to single-use plastic products, commonly referred to in Italian as *manufatti in plastica monouso* (MACSI). These items are designed for the containment, protection, or delivery of goods and food products and are subject to a levy of €0.45 per kilogram of virgin plastic. Exemptions are provided for certain materials, including recycled plastics, compostable plastics meeting UNI EN 13432:2002¹⁸⁷ standards, and plastics used in medical devices or for containing medical formulations. Additionally, the 2021 Italian Budget Law clarified that semi-finished products, such as plastic preforms, are included within the taxable base¹⁸⁸.

This inclusion resolves certain ambiguities concerning the taxability of products made from mixed materials or multi-component goods. However, determining the precise taxability of complex industrial products remains a challenge, particularly for goods containing multiple materials or components.

¹⁸⁷ UNI EN 13432:2002, Packaging - Requirements for packaging recoverable through composting and biodegradation.

¹⁸⁸ Law No. 178 of December 30, 2020, Article 1, para. 1084, clarifying the inclusion of preforms in the definition of MACSI.

The taxable event under the Italian Plastic Tax is defined as the introduction of MACSI into consumption. This includes three primary scenarios: the production of MACSI within Italy, the importation of MACSI from non-EU countries, and intra-community acquisitions from other EU Member States¹⁸⁹. The tax obligation is triggered upon the release of these products for consumption in Italy, regardless of their ultimate destination

Determining the taxable content of products, especially those containing mixed materials, presents a significant challenge. One key issue is the absence of standardized methodologies for calculating the taxable weight of MACSI, particularly for products made from mixed materials. This lack of clarity complicates compliance for businesses and creates enforcement challenges for the Customs Agency. Additionally, the concept of “*supply*” as a taxable event remains ambiguously defined, leading to inconsistent interpretations regarding whether invoicing, delivery, or another transaction stage constitutes the taxable event¹⁹⁰. These issues underscore the necessity for more precise legislative definitions and administrative guidance.

Tax compliance requires taxpayers, including producers, importers, and intra-community purchasers, to file quarterly tax returns with the Italian Customs Agency. These returns must detail the total weight of taxable MACSI and specify quantities of recycled or compostable plastics that qualify for exemptions. Non-compliance results in penalties ranging from 25 per cent to 100 per cent of the tax due, with a minimum penalty of €150. In severe cases, criminal sanctions may apply. However, the administrative burden associated with compliance is particularly heavy for small and medium-sized enterprises (SMEs), which often lack the resources to navigate the complex requirements.

The legislative framework of the Plastic Tax has been reinforced by Legislative Decree No. 196 of November 8, 2021, which transposed the “*EU’s Single-Use Plastics*

¹⁸⁹ Article 1, paragraph 639 of Law No. 160 of December 27, 2019 (2020 Budget Law).

¹⁹⁰ While paragraph 639 provides scenarios that define the taxable event as the introduction of MACSI into consumption, it does not clarify whether the taxable event corresponds to invoicing, physical delivery, or another transaction stage. This ambiguity arises particularly in complex supply chains, where the exact moment of “*supply*” can vary based on contractual terms or logistical operations. Such lack of precision in defining “*supply*” leaves room for inconsistent interpretations and creates uncertainty for taxpayers. It underscores the necessity for further administrative guidance to ensure uniform application of the tax.

Directive” (SUP) into Italian law. This decree introduced complementary regulatory measures, such as bans on certain high-impact single-use plastic products and obligations for producers to contribute to waste management costs. These measures aim to promote sustainable production and consumption patterns and address the broader objective of reducing plastic waste at its source. However, businesses face additional challenges in complying with both fiscal and regulatory requirements.

4.4.2. Challenges and Implementation Gaps

The legal framework for the Plastic Tax has been further strengthened by Legislative Decree No. 196 of November 8, 2021, which incorporated the “*European Union’s Single-Use Plastics Directive*” (SUP) into Italian law. This decree includes bans on selected plastic products with significant environmental impacts and obligates producers to finance waste management. These measures aim to establish incentives for sustainable production and consumption while aligning with Italy’s objectives for a circular economy. By creating a robust legislative foundation, the decree reinforces Italy’s commitment to sustainability while laying the groundwork for integrating fiscal and environmental policies.

However, despite this strengthened framework, several challenges remain, particularly in defining taxable events, ensuring compliance, and addressing territorial ambiguities.

As previously mentioned, one significant issue is the lack of standardized methodologies for calculating the taxable weight of MACSI, especially for products made from mixed materials. This lack of clarity complicates compliance for businesses and creates enforcement challenges for the Customs Agency.

Another major challenge concerns the notion of “*supply*” as a taxable event lacks clarity regarding when it occurs, whether at invoicing, delivery, or another stage. To address these ambiguities, the concept of “*supply*” must be analyzed primarily through EU tax law and relevant jurisprudence, given its precedence in defining taxable events for cross-border applications. While Article 14, para. 1, of the VAT Directive¹⁹¹ defines “*supply*” as the “*transfer of the right to dispose of tangible property as owner*”, aligning

¹⁹¹ Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax.

the taxable event with the economic reality rather than its formal legal structure, the Italian legal framework offers a different perspective.

Nevertheless, it is pertinent to note according to that Italia legislation and, in particular, to Article 2, para. 1, Presidential Decree of October 26, 1972, No. 633 “[s]upplies of goods are constituted by acts for consideration that entail the transfer of ownership or the establishment or transfer of real rights of enjoyment over goods of any kind”. This provision reflects a legal framework that prioritizes the legal effects of the act, specifically, the formal transfer of ownership or rights, over the economic substance of the transaction¹⁹².

In contrast, the broader EU definition of “supply” emphasizes the economic substance of transactions, focusing on the functional reality of whether a party has the right to dispose of goods as if they were the owner, even in the absence of formal legal transfer¹⁹³. This divergence underscores a fundamental tension in aligning Italian law with EU principles, particularly in cross-border transactions where economic substance often takes precedence over legal form. For example, under the Plastic Tax framework established by Legislative Decree No. 196/2021, the taxable event is not limited to the formal transfer of ownership but also encompasses the entry of MACSI into the market for consumption. This includes production, importation, and intra-community acquisitions, reflecting a broader scope akin to the EU's emphasis on economic substance. However, ambiguities persist regarding how this aligns with the traditional Italian approach under Article 2 of Presidential Decree No. 633/1972, particularly in scenarios where legal ownership does not formally change hands but goods are otherwise made available for use or consumption. To address this misalignment, policymakers could benefit from explicitly incorporating EU principles of economic substance into national legislation, thereby reducing inconsistencies and enhancing legal certainty.

The opinions of Advocate General Mengozzi in the *BLV Wohn- und Gewerbebau GmbH v. Finanzamt Lüdenscheid* case¹⁹⁴ provided a pivotal interpretation of the concept

¹⁹² Filippi P., *Le cessioni di beni nell'imposta sul valore aggiunto*, Padova, 1984, p. 21 and ss.

¹⁹³ In this sense, Ingresso M., *Le operazioni imponibili ai fini dell'iva*, in *Diritto e Pratica Tributaria*, 1973, I, p. 476 e Perrone Capano R., *L'imposta sul valore aggiunto*, Napoli, 1977, p. 277.

¹⁹⁴ Court of Justice of the European Union (CJEU), Case C-395/11, *BLV Wohn- und Gewerbebau GmbH v. Finanzamt Lüdenscheid*, Judgment of 13 December 2012, ECLI:EU:C:2012:799. In the considered case, a question was raised as to whether the term "construction work," as used in Council Decision 2004/290/EC, encompasses the exchange of goods along with services under the Sixth VAT Directive. The German Federal Finance Court referred the case to the CJEU for a preliminary ruling. The German authorities

of “supply”, asserting that it includes any transaction enabling a party to dispose of goods as if they were the owner, even in the absence of formal ownership transfer¹⁹⁵. Drawing parallels with the case *Staatssecretaris van Financiën v. Shipping and Forwarding Enterprise Safe B*¹⁹⁶, he emphasized the priority of economic substance over formal ownership transfer in defining taxable events under EU law¹⁹⁷.

Building on this interpretation, the CJEU in its judgment examined whether a “construction work” could be classified as a supply of goods or services under the Sixth VAT Directive. In this context, the European Court clarified that if tangible property is transferred alongside services that significantly modify its characteristics or enhance its value, the transaction may still qualify as a supply of goods, provided the recipient is granted the right to dispose of the property as if they were the owner. This ruling highlights the critical importance of focusing on the actual economic relationship between the parties rather than formal legal definitions, offering valuable guidance for adapting national frameworks like the Plastic Tax. This interpretation challenges conventional notions of ownership and transfer that are deeply rooted in national civil law systems, asserting the precedence of economic substance over legal form. In the context of the Plastic Tax, this focus necessitates a shift towards functional considerations regarding when goods enter the marketplace for consumption, irrespective of the formal transfer of title. Such an approach provides a more adaptable and economically coherent basis for identifying taxable events.

determined that BLV was liable for VAT concerning a construction project and applied the reverse-charge mechanism under national regulations. The CJEU ruled that “construction work” under a derogation measure included the supply of goods and services, emphasizing that it is necessary to consider the economic substance and disregard mere formal legal categorization. Furthermore, the Court held that Member States may partially apply derogation measures while respecting the principles of fiscal neutrality, proportionality, and legal certainty.

¹⁹⁵ In this sense, the opinions of the Advocate General Campos Sanchez-Bordona, delivered on July 4, 2017 in the case C-308/16, *Kozuba Premium Selection sp. z o.o. v Dyrektor Izby Skarbowej w Warszawie*, Judgment of 16 November 2017, ECLI:EU:C:2017:869 (para. 42) and the Case C-185/01, *Auto Lease Holland BV v. Bundesamt für Finanzen*, Judgment of 6 February 2003, ECLI:EU:C:2003:73 (para. 32).

¹⁹⁶ Court of Justice of the European Union (CJEU), Case C-320/88, *Staatssecretaris van Financiën v. Shipping and Forwarding Enterprise Safe B*, Judgment of 8 February 1990, ECLI:EU:C:1990:61.

¹⁹⁷ In more detail, the Advocate General Mengozzi at para. 27 of his opinions, delivered on September 12, 2012 specified that “[t]he notion of the supply of goods, as highlighted by the case law of this Court in the case of *Shipping & Forwarding Enterprise (Safe)*, ‘does not refer to the transfer of ownership in the forms provided for by the applicable national law, but rather includes any operation of transferring tangible property carried out by one party that authorizes the other party to actually dispose of that property as if they were the owner’, even if legal ownership is not transferred”.

Nevertheless, embracing this perspective introduces significant practical and interpretative challenges. For instance, temporary transfers, such as consignment stock or transactions involving delayed invoicing, create uncertainties about their treatment under the Plastic Tax framework. Developing specific guidelines for such cases, modeled on EU principles, would help clarify these ambiguities and reduce the compliance burden for businesses. Addressing these ambiguities will require a legislative framework that integrates EU principles while accommodating the dual objectives of the Plastic Tax: fiscal neutrality and environmental sustainability.

Furthermore, the lack of clarity in territorial rules amplifies compliance challenges. Under VAT rules, the concept of “*supply*” is foundational for determining both the taxable event and the place of taxation. Articles 31 to 36 of the VAT Directive establish specific criteria to localize the place of supply, differentiating between transactions involving the physical movement of goods, their delivery, and their final destination. Similarly, the Plastic Tax should clearly define whether the taxable event is triggered at the point of production, importation, or entry into consumption.

From a fiscal perspective, territoriality and “*supply*” are interdependent; the taxable event for the Plastic Tax – whether modeled on VAT or excise duties – should align with the principle of fiscal neutrality to avoid potential distortions in the internal market. For example, if MACSI are produced domestically and exported without entering the Italian market for consumption, it remains uncertain whether they should be excluded from the scope of the Plastic Tax; likewise, in cases where MACSI leave the Italian territory temporarily and are later reintroduced, it is unclear whether the Plastic Tax should apply at the point of initial production or upon re-entry into the market for consumption. This ambiguity mirrors issues faced in the administration of excise duties under Directive 2008/118/EC, which regulates the movement of goods under excise suspension.

As highlighted in the *BLV Wohn-und Gewerbebau GmbH v. Finanzamt Lüdenscheid* case, the Advocate General’s analysis and the CJEU’s judgment exemplify a broader trend in EU jurisprudence: the harmonization of fiscal systems based on principles that transcend national legal traditions. This trend underscores a deliberate effort to ensure the uniform taxation of economic transactions across Member States, minimizing opportunities for tax avoidance and fostering equity. The principles

articulated in this case offer essential guidance for defining taxable events under the Plastic Tax, ensuring alignment with economic realities and environmental objectives.

In this regard, as already noted, further complicating this issue is the dual nature of the Plastic Tax as both a fiscal and environmental instrument; while VAT and excise duties prioritize economic and market considerations, the Plastic Tax emphasizes sustainability. Thus, the taxable event linked to “*supply*” must also reflect environmental objectives, such as reducing plastic waste and incentivizing the use of alternative materials. The lack of a harmonized approach risks creating inconsistencies in its application, particularly in cross-border transactions involving Member States with differing fiscal regimes.

This interplay between territoriality and the definition of “*supply*” highlights the need for legislative refinement and clearer guidance. Without such measures, the risks of double taxation, non-taxation, and administrative disputes are likely to undermine the objectives of the Plastic Tax. Policymakers should take into account principles established in VAT and excise tax regimes, while adapting them to the environmental goals of the Plastic Tax, thereby ensuring both legal certainty and effective implementation.

Finally, compliance represents another critical challenge. As highlighted earlier, the financial administration’s ability to enforce the Plastic Tax is contingent on effective monitoring and data collection mechanisms. However, gaps in tracking the production, importation, and consumption of MACSI may hinder accurate tax assessments. The administrative burden disproportionately impacts SMEs, which often lack the resources to implement sophisticated compliance systems. From a legal perspective, the Customs Agency has significant discretion in tax audits, but this discretion must be exercised within the limits of proportionality and legality. The absence of detailed procedural guidelines increases the risk of disputes, making it imperative to adopt clear rules for compliance and enforcement.

Fiscally, alongside its environmental implications, the Plastic Tax provides an additional source of revenue for the Italian government. The proceeds could support Italy’s contribution to the EU budget¹⁹⁸, which, as noted earlier, is partially dependent on

¹⁹⁸ Scuderi E., *Towards a plastic-free economy: the Italian plastic tax*, in *Rivista Telematica di Diritto Tributario*, April 7, 2021, p. 3 and ss.

the amount of non-recycled plastic waste generated by Member States. Moreover, by aligning fiscal policies with environmental objectives, the Plastic Tax presents an opportunity for Italy to advance its sustainability agenda and drive innovation in sustainable materials.

The deferral of the Plastic Tax until July 2026 offers an invaluable opportunity for policymakers to refine its framework. This period should be utilized to resolve ambiguities, establish robust monitoring mechanisms, and provide supportive measures for businesses affected by the tax. If effectively implemented, the Plastic Tax could help Italy reduce its reliance on virgin plastics, promote innovation in sustainable materials, and contribute significantly to achieving European climate objectives.

The Italian Plastic Tax underscores the country's commitment to sustainability. Its success will depend on the ability of policymakers and administrators to address implementation challenges effectively. By maintaining a balance between environmental imperatives and economic considerations, the Italian Plastic Tax has the potential to serve as a model for integrating sustainability into national fiscal policies.

4.4.3. Proposed Strategies for Monitoring and Evaluation

An effective monitoring and evaluation scheme for the Italian Plastic Tax should incorporate various elements to provide a comprehensive overview and support continuous improvement.

Essentially, in monitoring the performance and evaluating the application of the Italian Plastic Tax, all relevant aspects must be considered to ensure effective outcomes and foster continuous improvement. This requires the definition of tailored performance indicators for each sub-area. For example, one indicator could be the percentage of recycled plastic used in Italian manufacturing processes, monitored on a quarterly basis. Others could assess reductions in virgin plastic consumption, increases in recycled or compostable plastic usage, and the number of companies adopting sustainable alternatives. These indicators would provide measurable baselines for tracking progress and identifying areas requiring focused attention.

Equally important are mechanisms for regular feedback. These mechanisms could include surveys and personal interviews to gather insights from businesses regarding operational challenges and best practices. For instance, a survey could assess the

effectiveness of administrative procedures or determine whether the incentives for switching to sustainable materials are adequate. Gaining insights from these challenges and feedback could lead to real-time adjustments to the program, fostering a stakeholder-centered approach to addressing critical issues. Such mechanisms are essential tools for monitoring compliance progress.

Reports should promote a culture of transparency and be easily accessible, conveying meaningful analyses of data compiled from key performance indicators and feedback mechanisms. These reports could include visual aids, such as charts or graphs, to highlight annual reductions in virgin plastic usage. Such practices would enhance accountability and provide policymakers with the information necessary to make informed adjustments, ensuring the tax remains effective and relevant.

To maintain the ecological and economic balance of the measure, specific policy proposals could be explored. For example, providing tax credits to companies investing in biodegradable and sustainable materials could incentivize businesses to adopt circular economy practices. One suggestion might include a 20 per cent tax credit for investments in bioplastic production facilities, which could accelerate the adoption of sustainable technologies. Such investments would facilitate the adoption of green practices across various sectors, creating a ripple effect that drives progress toward a circular economy.

Collaboration between the public and private sectors is also vital, as such partnerships could lead to the development of new technologies and processes that reduce plastic consumption and improve recycling efficiency. For example, a joint initiative between the government and private companies could focus on developing chemical recycling technologies that break down plastics into reusable components. Public incentives for private-sector innovation, such as those implemented successfully in the Netherlands, have proven effective in spurring research and development. By fostering mutual cooperation, public and private sectors could share knowledge and resources to achieve sustainability goals and drive innovation.

Public awareness campaigns offer another complementary strategy for reducing reliance on plastics by educating consumers about the benefits of sustainable materials. These campaigns could include targeted advertisements, school-based awareness programs, and collaborations with influencers to promote sustainable choices. Such

initiatives would encourage behaviour change and increase consumer support for sustainable products and practices.

If implemented, these measures could enhance awareness of Italy's commitment to a circular economy and reduce the ecological footprint of plastics. Moreover, aligning these efforts with broader European sustainability objectives would ensure a coordinated and inclusive approach, allowing all countries to contribute equally to shared goals. By addressing operational challenges and integrating these measures into broader sustainability initiatives, the Italian Plastic Tax could effectively support environmental objectives while fostering innovation and collaboration.

Conclusion

The ecological transition requires novel, coordinated, and effective strategies to address the environmental challenges of our time while considering the economic realities. Among the many tools available, taxation has emerged as a crucial mechanism for aligning economic behaviour with sustainability objectives. By internalizing environmental costs through fiscal measures like the Plastic Tax, policymakers can encourage more responsible production and consumption patterns, reduce reliance on virgin plastics, and accelerate the transition to a circular economy.

However, as this study demonstrates, the success of such measures depends on their design, implementation, timing, and the broader policy context. The Plastic Tax provides a compelling example of both the opportunities and limitations of environmental taxation. While it has the potential to reshape markets and drive innovation, it also presents challenges in balancing environmental goals with the socioeconomic impacts of such policies.

To overcome these obstacles, a flexible and adaptive design is essential. Policymakers must ensure that tax schemes are not only well-designed but also periodically evaluated and updated to reflect changing economic, social, and environmental conditions. Clear definitions that promote straightforward compliance, along with targeted support for businesses – particularly small and medium-sized enterprises (SMEs) – are crucial for fostering compliance and ensuring the tax's effectiveness.

Collaboration is equally important. Partnerships between the public and private sectors can drive technological innovation and the development of sustainable materials, while international coordination is vital to ensuring that national fiscal measures align with global and regional environmental objectives. Public awareness and education campaigns can further amplify the impact of fiscal measures by encouraging consumers to adopt sustainable choices and support eco-friendly products.

Although the implementation of the Plastic Tax in Italy has faced delays and operational challenges, it serves as a valuable case study in how fiscal policies can be refined to address environmental issues. Lessons learned from its development and deployment offer a meaningful perspective for designing future policies in Italy and beyond. At this critical juncture, the integration of fiscal, regulatory, and behavioural

mechanisms into policy frameworks can significantly enhance progress toward sustainability goals.

The ecological transition requires a comprehensive strategy that combines taxation with other policy tools to achieve a holistic approach to sustainability. The Plastic Tax is not a standalone solution but rather part of a broader effort to reconcile economic development with environmental protection. Its success depends on sustained commitment, collaboration, and innovation.

In conclusion, environmental taxation is not merely a technical tool but a unique opportunity to redefine the relationship between economy and ecology. By internalizing the true costs of environmental harm, promoting innovation, and encouraging shifts in consumer behaviour, fiscal policies like the Plastic Tax can contribute to building a sustainable and resilient future. However, this vision requires careful planning, inclusive dialogue, and unwavering commitment to sustainability principles, not just good intentions.

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