

Salvatore Antonello Parente

University of Bari Aldo Moro, Italy

salvatore.parente@uniba.it

ORCID ID: <https://orcid.org/0000-0002-5426-9043>

Environmental Taxation and the Circular Economy: What Are the Prospects in the European Context?

Abstract: The transition from a linear economy model to a circular economy system heralds great opportunities: on the one hand, because by smoothing out diseconomies and reducing waste, it can favour the ecological transition and steer production in the direction of sustainability and respect for the environment; on the other, because by offering economic operators the opportunity to become more competitive and to achieve considerable advantages, it can create jobs and facilitate integration and innovation at a social and an industrial level. To this end, a dimension of environmentally targeted taxation can only assume importance, characterized by the metamorphosis from a linear taxation system to a circular taxation paradigm: the former, dominated by the principle of fiscal neutrality, loses sight of non-tax purposes to attach importance only to those of revenue, too often ending up financing expenditure for expenditure and therefore even waste; the latter, through the taxation of waste and the use of tax eco-incentives, favours reuse and recycling, fully implementing the paradigm of the circular economy. In this perspective, through the preparation of a virtuous model and the elaboration of an agenda for future European growth centred on radical changes in production and consumption processes, the circular economy system can be fully implemented, promoting sustainable development and the efficient allocation of resources.

Keywords: analysis perspectives, circular economy, criticality profiles, environmental taxation, sustainable development

Introduction

With a view to environmental sustainability (Mendola, 2022, p. 7; Uricchio et al., 2020, p. 1) and climate neutrality (Amanatidis, 2022a, p. 1; Carducci, 2021, p. 51; Gratani, 2014, p. 535), under the auspices of the 2015 Paris Climate Agreement (Ari

& Sari, 2017, p. 175; Aristei, 2017, p. 73; Blasizza, 2021, p. 642; Gugliotta, 2021, p. 23; Klein et al., 2017; Nespor, 2016, p. 81; Savaresi, 2016, p. 16; Nishimura, 2018, p. 42), the attentions of the EU legislature has over time focused on economic models of production, marking a transition from a 'linear economy' system (characterized by a scheme of 'take, produce, use and throw away') to a 'circular economy' paradigm (based on the configuration of 'take, produce, use and recycle') (Cocconi, 2020, p. 1; De Leonardis, 2021, p. 161; Greggi, 2020, p. 25; Parente, 2022, p. 75; Soncini, 2019, p. 325; Trenta, 2020, p. 91; Uricchio, 2020a, p. 409), also through the use of taxation. In the past, the implementation of production based on the linear economy model contributed to the depletion of many natural resources, in addition to causing high levels of pollution, a source of environmental degradation.

From this perspective, by emphasizing an environmentally targeted tax (Uricchio, 2015, p. 19) within a virtuous model aimed at subjecting waste to taxation and encouraging reuse and recycling, the modern circular economy has been fully implemented, promoting sustainable development and efficient allocation of resources through the elaboration of an agenda for future European growth, centred on radical changes in the processes of production and consumption (Uricchio, 2017, p. 1861). It is an approach based on the entire life cycle, which, in addition to being destined to improve the use of secondary materials, aims to provide economic incentives, including tax incentives, to limit the production of waste and encourage its reuse (Amanatidis, 2022b, p. 6). The circular economy becomes an intermediate legal good, instrumental to the protection of two final-level legal goods: the environment and economic development (Salanitro, 2023, p. 367; Uricchio, 2022, p. 185). From this perspective, implementing a circular economy model means, on the one hand, managing resources efficiently, increasing productivity and reducing waste and, on the other, ensuring that what still has some use is recovered and reintroduced into the economy, preventing it from being disposed of in landfill (in ways that are not always legal) (Alfano & Bisogno, 2022, pp. 302–303).

This reflection, starting from a range of sources, has the objective of verifying the forms and limits within which fiscal instruments can be used, from an environmental perspective, for non-tax purposes to encourage the transition from a linear economy model to a circular economic system, through analysis of the solutions adopted by the Italian legislature in the context of EU legislation (Walker et al., 2020, p. 185), which are aimed at limiting the use of plastic products, the production and disposal of which constitute a source of environmental degradation (Morath, 2022, p. 7). In fact, the experience that best represents the attempt to fill the existing gaps in circularity is represented precisely by the tax on plastic, which stands as a virtuous example of how the fiscal lever can be used for extra-fiscal purposes with the aim of promoting policies of environmental sustainability, also thanks to the use of the related revenue to finance initiatives aimed at reducing pollution deriving from plastic and its environmental impact, and encouraging recycling. The crucial role played by

so-called 'extra taxation' (Fichera, 1973; Fichera, 1997, p. 486; Gallo, 2009, p. 399; Giannini, 1937, p. 6; Griziotti, 1951, p. 152; Stevanato, 2014, p. 419) in the promotion of solutions capable of protecting the environment and encouraging circular behaviour thus emerges (Alfano & Bisogno, 2022, pp. 289–290).

Despite being an essential resource for scientific and technological progress, plastic is one of the main causes of global pollution; it is therefore clear that the negative externalities related to its production and consumption cannot ignore the use of taxation, complying with the reparative logic of the internalization of negative externalities typical of Pigovian theory (Pigou, 1932), which also takes on particular relevance in the modern circular economy (Alfano & Bisogno, 2022, p. 301). During this investigation, reference will be made to certain national experiences (in particular, those of the United Kingdom and Spain) from a comparative perspective, where the imposition of a tax on plastic has become reality through the entry into force of the relevant forms of tax levy, although not without critical issues.

1. Taxation in the context of different forms of environmental protection

Since the circular economy is designed to reduce CO₂ emissions, promoting sustainable development and the efficient allocation of resources, the most appropriate research method from a tax perspective cannot ignore an investigation of the dogmatic categories relating to 'environmental taxation', a periphrasis which outlines the complex of fiscal measures payable by the person carrying out a specific polluting activity (or by the end user) to help prevent, eliminate or limit its harmful effects (Cipollina, 2009, p. 577; Parente, 2020, pp. 624–625; Procopio, 2013, p. 1170).

On a methodological level, a clarification is appropriate: in this context, the fiscal lever does not exhaust the forms of protection available to the legislature. It is also true that 'green taxation' measures are aimed at encouraging non-polluting behaviour and discouraging polluting conduct, favouring the transition towards 'clean' production models, the use of which, in the long term, seems preferable to direct regulatory mechanisms due to the objectives pursued and the merit of inducing the taxpayer not to rest on achieved results but to invest in clean technology. But, alongside the green taxation measures, further intervention policies can be found: on the one hand, command and control tools, designed to prepare limits, prohibitions and controls, with the provision of sanctions for violators; on the other, private measures to safeguard the environment, compliant with negotiations and economic models inspired by the market-based approach.

From the perspective of the circular economy, the environmental protection regime, through the 'polluter pays' principle (Article 191(2), TFEU) (Alfano, 2012, p. 51; Allena, 2013, p. 813; Boria, 2014, p. 214; Boria, 2017, p. 314; Buccisano, 2014, p.

113; Buccisano, 2016, p. 596; Ferrara, 2005, p. 509; Lombardo, 2011, p. 722; Marchetti, 2006, p. 243; Mastellone, 2013, p. 88; Meli, 1989, p. 218; Palombino, 2003, p. 871; Sciancalepore, 2016, p. 45; Tarantini, 1990, p. 728), makes it possible to establish 'taxed' asset benefits for which the environmental factor is not only an integral part of the taxable case, but becomes a parameter for determining the taxpayer's economic capacity.

2. The distinction between environmental taxes in the narrow and broad senses and between redistributive and incentive taxes

In this view, it is easy to distinguish between environmental taxes defined narrowly or broadly. The former, defined as 'structurally environmental' taxes, presuppose a polluting factor, i.e. an event that produced the damage; the taxable case is given by the physical unit which, in the case of the use or release of a polluting substance, produces environmental effects that have been proved harmful (Boria, 2019, pp. 215–216; Cipollina, 2008, p. 560; Cipollina, 2009, p. 578; Dorigo, 2013, p. 152; Dorigo & Mastellone, 2018, p. 58; Esposito De Falco, 2004, p. 658; Gallo, 2010, p. 303; Guido, 2013, p. 224; Procopio, 2013, pp. 1168–1169; Stefani, 1999, p. 1493; Strianese, 2017, p. 397; Uricchio, 2010, p. 184; Uricchio, 2012, p. 1490; Uricchio, 2017, p. 1855). These forms of taxation are characterized by a necessary causal link, which consists of a direct and osmotic relationship, scientifically ascertained and sustainable, between the assumption and the material and objective fact that determines the deterioration of the environment (Parente, 2020, p. 643). By way of example, we may mention taxes that affect the emission of polluting gases or noise, or the extraction or production of substances, goods and products that deplete natural resources or cause damage to the environment (Gallo, 2010, p. 303; Gallo & Marchetti, 1999, p. 119; Procopio, 2013, pp. 1168–1169; Verrigni, 2003, p. 1621).

'Broad' environmental taxes are designated as having 'environmental purposes'; however, they are characterized by a traditional assumption – consumption, assets or income – which is accompanied by the purpose of protecting the environment, implemented through an incentive or disincentive for certain activities or the use or production of environmental goods (Boria, 2019, p. 216; Cipollina, 2009, p. 578; Dorigo, 2013, p. 152; Dorigo & Mastellone, 2018, p. 57; Gallo, 2010, p. 303; Guido, 2013, p. 224; Strianese, 2017, pp. 408–409; Uricchio, 2017, p. 1851).

In these types of taxes, the environment is placed outside the taxable case, on an extra-fiscal level, placing itself as a value, asset, right and goal (Uricchio, 2010, p. 184; Uricchio, 2012, p. 1490); environmental protection is a hoped-for effect deriving from the introduction of a levy, also a fiscal one, which, by determining an increase in the cost of the polluting good or activity, can lead the consumer to turn to other goods with less environmental impact (Gallo & Marchetti, 1999, p. 120). The inter-

nalization of environmental externalities, as an extra-fiscal purpose unrelated to the tax basis, thus takes on the characteristics of a mere economic effect not included in the legal tax case (Gallo & Marchetti, 1999, p. 120; Procopio, 2013, pp. 1168–1169). The ‘broad’ environmental tax therefore pursues predominant revenue objectives: the protection of the environment is relegated to a marginal role, constituting a simple pretext to make the tax more acceptable to the taxpayer (Cipollina, 2009, p. 592).

From a systematic perspective, a further distinction is that between ‘redistributive’ and ‘incentive’ taxes: the former aim to finance environmental protection and clean-up interventions, attributing the costs to the creators of the polluting conduct in the implementation of tax policies; the latter, in addition to targeting those who pollute, have the aim of inducing investment in clean technologies with favourable environmental policies (so-called green taxation) in order to reduce harmful activities (Cipollina, 2009, p. 573; Esposito De Falco, 2004, pp. 650–651; Strianese, 2017, pp. 406–407; Uricchio, 2010, p. 186; Uricchio, 2012, p. 1491).

3. Tax instruments designed to guarantee environmental sustainability and measures to combat irreversible situations of environmental degradation

Among the tax instruments designed to guarantee environmental sustainability, it is possible to point to multiple types of intervention: taxes on production and consumption; taxes on polluting emissions; taxes on the exploitation and depletion of environmental resources; and energy taxes (Parente, 2020, p. 638). In particular, taxes on production and consumption affect the use of products harmful to the environment in industrial processes (Verrigni, 2003, p. 1621); in these forms of levy, which can also be used from a circular economy perspective, the taxable amount is a physical unit of a resource, good or product that bears some relation to the deterioration of or damage to the environment in a general sense (Gallo & Marchetti, 1999, p. 118). In fact, from the regulation of the taxable case, an environmental justification emerges, capable of characterizing the tax authority–taxpayer relationship in legally appreciable terms: the reason for the levy lies in the need to compensate for an environmental cost and not in the mere redistribution of wealth (Verrigni, 2003, p. 1621). Even taxes on emissions – which have an impact on activities that disperse polluting substances into the air, water or soil or generate noise pollution – are based on the quantity and quality of the contamination and the damage caused to the environment (Buccisano, 2016, p. 590). For these taxes, however, the taxable amount is the physical unit of a specific pollutant, calculated by measuring polluting emissions or by making an estimate of the polluting potential (Gallo & Marchetti, 1999, p. 118). Taxes on the exploitation and depletion of environmental resources tend to cover the costs of treatment and disposal and administration costs (Verrigni, 2003, p. 1621).

The negative effects on the environment resulting from the use of energy sources justify the spread of 'energy taxes' and the provision of tax breaks related to the use of renewable energy sources (Strianese, 2017, p. 409). However, if the use of environmental taxes can favour environmental protection policies and incentivize the transition towards a circular economy model, it cannot constitute the only intervention technique to discourage polluting behaviour. In fact, the use of fiscal instruments to implement environmental protection policies suffers from restrictions, being plausible only if the deterioration that justifies the imposition is bearable, reversible and repairable in relative and not absolute terms (Gallo, 2010, p. 304; Procopio, 2013, p. 1169; Sciancalepore, 2016, p. 96); otherwise, it is necessary to intervene with more incisive instruments, such as prohibitions or criminal and administrative sanctions, which act as a deterrent to activities capable of causing forms of degradation, the tax instrument in this case being inadequate to provide effective protection (D'Andrea, 2004, p. 107).

4. The transition from a linear to a circular economy system over time

A first objective to preserve the environment and encourage the overcoming of a linear economic system was set with Directive 2000/53/EC of 18 September 2000, which relates to the reduction of waste produced by end-of-life vehicles and their components and was implemented with the forecast of a reuse and recovery rate of 95% by 2015, in order to encourage manufacturers and importers to use recycled materials. Directive 2006/66/EC of 6 September 2006 on waste batteries and accumulators aimed to improve waste management and the environmental performance of these products by setting standards for collection, recycling, treatment and disposal. A similar objective was pursued with Regulation 1257/2013/EU of 30 December 2013 concerning the recycling of ships, in order to encourage reuse, as far as possible, and to ensure that hazardous waste was subjected to environmentally sound management (Amanatidis, 2022b, pp. 2–3).

With the Communication of 25 September 2014, COM (2014) 398 final/2, entitled 'Towards a Circular Economy: A Zero Waste Programme for Europe', the European Commission made some proposals in this direction, developing the prevention and the precautionary principles, through the modification of waste-treatment and disposal processes. Subsequently, an ambitious circular economy package was prepared in the EU on 2 December 2015, through an action plan containing measures relating to the entire life cycle of products: from design, procurement, production and consumption up to waste management and the secondary raw materials market (Uricchio, 2017, p. 1862).

In the implementation of the circular economy package, the European Commission adopted the Regulation of 17 March 2016, COM (2016) 157 final, with the pri-

mary aim of encouraging the use of organic and waste-derived fertilizers, establishing equal conditions of competition with conventional inorganic fertilizers (generally extracted from mines or obtained chemically in compliance with a linear economy model), in order to favour the conversion of organic waste into raw materials that can be used to manufacture fertilizing products, at the same time reducing energy consumption and environmental damage (Uricchio, 2017, pp. 1863–1864).

In order to review the waste-management objectives, together with the 2015 action plan on the circular economy, the European Commission prepared five legislative proposals aimed at amending a series of EU regulatory acts: the Waste Framework Directive (2008/98/EC of 19 November 2008), the Directive on Landfills (1999/31/EC of 26 April 1999), the Directive on Packaging and Packaging Waste (1994/62/EC of 20 December 1994), the Directive Relating to Batteries and Accumulators and Waste Batteries and Accumulators (2006/66/EC of 6 September 2006) and the Directive on Waste Electrical and Electronic Equipment (2012/19/EU of 4 July 2012) (Amanatidis, 2022b, p. 4). These proposals were followed by the adoption in 2018 of the four Directives on the circular economy (Directive 2018/849/EU of 30 May 2018; Directive 2018/850/EU of 30 May 2018; Directive 2018/851/EU of 30 May 2018; Directive 2018/852/EU of 30 May 2018), then were implemented in domestic law in 2020 (Legislative Decree of 3 September 2020, No. 116, implementing Directives 2018/851/EU and 2018/852/EU; Legislative Decree of 3 September 2020, No. 118, implementing Articles 2 and 3 of Directive 2018/849/EU; Legislative Decree of 3 September 2020, No. 119, implementing Article 1 of Directive 2018/849/EU; Legislative Decree of 3 September 2020, No. 121, implementing Directive 2018/850/EU), with which a new waste-management model was prepared based on a logic of prevention, reuse and recycling.

5. The objectives pursued by the EU directives contained in the circular economy package and by the legislation aimed at restricting the use of plastic products, and the transition from linear to circular taxation

The objectives pursued within the EU with the directives in the circular economy package of 2018 are multiple: to bring the recycling of urban waste to a threshold of 55% by 2025, 60% by 2030 and 65% by 2035; to set recycling standards for packaging waste at 70%, to be achieved by 2030; to reduce landfill for municipal waste to a maximum of 10% by 2035; to ban landfill waste from separate collection and to impose separate collection obligations for organic waste by 2023 and for textiles and hazardous household waste by 2025; to promote economic instruments designed to discourage landfill; to simplify and improve the definitions and harmonization of calculation methods for recycling rates throughout the European Union; to take concrete meas-

ures to promote reuse and stimulate industrial symbiosis, transforming the by-product of one industry into the raw material of another; to develop extended producer responsibility schemes to bring greener products to the market; and to implement recovery and recycling systems (for example, for packaging, batteries, electrical and electronic equipment and end-of-life vehicles) (Amanatidis, 2022b, pp. 4–5).

Almost simultaneously with the adoption of the circular economy package, with the Communication of 16 January 2018 COM (2018) 28 final, entitled ‘European Strategy for Plastics in the Circular Economy’, the European Commission proposed that all plastic packaging be redesigned in order to allow its recycling and reuse by 2030, proposing multiple measures aimed at improving the economic aspects and quality of recycling and reducing plastic waste, so as to also limit its abandonment in the environment. Following the European Commission’s proposal of 28 May 2018, the European Parliament and the Council, in order to reduce ‘the impact of certain plastic products on the environment’, adopted Directive 2019/904/EU of 5 June 2019 (Aristei, 2020, p. 1; Aristei, 2022, p. 490), setting new and rigorous restrictions for some single-use plastic products; in particular, plastic cutlery, plates and straws and food and drink containers in expanded polystyrene have been banned in the European Union. Furthermore, from 2025, all PET bottles will have to contain at least 25% recycled plastic; by 2030, at least 30% of the content of plastic bottles must come from recycled material (Amanatidis, 2022b, p. 5).

Subsequently, the European Parliament, with the Resolution of 13 September 2018 2018/2035 (INI) entitled ‘A European Strategy for Plastics in the Circular Economy’, urged the Commission to introduce requirements relating to the minimum recycled content for specific plastic products placed on the EU market, to create a single market for recycled plastics, to take measures to solve the problem of marine litter and to ban microplastics in cosmetics and cleaning products from 2020 (Amanatidis, 2022b, p. 6). Finally, with the Communication of the European Commission of 11 December 2019 COM (2019) 640 final (European Green Deal), in addition to the provision of a regulatory framework for biodegradable and bio-based plastics, the intention was announced to prepare suitable measures to ensure that by 2030, all packaging on the EU market is reusable or recyclable in an economically sustainable way, so as to limit the use of single-use plastic.

Therefore, following the increase in plastic production and, with it, the environmental problems attributable to an economic model centred on the logic of profit and waste, and therefore indifferent to the costs of the negative externalities it is able to generate, the need was felt, also by the EU institutions, to prepare suitable measures to remedy the harmful effects of disposable plastic packaging and containers in the environment – products that have revolutionized our way of life due to their flexibility (Scialpi, 2020, pp. 301–302). The goal is to achieve a real ecological transition through the preparation of a circular economy model which, in smoothing out the diseconomies, improves production upstream, reduces waste, reorients consumption

and remedies distortions; this recipe can only embrace the dimension of an environmentally targeted tax system characterized by a metamorphosis from a linear taxation system to a circular taxation paradigm (Scialpi, 2020, p. 302).

In this view, linear taxation, dominated by the principle of fiscal neutrality and unsuitable for influencing the decisions, preferences and behaviour of taxpayers, loses sight of non-tax purposes and attributes relevance only to revenue, offering the state resources to allocate to spending without having regard to the worthiness of how it is used, thus too often ending up financing spending on spending and therefore even waste (Uricchio, 2017, pp. 1860–1861). On the contrary, circular taxation, which enhances environmentally targeted taxation, limits unproductive and patronage public spending, restarting development without destroying wealth: this model, through taxing the waste and the use of tax eco-incentives, favours reuse and recycling, fully implementing the circular economy paradigm (Strianese, 2021, p. 81; Uricchio, 2017, p. 1861).

6. The European and Italian plastic taxes: Forms of levy to guide behaviour and development models

In order to promote the recycling of plastics, reduce environmental pollution and discourage the use of disposable plastic products, Article 21 of Law Decree of 31 December 2020, No. 183, converted into law on 26 February 2021 (No. 21), implemented the EU/Euratom Decision 2020/2053 of 14 December 2020, relating to the system of European Union resources, in the Italian legal system. Article 2(1)(c) of the latter introduced the ‘European plastic tax’ (Rinaldi, 2021, p. 154; Schratzenstaller, 2019, p. 101; Scuderi, 2021, p. 539; Selicato, 2021, p. 232; van den Eijnde, 2022, p. 243), establishing a uniform rate of EUR 0.80 per kilogram, applied to the weight of non-recycled plastic packaging waste generated in each Member State (except for annual flat-rate reductions reserved for Member States with per capita gross national income below the European average), based on the difference between the weight of plastic packaging waste generated in a given year and the weight of plastic packaging waste recycled over the same period (Sciancalepore, 2021, p. 241).

The measure differs from the Italian plastic tax (Article 1(634–658) of the Law of 27 December 2019, No. 160) (Di Salvo & Coaloa, 2021, p. 1133; Gentili, 2022, p. 26; Gianniti, 2020, p. 3323; Romito, 2021, p. 156; Salanitro, 2023, p. 339; Sbandi & Santacroce, 2020, p. 1239; Sbandi & Santacroce, 2021, p. 261; Scialpi, 2020, p. 299; Selicato, 2022, p. 33; Uricchio, 2020b, p. 185; Uricchio, 2020c, p. 371), a tax on the consumption of single-use plastic products, the entry into force of which has been deferred several times (most recently, with Article 1(54) of the Law of 29 December 2022, No. 197 and with Article 1(44) of the Law of 30 December 2023, No. 213). The tax will be applied from 1 July 2024, in an amount equal to EUR 0.45 per kilo-

gram of plastic material contained in the asset subject to taxation, to stem the growing production of packaging and containers. It is a form of levy which, in affecting the production and consumption of plastic products, pursues indirect objectives which, disregarding the typical purposes of revenue, aim to direct development behaviours and models towards more responsible and aware forms (Scialpi, 2020, p. 300).

The harmful effects that plastic has on the ecosystem allow the levy to be ascribed to the category of green taxes; more specifically, since the tax obligation arises in relation to the consumption of single-use plastics, it seems possible to bring it under the genus of environmental excise duties, the prerequisite of which is not manufacture or consumption considered alone, but manufacture or consumption if and as they produce environmental damage (Scarascia Mugnozza, 2022, p. 6). Domestic tax is levied on single-use plastics unsuitable for reuse or for subsequent transfer with the function of containment, protection, manipulation or delivery of goods or food products, including semi-finished products, preforms and objects which allow the closure, marketing or presentation of the same (Article 1(634–635), Law No. 160/2019). The plastic composition of these products, even if partial, and their destination for a single use become essential requirements for tax purposes (Scarascia Mugnozza, 2022, p. 6). By explicit regulatory provision, compostable single-use plastics, medical devices and plastics used to contain and protect medicinal preparations are excluded from taxation (Scialpi, 2022, p. 303).

The manufacturer is identified as the taxable person where the single-use plastics are made in the national territory, or as the purchaser carrying out an economic activity or as the importer for single-use plastics (purchased by a private national consumer) coming from other EU or non-EU countries (Scialpi, 2022, p. 303). Depending on the relevant hypotheses, the tax obligation arises at the time of production or of the plastics' introduction into the national territory from other countries (Scialpi, 2022, p. 303). The act of release for consumption, which makes the tax payable, coincides with the transfer to other national subjects, with the purchase or transfer in the national territory or with the definitive importation (Scialpi, 2022, p. 304).

A bonus is also envisaged, in the form of a tax credit for companies operating in the plastics sector and producers of single-use plastics; this is a facilitation measure consistent with the market-based approach strategy, which, on the one hand, prescribes the use of the tax to dissuade consumers from ecologically unsustainable conduct and, on the other hand, mitigates the tax burden on environmentally virtuous products and behaviour to encourage their diffusion (Scarascia Mugnozza, 2022, pp. 7–11). Considering that compostable products are expressly excluded from the application of the tax, the intention is to encourage the production of biodegradable plastics, in the wake of the strategy endorsed by EU legislation (Scarascia Mugnozza, 2022, p. 7).

On an abstract level, it seems that national and European legislation is destined to find joint application, in order to subject the entire life cycle of plastic to taxation

and maximize the deterrent effect of the tax (Scarascia Mugnozza, 2022, p. 8). In reality, the domestic tax differs from that of the EU: the tax developed by the Italian legislature affects the mere production of disposable plastic products, emphasising manufacturing and consumption; the European approach, on the other hand, pertains to the broader sphere of non-recycled plastic packaging, affecting its disposal (Sciancalepore, 2021, pp. 243–244). Therefore, while the imposition on single-use plastics should occur during the production process, i.e. as long as the plastic product is on the market, the application of the European tax would take place on the disposal of the product, which can be legally qualified as ‘waste’ once it is released from the market. Furthermore, the European levy is not aimed at the final consumer but at the Member State, and is not applicable at the stage of the production or consumption of the plastic; for this reason, the disincentive effect of the measure, which becomes a characteristic feature of the environmental levy in its proper sense, is of little importance (Scarascia Mugnozza, 2022, p. 9). However, on a concrete level, the demarcation line between ‘artifacts having the function of containment, protection, manipulation or delivery of goods or food products’ and ‘packaging waste’ is rather blurred: in fact, both regulations limit the application of the fiscal measure to non-recycled or non-recyclable products. Moreover, the European provision does not make distinctions regarding the composition of the product (Sciancalepore, 2021, pp. 243–244).

7. Further domestic experiences: the Spanish plastic tax and the United Kingdom’s Plastic Packaging Tax

Unlike what has happened in the Italian legal system, in the European context, there has been no shortage of domestic legislation in which the tax on plastic has been fully implemented and has effectively come into force, with results that are, however, not always satisfactory. This is the case in Spain, which, with Articles 67–83 of the Law of 8 April 2022, No. 7, entitled ‘De residuos y suelos contaminados para una economía circular’, introduced a special tax, starting from 1 January 2023, applicable at the rate of EUR 0.45 per kilogram of non-recycled plastic material on non-reusable packaging containing plastic (without any distinction between primary, secondary or tertiary), on semi-finished plastic products intended for the production of packaging (such as preforms or thermoplastic sheets) and on products containing plastic materials intended to allow closure, placement on the market or the presentation of non-reusable packaging (whether empty or used to contain, protect, handle, distribute and present goods) (Palomar Olmeda et al., 2022; Patón García, 2022).

With a view to transposing the EU principles concerning the reduction of the environmental impact of certain plastic products into Spanish law, the tax pursues a dual purpose: on the one hand, to prevent the production of single-use plastic pack-

aging waste; on the other, promoting a truly circular economy by encouraging the use of recycled plastic. The tax basis refers to the use of plastic packaging at the time of manufacturing as falling within the scope of the tax or at the intra-community purchase or importation of the same. This entails a transversal application of the tax for all industrial sectors that use goods containing disposable plastic packaging: the relevant economic operators are subject to taxation regardless of whether they are engaged in the plastic sector or not, having at the same time to comply with various formal and accounting obligations, including the management and updating of specific inventories and registration in a specific list kept by the financial administration.

In order to encourage the use of recycled material for the manufacture of packaging, the taxable base of the tax does not include the quantity of recycled plastic (including mechanical and chemical recycling); however, it is necessary that the quantity of recycled plastic contained in the products falling within the scope of application of the tax is certified by an organization accredited to issue certifications according to European standards, on the basis of specific criteria which refer to the methods and chemical processes with which a product was designed, manufactured and marketed, regardless of how it is used by consumers. Therefore, the recycling factor becomes a determining element in whether or not taxation is triggered.

The law establishing the tax also provides for a series of exclusions and exemptions: the exclusions pursue the objective of exempting from taxation operations on goods which are not intended to be consumed on Spanish territory (for example, products which, although falling within the scope of the tax, are no longer suitable for use or have been destroyed or are intended to be sold directly by the producer or by a third party operating on his/her behalf in another territory; to paints, inks, glazes and adhesives applied to products subject to the plastic tax; and to disposable plastic packaging not designed for the delivery of goods). The exemptions, however, refer to drugs, medical devices, foods for special medical purposes and infant formulas for hospital use.

As with the Italian plastic tax (Villar Ezcurra & Bisogno, 2022, p. 185), for the equivalent Spanish tax, the moment at which the tax becomes payable differs depending on the taxable event: for production, the tax is due when the product is sold to the first buyer; for imports, reference is made to the moment of customs clearance together with the payment of customs duties and VAT; for intra-community purchases, payment must be made by the 15th day of the month following shipment, unless the invoice is issued before that date.

Even before the Spanish experience, in the United Kingdom, a form of environmental levy was introduced from 1 April 2022, called the 'Plastic Packaging Tax', applicable at an amount equal to GBP 200 per tonne on plastic packaging produced in or imported into the UK with a recycled plastic component of less than 30%, in order to encourage the use of recycled plastic in the production of packaging. For the purposes of the tax in question, a packaging component means a product designed

to contain, protect and be functional for the delivery of goods. This tax applies to a quantity exceeding 10 tonnes over a 12-month period, when the component of the produced or imported plastic packaging is finished, i.e. it has undergone its last substantial transformation, meaning any material made of a polymer derived from petroleum or renewable sources. The payer of this tax measure is the manufacturer or importer, who is required to pay the tax by the last working day of the month following the end of the accounting period. Also, for this form of levy, alongside specific exemptions (concerning, for example, plastic packaging made or imported for medical use), specific formal and accounting obligations are envisaged for producers and importers.

8. Criticisms and alternative solutions

On a methodological level, after having mentioned the foreign experiences in which the tax imposition on plastic, with a view to environmental protection, has begun to produce effects, it is appropriate to focus attention on the Italian legal system, in which the domestic form of the levy (not yet entered into force), homologous to the measure developed within the EU, has drawn numerous criticisms: in addition to the dubious tax nature of the European levy, defined by Decision 2020/2053 as a 'contribution', its concrete implementation is far from easy, also due to the complex coordination with tax cases already in force (primarily, with the Italian regulation of excise duties contained in the Legislative Decree of 26 October 1995, No. 504) (Scarascia Mugnozza, 2022, p. 8).

A further criticism concerns the structure of the tax on single-use plastics, which is also applicable to products 'made with the use, even partial, of plastic materials', as well as to 'semi-finished products, made with the use, even partial, of the aforementioned plastic materials, used in the production' of single-use plastics; the legislation thus seems to outline a particularly broad scope of application, so as to subject the highest number of non-reusable plastic products to taxation, maximizing the deterrent effect (Scarascia Mugnozza, 2022, p. 10). Nonetheless, such an extension raises some problems: firstly, because it is necessary to clarify the reference to 'semi-finished' products liable to be subject to taxation; moreover, since the legislation defines a link between the amount of plastic contained in the product and the amount owed, the need arises for the taxable person to acquire this information and make it available to the administrative authority, a circumstance that is not entirely easy, since the taxable person, even if s/he is not the manufacturer, may not have the necessary technical skills (Scarascia Mugnozza, 2022, pp. 10–11). Furthermore, if the aim is to discourage the production and consumption of a highly polluting material such as plastic, increasing the cost of single-use plastics by a few cents could prove to be poorly effective, especially for those who make limited use of manufactured articles

in disposable plastic; for large consumers, on the other hand, it would be necessary to quantify the consumption of material which entails the tax obligation, to determine the economic burden and evaluate its effectiveness as a deterrent (Scarascia Mugnozza, 2022, p. 13).

These circumstances, added to the complexity of the regulatory system and the implementation costs of individual taxes, lead to a broader reflection on the actual usefulness of the tax on plastics in its current configuration and on its suitability for achieving its objectives (Scarascia Mugnozza, 2022, p. 8). In fact, the efficiency of these fiscal measures as a method of combating pollution and plastic consumption appears to be of little importance: the negative factors, mainly linked to the cumbersome nature of the regulatory discipline, seem to prevail over the desired environmental advantages (Scarascia Mugnozza, 2022, p. 14). An alternative solution could lie in the provision of a 'green VAT', consisting of an environmentally oriented application of VAT through a variation of the rate linked to the non-recyclable plastic content of the product, provided that the tax burden falls on the polluter and not (only) on the final consumer, in line with the 'polluter pays' principle (Scarascia Mugnozza, 2022, p. 18). A further viable path to stimulate the green transition could lie in strengthening tax credits – instruments that have not found adequate space in the current tax system – in order to promote the recycling and reuse of plastic by operating on the side of tax breaks (Alfano & Bisogno, 2022, pp. 310–311).

Moreover, plastic has already been the object of attention by the Italian tax legislature. In a period in which the low unit costs to produce plastic bags favoured their indiscriminate abandonment, Article 1(8) of the Law Decree of 9 September 1988, No. 397, converted by the Law of 9 November 1988, No. 475, introduced a manufacturing tax on plastic bags, whose tax basis was the mere production of the bags, regardless of the product's characteristics (Alfano, 2012, p. 234; Fergola, 1992, p. 1435; Uricchio & Zavaglia, 2014, p. 85; Zecca, 1989, p. 479; Zecca, 1990, p. 541). In the Italian legal system, manufacturing taxes, included (together with consumption taxes) within the category of excise duties, originally constituted indirect levies intended to pursue mere revenue purposes; environmental protection, achieved by encouraging ecologically correct behaviour and discouraging conduct harmful to the environment, only took on importance later, allowing the use of fiscal leverage to achieve environmental-sustainability objectives (Alfano & Bisogno, 2022, p. 294).

From an environmental point of view, the experience of the manufacturing tax on plastic bags, at least initially, was positive: the results relating to the first period of the tax's validity were overall good, with a sharp reduction in the use of a highly polluting product in favour of a policy of reuse and a greater inclination towards paper bags (Scialpi, 2020, p. 308). Over time, however, this form of levy ended up betraying the original logic, as a subsequent legislative change extended the scope of its application (initially limited to non-biodegradable bags) to all plastic bags, regardless of the existence or otherwise of a sustainable component; this intervention, not assisted

by effective action to tackle clandestine producers of shopping bags, deprived the tax of its essential purpose and caused its repeal (Scarascia Mugnozza, 2022, p. 11). Despite the critical issues highlighted, the manufacturing tax on plastic bags represented a significant example of an environmental excise duty, having as its tax basis not the manufacturing or consumption itself but the manufacturing or consumption as productive of pollution (Alfano & Bisogno, 2022, pp. 300–301).

More recently, the Law Decree of 14 October 2019, No. 111, converted by the Law of 12 December 2019, No. 141 (the so-called 'Climate Decree'), implementing community obligations related to air quality, has prepared a series of measures, providing with the Experimental Plastic-Eating Programme a fund to contain the production of plastic waste through the use of eco-compactors and recognizing, on an experimental basis, a non-repayable economic contribution to neighbourhood commercial operators (medium and large) who equip spaces for the sale of loose or refillable food products and detergents or for the opening of new stores which exclusively sell bulk products (Scialpi, 2020, p. 309).

Conclusion

The transition from a linear to a circular economy heralds great opportunities for two reasons: on the one hand, because by acting as a stimulus for the modernization and transformation of economic models, it can favour the ecological transition (Uricchio, 2020d, p. 1) and direct production in the direction of sustainability and respect for the environment, nature and people; on the other, because by offering economic operators the possibility of becoming more competitive and of achieving considerable advantages, it can create jobs and facilitate integration and innovation at a social and industrial level (Uricchio, 2017, p. 1862). Among the various tools that can be used for this purpose, taxation can play a crucial role (Alfano & Bisogno, 2022, p. 310), as can the use of the related revenues to finance environmental education policies, since it has been demonstrated that educational interventions, especially in the long term, appear much more incisive than any other policy.

In March 2020, as part of the European Green Deal (Claeys et al., 2019; Comelli, 2021a, p. 44; Comelli, 2021b, p. 1969; Gallo, 2020; Gallo, 2022, p. 7; Padoa-Schioppa & Iozzo, 2020, p. 3; Rosembuj, 2019, p. 1; Uricchio, 2021, p. 149) – a programme aimed at achieving sustainable growth to contribute to full climate neutrality (Chomsky & Pollin, 2020; Moratti, 2020, p. 439) — an important action plan on the circular economy was prepared for the development of a growth-oriented programme aimed at building a cleaner and more competitive Europe, promoting sustainable consumption and aiming to ensure that the resources used remain in the economic system for as long as possible, so as to reduce the overall footprint (in terms of environment and resources) of production and consumption and provide incentives for techno-

logical innovation, sustainable businesses and zero-impact products, in consideration of the strong synergies between the circular economy and climate-protection actions. In this context, a proposal for a regulation was presented on 10 December 2020 to modernize EU legislation on batteries, so as to ensure that they are sustainable, circular, high-performing and safe throughout their life cycle and that they are collected and recycled, thus becoming a real resource. To this end, mandatory requirements have been set for all batteries placed on the European market: restrictions on the use of hazardous substances, a minimum content of recycled material, a low carbon footprint, performance and durability, labelling, and compliance with collection and recycling targets (Amanatidis, 2022b, pp. 5–6). Lastly, with the ‘Fit for 55’ programme (Fregni, 2022, p. 161; Monteduro, 2021, p. 447), the European Commission has presented a series of proposals designed to achieve the objectives set by the European Green Deal, consisting of a 55% reduction in net carbon dioxide emissions to be achieved by 2030 (compared to previous levels) and energy neutrality by 2050.

The hope is that the evolution of tax matters, especially in complex times like the current one (de Cogan & Brassey, 2023, p. 1), will not lose sight of the objective of effectiveness, which cannot be separated from a simple and easy application both for the interpreter and for the taxpayer, and which can also monitor interventions developed at the EU level, so that mere revenue contingencies do not affect their legitimacy (Scarascia Mugnozza, 2022, p. 18). A significant contribution would thus be offered to the transition of economic systems towards eco-sustainable models and, more generally, to the achievement of the objectives that the international community considers essential to address the main environmental emergencies of the planet (Uricchio & Selicato, 2023, p. 937).

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