EUROPEAN CIRCULAR ECONOMY STAKEHOLDER PLATFORM (ECESP) COORDINATION GROUP

2021 CIRCULAR TAXATION REFLECTION PAPER

LEADERSHIP GROUP ON ECONOMIC INCENTIVES
Authors

Editor: Hubert Bukowski, INNOWO

Coordinator: Emmanuel Katrakis, EuRIC

Members of the circular taxation subgroup of the Leadership Group on Economic Incentives, specifically:
- Fabio Eboli, ENEA
- Femke Groothuis, Ex'tax
- Raúl van Kleef, Ex’tax
- Michael Laermann, Ecopreneur.eu
- Stefan Ulrich Speck, EEB
- Arthur ten Wolde, Ecopreneur.eu
The circular economy model is often regarded as our best effort at attaining sustainability without having to diminish our quality of life. To achieve this, every economic actor would have to make a transition from the "throw-away" culture to closing economic cycles. However, we often fail to realise that the whole economic system has been developed to address linear economic model needs and goals. Specifically, this includes statistics, procurement, monetary policies and taxation. Those basic rules on which the economic system is based would have to be significantly modified not only to enable the proper functioning of the circular economy model, but initially to facilitate a just and efficient circular transition.

One of the key areas that has been nothing short of neglected is taxation. The European Union members have not been particularly active in transposing the tax system to circular needs, although there are examples of taxation being harnessed for sustainability, specifically in the form of environmental/green taxation. These are taxes levied on all types of resource use or pollution, including but not limited to the use of water, metals and minerals, carbon and other harmful emissions. In addition to revenue collection, they seek to address free markets' failure to consider environmental impacts and internalise market distorting externalities. However, they have never played a significant role in the tax system as a whole and since the beginning of the millennium, their importance has actually diminished. This fact is corroborated by the experience of many countries. Environmental tax revenues in relation to GDP have been decreasing for two decades now and currently are at their lowest level since the beginning of the monitoring period. Moreover, environmental taxes are often limited to energy and transport taxes, primarily in the form of excise duties. Other possible avenues of green/environmental taxation, such as explicit carbon taxes, are often foregone. Meanwhile, fossil fuel subsidies have only increased over the past decade. As a result, the Polluter Pays Principle is not effectively applied within the EU.
The push towards circularity exemplified by the previous and current European Commission plan – the European Green Deal, the Circular Economy Action Plans - is an opportunity to reverse the negative trajectory of green/environmental taxes. The European Green Deal acknowledges the crucial role of taxation in the transition towards greener and more sustainable growth and that the current taxation system is inadequately aligned with EU climate objectives. The expected tax reforms will:

- Aim to reduce greenhouse gas emissions, for instance by ensuring effective carbon pricing.
- Accelerate the much-needed transition towards a more circular economy by levelling the playing field for circular materials, products and services,
- Contribute to a fair transition by putting most of the tax burden on the actors that consume the most and offering support for the most vulnerable.

Currently however, the European Green Deal Communication highlights only two initiatives in the field of taxation (the revision of the Energy Taxation Directive and the introduction of a CBAM - Carbon Border Adjustment Mechanism). Let us hope that these are only some initial actions in the area of taxation, as the EU goals require further steps to ensure deep economic and societal change. To align the tax system with the Green Deal and the circular economy model, the tax burden must shift towards environmentally harmful activities, as is the case in environmental/green taxation. Current systems have to give way to a system of taxation that puts a price on activities that have a detrimental impact on the environment, society or economy. The tax system can internalise these negative external costs, which are not usually reflected in the market price. Consequently, circular goods and services will increase in competitiveness, compared to polluting activities.
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However the European Union, which wants to transition to a circular economy model, has to be even more ambitious than environmental/green taxation. European countries need to head towards circular taxation. The concept exceeds environmental/green taxation in range and reach as it encompasses an entire tax system geared towards circularity. Existing environmental taxes aim to reduce some externalities and give small incentives to change economic behaviour, but they leave the basic structure of the linear economy intact. Circular taxation however aims to contribute to a more fundamental change in economic structure, significantly altering relative prices and changing the behaviour of firms and consumers to achieve an economy that respects the limits of the planet.
Building on that notion, a novel approach to taxation should be underscored. Namely, the adoption of circular taxation requires changes in reasoning for taxes. In some cases, they may become an effective mechanism for encouraging positive and discouraging negative activities, such as limiting externalities and overconsumption and nurturing the planet’s ecosystem. Only secondly should they be assessed on their revenue-generating potential, though, by all means, this aspect is also meaningful. This may be in opposition to the classic approach to taxation that aims to minimise the effect of the tax law on a taxpayer’s decisions, while its primary purpose is to raise revenue for governmental activities. The proposed change in taxation paradigm should not be assessed as a utopia, but a viable mechanism for circular economy advancement. In fact, it has already been proposed in scientific literature. The rationale for a tax shift towards circular taxation is based on the concept of extrafiscality or extra fiscal taxation (taxation with extra fiscal purposes, e.g., “sin taxes”).

Judging by the relatively slow evolution of taxation over the last decades, the implementation of a circular tax system will be neither swift nor simple. However, based on the current state of our planet, it is clear that acting quickly is essential. Therefore, keeping circular taxation in mind as the ultimate goal, we should not overlook the smaller, specific taxes that could be implemented to advance circularity.

In this document we discuss the possibilities of a tax system that would fit the needs of a circular economy, and most importantly support the broad implementation of the concept. We examine the most potent forms of a circular tax system and its components discussed among Leadership Group members. We consider the implementation and possible issues on the path towards circular taxation. Finally, we shed light on the factors that should be taken into consideration when searching for circular taxation opportunities.
2. KEY FINDINGS

2.1 Circular taxation system instead of individual green taxes

Throughout history, the tax system has evolved along with the technical possibilities of collecting taxes, the growing importance of government and its spending and overall economic progress. Most of the time, it is the current economic conditions that dictate the form of the tax system. This premise also applies to the current tax system. As the economy is based on a linear economic model, the taxation system was constructed to answer this model’s needs. In fact, our inherited fiscal architecture reinforces the current linear economic model. Therefore, on the path to attaining circularity, tax system changes are crucial. In the words of Stahel, “a shift to a sustainable taxation constitutes a giant booster to multiply the benefits of a circular economy within a national economy”.

The architectural design of the tax system could be altered by significantly modifying or replacing the existing taxes. However, as has been stated, actual experience of the fiscal instruments and environmental/green taxes has led to growing dissatisfaction with their use. Therefore, the proliferation of new, relatively marginal environmental taxes, as implemented in many countries, has been minuscule compared with the last decade of the 20th century. At the same time, the broad consensus regarding the importance of fiscal instruments, particularly taxes, has not changed. Those tools are still believed to be an extremely important mechanism for supporting sustainability. This has led some researchers to call for a more thorough reform of taxes and even to rethink the design of the entire tax system.

Circular taxation advocates a comprehensive step-by-step overhaul of the taxation system rather than adjusting for specific market failure or environmental externalities by the use of environmental/green taxes. It goes beyond putting a patch on a specific problem caused by the linearity of the economic model, and in fact supports the transition to circularity so as to eliminate the root cause of the problems we are facing.
Conventional environmental taxes focus mainly on taxing the harmful consumption of specific products at the end of the production chain and do not take into account the externalities in previous life-cycle phases. Additionally, the level of taxation is typically too small to alter consumption decisions. Moreover, most of those taxes are applied to goods with no commonly used alternatives and substitutes (e.g., petrol, cars).

Circular taxation must be primarily aimed at modifying consumption decisions in a market economy. To this end, the relative prices of goods and services need to be altered to steer economic activities and consumption towards sustainable activities. The circular tax system can affect the profitability of economic endeavours, thereby shifting investor behaviour and the relative prices of goods and services. This results in changing consumption patterns. Production and consumption decisions should be steered towards sustainability based on positively and negatively influencing costs and prices. This requires structural changes in the architecture of the current tax system so as to eliminate implicit costs for circular activities and implicit/explicit subsidies for polluting activities. This includes promotion of activities aimed at the retention of economic value in time, instead of opting for new production. At the same time, it is crucial to reinforce taxes on production factors that are intensive in the linear economy, i.e., non-renewable resources and capital. In effect, a circular taxation system would make it economically sound for all agents to act according to circularity principles instead of conforming to a linear model.

The form of such a tax system needs to be carefully evaluated, possibly using factors for consideration that are proposed in this document. Some, already existing proposals[1] suggest a general and transversal tax that reflects the total value of all externalities associated with each product or service in their lifecycle. Rather than designing or assessing single taxes to correct a specific externality, this proposal involves creating a tax system that attempts to counteract all of them at once. The assessment of the value of those externalities seems to be the biggest hurdle for the proposal’s implementation, along with the changing nature of the production process, resource usage, etc.

Other holistic proposals to influence market forces by inducing broad, cross-cutting, socio-environmentally positive changes in production and consumption concern relatively higher taxation of production factors more important in the linear model than the circular one (e.g., taxing resources instead of labour). What is just as important is the modification to the indirect taxation that is a cornerstone of current taxation systems. This type of tax has the biggest influence on the final price of the product for the consumer. Some may argue that VAT-type taxes are crucial for altering those prices to increase competitiveness of circular products and services compared to standard ones and influence their adoption. Those two options are discussed more thoroughly in the subsections below. Finally, direct taxation could be used to support equity and possibly limit overconsumption, which is a characteristic of more affluent economic classes of society.
2.2. Taxing resources and pollution instead of labour

The tax mix of European Member States is not yet aligned with the goals of the European Green Deal and the European Pillar of Social Rights. Fiscal systems still provide financial incentives in support of the linear take-make-waste economy. In the EU27, on average, 51.7% of the tax burden falls on labour, while green taxes (on all types of natural resource use and pollution) represent only 5.9% of tax revenues. This means that the pollution of water, air and soil, for example, as well as waste, the use of metals and minerals and carbon emission remain relatively tax-free. The Polluter Pays Principle, as enshrined in the EU Founding Treaties, is not consistently applied.

High labour costs on the other hand encourage businesses to minimise employment, outsource jobs and opt for non-standard forms of employment to avoid social security costs. Circular activities, such as repair, reuse, recycling and redesign, however, are labour intensive. They take more time and effort, customisation and a higher service level than 'business as usual' linear activities. The high tax burden on labour is a barrier to circularity. Making matters worse, circular entrepreneurs need to compete with products that are allowed to pollute without paying for the externalities. This means that there is no level playing field.

Research shows that a tax shift from labour to resource use and pollution is needed to bring EU tax systems into line with the economic, social and environmental goals. An increase in green taxes would raise revenues as well as encourage prudent use of natural resources. Using the revenues for social impact by reducing the tax burden on labour (both for employers and households) would facilitate a just transition and enable entrepreneurs to apply circular business models and invest in people. Circular activities tend to benefit from lower volumes and smaller distances of transport, limiting material imports and shortening the global value chains that proved fragile during the COVID-19 pandemic. If implemented as a coherent package, this tax shift from labour to resources would promote GDP growth, CO2 reduction and employment in all sectors, while ensuring lower income households also thrive in the transition to a circular economy.
### 2.3. Circular VAT

The reasoning behind current Value Added Tax was developed and is adapted to a linear economy. What it means is that the value added on a finite number of steps towards attaining the final product is taxed. Therefore, there is no accumulation of taxes, as the final product becomes worthless waste at the end of its lifecycle. However, in the circular economy the products, elements and materials circulate in possibly infinite economic loops. This in fact means that preserving the economic value of assets is also taxed, while no new value is produced. In other words, taxes accumulate on the added value that was already produced. This in turn discourages the closing of the economic loops and capitalising on the full potential of resources. Therefore, the circular transition requires the amendment of the VAT mechanism to tax only the new added value. The lower prices of assets that are already present in the economic cycle would encourage their purchase, or at least forgo the negative incentives to use already existing goods, components and materials.

There are a number of pathways to achieve this. The quickest one is to introduce VAT exemption, zero rate or minimum rate to encourage circular activities extending the lifespan of products and materials. This may concern such services as reuse, repair, remanufacturing, recycling, remediation, rehabilitation and regeneration activities. This has to go hand in hand with exempting used, second-hand products from VAT as tax was already paid once during the purchase of a new product. Alternatively, as a step towards incentivising the reuse and resale of assets, the VAT could be applied to the net value added, taking into account not only the final sales price but also the buy-back price of the used good and operating expenses linked to reselling the product. This would specifically encourage the reuse of more complex products that are in need of maintenance and repair.

Another way to stimulate consumer demand for circular goods, aside from value-preserving services and used products, would be to lower VAT rates applicable to circular products consisting of recycled/upcycled materials. Given the choice between two otherwise equal goods or services, even a moderate VAT difference can effectively nudge consumers to purchase the circular option rather than the linear one. This can alleviate the biggest hurdle for sustainable products and services, which is lack of demand. Therefore, besides further amending the EU VAT directive to make it legally possible, it must be possible to evaluate information on product properties, along with the ratio of new versus reused components and materials, for instance by using material passports.
Additionally reduced VAT rates could be applied to products with a certain level of circular properties. To avoid greenwashing, consistent criteria and checks, possibly using trustworthy certificates that are already on the market need to be introduced of course. However, this approach does give rise to some concerns, such as complexity and volatility of the system or subjectivity issues.

Indirect taxation should also reconsider the timing of tax collection. As the rationale behind circular VAT is to tax new value in the economy, the product that has not been fully utilised could be taxed according to the extent of the value it actually brought. This has direct implications for rent-purchase, rent, lease and pay-per-use relationships in which revenues will be obtained over a longer period of time. This approach should support the conversion of producer-user relationships towards more long-term commitments, by the use of circular business models. Currently, enterprises using all forms of rent agreements need to pay VAT upfront on all projected revenues from the renting of goods. This is because rent-purchase is seen as a deferred supply of goods. Especially in the early stages of the producer-user relationship, this entails negative effects for liquidity and viability of the business.

An important issue that needs to be addressed is that the rating and definition of circularity is still unclear. If not properly disposed of, a seemingly circular product or material (e.g. refurbished iphone or salvaged construction material) can still end up in a polluting end-of-life stage. This means processes can become more circular, but defining what a circular product is, is not possible without knowing the full lifecycle. Another issue to take into account is that intra-communal trade is best served by standardised and consistent VAT rates across the EU.
3. PRACTICAL IMPLICATIONS

3.1. Gradual transition into circular tax system

There is no doubt that our planet is facing substantial threats that stem predominantly from our unsustainable production and consumption. As most scientists claim, we must act quickly. This can be achieved by switching to a circular economy model, with the support of the circular tax system, as stated in previous sections. Despite the desperate call for swift action, the overhaul of economic mechanisms, consumer habits, global value chains and indeed the tax system cannot be done overnight.

Therefore, a gradual approach to circular taxation transition is suggested. The path towards a circular tax system should consist of specific steps with a focus on viability, effectiveness and practical implementation. As breaking fiscal habits is challenging, especially if it means paying for something that was previously not taxed, a gradual approach would facilitate acceptance among consumers and companies. At the same time, it would influence producers to switch to circular processes and business models.

A correct sequencing of modifications to the tax system is vital to achieve the intended outcomes and at the same time limit the adverse ones. It is advisable to utilise those target-oriented changes which are easier or faster to execute, though they may be more modest in their effect. Some of those steps can be implemented as soon as possible, for instance:

- Increased pricing of pollution and natural resource use (e.g. carbon and other emissions from aviation and shipping, fresh water use, virgin concrete, non-energy use of fossil fuels)
- VAT rate decrease for reuse, repair, remanufacturing activities
- VAT rate decrease for second-hand products
- Decreasing labour taxes (personal income tax, social security contributions and payroll taxes).

Incrementally shifting financial incentives is in line with the evolutionary approach to tax system changes. It would facilitate acceptance as well as decreasing market and economic volatility. Other tax system alterations may well be suited to accompany later stages of circular model implementation, such as tax rates based on externality evaluation or abandoning VAT for circular products and activities altogether.
3.2. **International cooperation**

The gradual approach to circular taxation transition requires a thorough examination of the cross-border effects on taxation. Differences in taxation, with regard to the tax base or tax rate, could influence the profitability of economic activity, consequently affecting the location of the production facilities or at least the place of settling taxes. Thus, deciding on a common framework among a group of neighbouring countries, or especially in a common market, as is the case in the EU, would be advisable. International coordination in the design and pace of implementing tax reforms would be necessary both to effectively influence sustainable production and consumption and fulfil taxation’s role as a revenue source for the state. At the same time, efficient circular taxation is in need of common international nomenclature. Specifically, one concerning resources, as they are subject to global trade. The decision on what is the optimal phase of the lifecycle to tax the resources is quintessential.

3.3. **Tax administration**

Successful implementation of a tax system, specifically a circular one, is directly determined by the proper functioning of the tax administration. This issue becomes more important as it would be accompanied by a substantial modification of the economic model – from linear to circular. The tax administration plays a crucial role in determining the real (or effective) tax system, as opposed to the statutory tax system. It is indeed critical to ensure that changes in tax policy are compatible with administrative capacity, once again encouraging a gradual approach to circular taxation implementation.

During this process there are numerous factors to be considered. Administrative costs on the part of the payer and public authorities should be assessed and minimised, with simplicity of the tax system being an important component. This is directly connected to possibilities for using loopholes and the costs of tackling tax avoidance that should also be considered. Other factors to consider are enumerated and briefly discussed in the next section (although they concern not only tax administration but the overall tax design and its effects). It is technically possible to design a circular tax system that is simple and enforceable.

Circular taxation and particularly its role in internalising externalities in the goods’ prices as is the case in ‘true pricing’ and/or ‘true cost accounting’ require the tax administration to take on new roles. Although simplicity of the tax system is always the objective, it should not obscure the intention of affecting production and consumption choices. Therefore, a more thorough assessment of the externalities, origin of goods and resources, composition of elements and product (virgin/reclaimed materials), etc. by the tax administration may be necessary in the future. The digitalisation of our economy that we are currently experiencing may help tremendously in that matter.
3.4. Timeliness and congruence

As stated numerous times, the circular transition and its components, including circular taxation, cannot wait. However, the transition should be adjusted to the current conditions. We now have a great opportunity to implement changes in the taxation system. Since the onset of the pandemic, fiscal packages have been aimed at cushioning the immediate impact of the sudden drop in economic activity. The current crisis also presents governments with an opportunity to shape, for the long term, a more prosperous economic recovery that also meets environmental objectives. Using circular taxes in this process would be advisable, as it would supplement the fiscal push towards sustainable activities. At the same time, circular taxation could also enhance the measures aimed at counteracting the economic slowdown. This specifically concerns treating circular taxes as an automatic stabiliser for the economy.
## 4. FACTORS TO CONSIDER WHEN DEVELOPING CIRCULAR TAXATION

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### Proactivity
Circular tax design should address how the tax interferes with market mechanisms. Some distortion is of course necessary to support circularity, namely increase the competitiveness of circular goods and services against standard ones. However, one has to also rigorously consider other effects of tax induced distortion, e.g., price volatility.

### Scope
In the process of establishing a circular tax system or a particular circular tax, the tax base should be of primary concern. It is essential to burden activities which one wants to discourage. Circular tax system should not be limited to current standard practices. Specifically, one should look beyond energy and vehicles taxation.

### Simplicity
Simplicity is often related to efficiency of the tax system as it limits the administrator costs and precludes loopholes. On the other hand, simple tax systems have a decreased ability to support social equity (e.g., progressive taxation) and address specific needs of certain economies. Tax system simplicity also requires proper levels of predictability, stability and reliability.

### Coherence
It is important to avoid policy measures that offset each other in terms of final desirable outputs. On the contrary, it is suggested to consider potential synergies to achieve expected outcomes at the lowest costs. Thus, a circular tax system should not only consist of a set of tax tools but also their relations.

### Fairness
Depending on design features, circular taxes should support the ‘polluter pays principle’ under which the costs of pollution prevention and control should be reflected in the price and output of goods and services which cause pollution as a result of their production and/or consumption. The approach should be even broader incorporating not only pollution but all externalities.
## Circular tax effects

**Sustainability:** Circular taxation should have a clear focus on supporting sustainability. However, as there are different aspects of sustainability, one should consider the overall effects of the tax not its specific parts e.g., biodiversity, social cohesion. The tax should have a clear long-term objective that would not necessitate abrupt modifications. Short-term sustainability issues should be addressed using other tools.

**Competitiveness/Innovativeness:** Environmental taxes may enhance competitiveness, via the spur to innovation. They encourage optimal use of its resources and the prevention of costly clean-up operations. In result they can increase the overall strength of the economy and possibly make use of a first-mover advantage. On the other hand, any tax may damage competitiveness as they typically result in price increases or profit reduction in costs can be damaging.

**Equality:** Circular tax should burden each economic agent proportionately to their externalities (see fairness factor). Furthermore, as poor individuals tend to contribute to environmental problems far less than wealthier persons, they can be used to actively deter people from overconsumption. Consequently, increasing social equality.

**Employment:** As the modification of the tax system has an effect on competitiveness of particular sectors or regions, it also affects its employment. The overall effect for the economy is dependable on the specific form of the tax. Particularly switching from labour to resources may have a positive effect on total employment.

## Social response to circular taxes

**Perception/reasoning:** Accessibility and visibility of information on tax laws, their purpose and use are necessary for taxpayers. Public understanding is crucial especially for taxes that are aimed at deterring negative activities. In result taxpayer awareness of those activities increases. Transparency in the law-making and guidance process promotes understanding and respect for the overall tax system.

**Acceptance:** With the growing social awareness on global warming, pollution etc., comes the growing acceptance of counteracting measures, including environmentally related taxes. In result circular tax acceptance should be much higher than that of standard taxes.

**Compliance:** Structuring tax laws to minimize noncompliance is essential. Generally, compliance measures need to strike a balance between the desired level of compliance against the costs of enforcement and the level of intrusiveness of the tax. The sense of duty, which stems from tax perception and acceptance is also substantial for tax compliance.
5. FINAL WORDS

We have no doubt that circular transition must be accompanied by a systemic change in the architecture of the tax system towards circular taxation, as the inherited tax system of today reinforces the linear economic model. Furthermore, the proliferation of specific, and relatively marginal environmental/green taxes is not enough to combat problems affecting our planet and society today. The fact that we are discussing those issues today, decades after the implementation of environmental/green taxes, corroborates the fact that they were not effective in mitigating serious environmental threats.

Meanwhile, there is a broad consensus on the importance of the tax system as an essential tool for meeting environmental challenges. We should not neglect this possibility, but rather put it into practice. A sequence of incremental, step-by-step adjustments in taxation that bring viable economic changes in the short term, with the clear objective of attaining circular taxation architecture and consequently transitioning the economy into circularity in the long term, is advisable.

Two main tools for this transition would be taxing resources instead of labour and modifying VAT to meet the circular model requirements. However, there are numerous tools that may be chosen and applied to tackle the global problems we are facing. A thorough examination of all aspects of tax design and its effect on the green and social transitions is needed during the process of switching to circular taxation.

Finally, the circular transition requires the implementation of a policy mix that integrates a wide range of policies and instruments. Taxation is just one of these instruments. To truly alter the economic model, decision-makers should consider each instrument as part of a systematic change, and not as separate tools unrelated to each other. Secondly, they should aim for actions that affect the economy deeply in the long term, even if the short-term disruption may be harmful for certain economic actors. After all, we have a choice: to leave the economic status quo intact or save the planet for current and future generations.