

TRANSFORMING CURRENT ECONOMY IN CIRCULAR ECONOMY – FRAMEWORK IN THE EUROPEAN UNION

Georgiana Chițiga⁴⁵

Abstract:

The research aims at the necessity of giving up “procurement, production, consumption, and elimination” type of economies to the detriment of “reuse, repair, reconditioning, and recycling” type. The analysis is meant to present and emphasize that, currently, to be competitive means to properly use resources, ensure their productive reuse, as well as assuring the reduction/elimination of waste deposits. The transition to a circular economy has the opposite effect of linear on, with increased prosperity, and, above all, the future of human existence.

It is a primordial and major necessity, but it will not happen without correct policies. EU intends to transform circular economy into reality and in order to achieve this goal, *it is necessary to limit the environmental impact*, improving, at the same time, the economic well-being.

Key words: circular economy, current pressures, proposals

JEL classification codes: A11, O10

1. Introduction

We still cohabitation under the linear economic systems of the XIX century, the relationship between an efficient use of resources and waste reduction is highlighted as a major problem and the switch to a circular economy is more a necessity for appreciating waste as a resource, for learning from nature, where nothing goes to waste. The solution is to give up the current approach, in which we extract limited raw materials and use them one time to obtain a product.

The crossing has the premise the abandoning the “procurement, production, consumption, and elimination” type of economies to “re-use, repair, reconditioning, and recycling” model. To be competitive means to capitalize proper use of resources, recycle them, ensuring their productive re-use, as well as, reduction/ elimination of waste units. The causes of waste are: the unsustainability of production and consumption habits, inadequate waste management and the lack of public awareness and civic conscience.

The disadvantages of linear economy are well known, what prompted like a viable solution, transition to a circular economy – the necessity of reintroducing used products into the circuit (be it natural elements, or technical materials and products that need to be transformed, used and usable as long term), as well as the necessity of focusing on optimum waste management, with the purpose of an efficient and rational use of resources.

The necessity of transforming the current European economy: Voting for “Circular Economy” project represents an historical moment, both for the European Union, and for the whole global society. The policymakers are opened to making the first step towards avoiding humanity collapse because of over-consumption. The road to implementing it is extremely difficult. For Europe, this project coincides with an unprecedented global crisis, which may be the basis of a rejection of sustainability growing plans.

At present, Europe records a dense population, stuck on an intensive-usage type of economy, it registers high and volatile prices of resources, characterized by a growing resource and energy import dependence, compared to other regions: 40% (on average) of raw materials come from imports. On the one hand, we have a percentage of 55% for strategic resources, such as metals and nutrients - phosphorus it is imported being in a proportion of 92%. The viable solution is obtaining added value from resources we use, ensuring a high economic productivity.

⁴⁵“Victor Slăvescu” Centre for Financial and Monetary Research, Romanian Academy, Bucharest, Romania, e-mail: georgiana_chitiga@yahoo.com

We must be aware of the fact that the ratio between economic growth and resource consumption is at the basis of current crisis: we have little resources as to sustain economic growth, and, in the future, exhaustion will result to an unmistakable destruction of the society because of related effects pollution has on the environment.

2. The pressures to transforming the current EU economy

Transposition to practice requires the existence and manifestation of a buffer-period, which, at the beginning, will register negative effects as well

First, the companies will accept and adapt with difficulty to the new business model, that means sustainability investments, and not profit from pollution. The current inertia of the financial system is high, there are registered high shares in terms of economic investments in politic decision, and so, the transition to a circular economy seems extremely difficult.

The members of the European Parliament supported this idea by voting in favor of circular economy (at Strasbourg), but the plan wasn't fully supported. The vote demonstrates the companies' concerns as to the changes that need to be applied and population's unrest when comes to losing their jobs in the process of assimilating the new economic model.

Also, in the industrial activities it is held that it is more convenient to produce using resources and not recycle the waste. We also add the principle according to "you can obtain an infinite economic growth", and the fact that it is considered as "the natural resources are unlimited, available, and they can be thrown". By these statements, only aggravates the current pressures on all socio-economic levels. Is emerging, a more obvious need of giving up to the linear economy model and to supporting the transformation of existing EU economy by means of a swab period.

The members of the European Parliament support that is absolutely necessary to identify economic growth solutions, by using only 10-12% of natural resources. The European Parliament, by the agreed legislation, they want to impose a series of measures and objectives, but they also name the penalties for non-compliance.

In the current situation, in EU, large amounts of money are provided for technologies subsidizing and pollution sources, which require targeting to research and support of initiatives which ensures sustainability.

Once again, it is clear that, it will be extremely difficult to giving up the current type of economy, as long as the industry is dominated by the corporations producing pollution in order to develop and by government subsidies. A clear example is energy industry, a financial colossus, that imposes major and necessary reforms, but which also presents the biggest resistance to change. The main question: does EU want a circular economy, but the society and big companies subscribe to this need to ensure resource efficiency in the future?

The Package of measures on circular economy establishes a common and coherent framework in order to optimize the resources and it requires:

- political decision pro changes;
- policies and long term planning of investments;
- an increasing awareness and involvement of citizens, companies and of their behavior towards in terms of resource efficiency.

In terms with the objectives set regarding the efficient resource use, these derive from the necessity:

- of a whole circuit approach and a better correlation between various politic domains and initiatives such as: Roadmap to an Efficient Europe in Terms of Resource Use, The 7th Environment Action Programme, The Energy and Climate Change Package, or the European Strategy "Innovation for durable growth: a bio economy for Europe";
- developing a politic framework, advantageous for circular economy at national, regional and EU levels – adopting measures that combine intelligent regulations, market tools, research and innovation, stimulants, sharing information and support for voluntary approaches;

- the application of the Eco-design Directive to the criteria of efficient usage of resources, for durability, modularity, reuse and recycling capacity, with grating proper consumers' assistance, including for the priority product categories of the Work Plan 2015-2017; -Establishing compulsory objectives in terms of ecologic public acquisitions (GPP - green public procurement), of national governments and European institutions;

- monitoring the progress of the initiative "An Efficient Europe in Terms of Resource Use" in the context of 2020 European Strategy.

The developing of a circular economy is a necessity, the key-element for accomplishing all the objectives concerning the efficient use of resources, ensuring the growth of economy and a smaller dependence of primary resources, which will ensure a better environmental protection.

3. Proposals of supporting the transformation of the European economy to a circular economy

The European Commission considers absolutely necessary transition to a circular economy as being absolutely necessary, including it in the Research Agenda of the European Union.

In order to accomplish this objective, the Commission's proposals vary and they include:

- new indicators ensuring and monitoring resource efficiency;

At EU's level, to ensure resource productivity – an indicator having with the role of supporting all member states in focusing their policies and promote EU's political synergy, such as employment and research.

It was propositioned that resource productivity to be measured in terms of the objective that correlates the raw materials consumption with GDP, suggesting a 30% improvement until 2030 (RMC - Raw Material Consumption), objective that needs to be taken into account at the next European Strategy revision of 2020.

Specific objectives are necessary for each country as well, because of the productivity and resource usage differences

- policies that would encourage recycling and to act on products' life cycles in order to become durable;

Stimulating changes applied to products' life cycles and value chains – it also appears a significant potential for workplaces – may be benefic (recycled materials, joint usage schemes of automobiles).

However, until 2019, the European Parliament requests European Commission to establish a number of indicators and sub-indicators that would reflect both the real resource consumption, as well as services and products' life cycles. This request is identified as a contradictory demand, because the producers aim, on the one side, at low life cycles for their products, and on the other, they discourage parts repairing/ replacement, the consumer being forced to buy a new product.

In the current conditions, the demand to limit the use of resource is imposed, as a necessity for the products to have long guarantee periods, by supporting easy repairing, and efficient recycling, in order not to waste the resources used in their production.

- creating "green" workplaces, encouraging ecologic entrepreneurship;

Workplaces are ecologic as long as they support the transition to a durable economic model, energy saving, the use of renewable energy sources, and if they preserve natural resources, protect and preserve ecosystems and biologic diversity, reducing waste volume.

Once with the necessity of a revision of objectives concerning recycling and waste, with related proposals in the view of improving buildings' environmental performances, the Commission proposed new interconnected initiatives for ecologic workplaces and SME's.

Actions towards ecologic workplace employment represent the politic framework for the employment market and the necessary qualities to encourage the transition to a green economy: low CO₂ emissions and high efficiency from the point of view of energy and resource usage. Also,

the structural change overhauls and supports the employees in order to sustain and acquire new necessary skills.

The “green” action plan for SME’s supports the exploitation of available business opportunities, ensuring the efficiency of resource usage for small and medium-sized European enterprises, to this we add ecologic entrepreneurship and the opportunities offered by ecologic value chains. The new business plans are the basis of “consumer” changing into “user”, and support the orientation/ change of the demand for disposable items into repairing/ renting based services.

- EU waste objective reexamination;

The policy concerning waste represents a strong promoter of recycling and reuse, and also certifies that major changes are imposed in order to close the loop.

Waste represents a primordial concern – rendering a productive use for tonnes of materials that can be found in waste, represent a major necessity.

Several of the instruments certain countries could use, have been identified, such as: separate waste collection, taxation applied to waste deposits, “pay or throw” schemes, and an extended responsibility of producers.

By the end of 2016, European Commission plays a special role – it must drastically reexamine waste legislation.

Together with the European Commission, through Lisbon Treaty, it was created and added – the Committee of the Regions (CoR) (2009) – complementary to the three community institutions (the Council of the European Union, European Commission, European Parliament), with the role of representing local and regional interests of the communities.

Its demand is compulsory for the whole legislative process that involves the European Parliament and European Union’s Council, in domains such as: economic and social cohesion, trans-European infrastructure networks, transport, health, education and culture, occupation, social politics, worker training, environment protection, climate changes, civil rights, and last but not least, energy.

In order to adopt and apply the EU decisions at a proper level, it surveys the compliance of subsidiarity and proportionality principles. The commission demand modifications for certain proposals made by community institutions (Table 1, Table 2, Table 3)

Table 1

CoR's changes on the products' design

European Commission Proposals	CoR's Changes
<i>encouraging</i> the products' design with the propose of reducing the impact they have on the environment, as well as reducing waste generation in the course of production and use of products, without distorting the internal market	<i>ensuring</i> that the products' design with the propose of reducing the impact they have on the environment, as well as reducing waste generation in the course of production and use of products, without distorting the internal market
measures: development, production, and selling of durable products, from the technical point of view, which can be reused and recycled after becoming waste, to make subject to reuse and recycling, to facilitate the proper implementation of the waste hierarchy The measures take into account the entire life cycle impacts of products	measures: <i>identical</i> with those held by the European Commission

Source: data processed by author

Following European Commission' analysis, CoR's amendment, the importance of avoiding waste can be observed – the main reason for transition to circular economy, with an even higher importance than recycling and reuse

On the other hand, in order to ensure resource efficiency, changes must take place at the source of products, improving the development phase of products as to make them reusable, repairable,

and recyclable, as well as package optimization. All these have a significant contribution to avoiding waste generation.

Consequently, ambitious aims are necessary when it comes to ecologic projection of products, products and services' "eco-design" must be controlled. European Commission must present, by the end of 2016, an "Eco-design Directive" plan, that would control, monitor, and approve the way in which companies run their production activity, according to circular economy.

Table 2

CoR's Changes on the biowaste

European Commission Proposals	CoR's Changes
<i>Minimum reductions of waste contamination</i> , the member states ensure differentiate collection of bio-waste, by 2025. The Commission performs an evaluation of bio-waste management in order to present a proposition, if needed	<i>Ensuring optimal recycling for organic waste materials</i> , member states ensure differentiate bio-waste collection, by 2025. The Commission performs an evaluation of bio-waste management in order to present a proposition, if needed.
Measures: - <i>establishing minimum demands for bio-waste management</i> ; -quality criteria for compost and digest from bio-waste, in the interest of guarantee a high protection level for human and environmental health.	Measures: - quality criteria for compost and digestate from bio-waste, in the interest of guarantee a high protection level for human and environmental health

Source: data processed by author

After the analysis, we can observe the fact that, because bio-waste is not a contamination factor, a maximum waste capitalization must be taken into account.

On the other side, it must acknowledge the adaptation flexibility to the local conditions and new technologies; the way of waste collection/management must not be imposed, their quality is of major importance.

Table 3

CoR's Changes on the municipal waste

European Commission Proposals	CoR's Changes
In the composition of municipal waste there is household refuse, retail, as well as waste generated by small enterprises, office buildings and institutions (schools, hospitals, government buildings), that are similar in nature and composition to household refuse, <i>collected by municipalities or in their behalf</i>	In the composition of municipal waste there is household refuse, retail, as well as waste generated by small enterprises, office buildings and institutions (schools, hospitals, government buildings), that are similar in nature and composition to household refuse.
In this category there are: -Heavy waste (domestic appliance, furniture, mattresses etc.) -Garden waste, leaves, lawnmower waste, street garbage, waste bins content, and waste generated by market cleaning. -Waste coming from selected municipal services – parks and gardens maintenance, as well as street clearing	In this category there are: -Heavy waste (domestic appliance, furniture, mattresses etc.) -Garden waste, leaves, lawnmower waste, street garbage, waste bins content, and waste generated by market cleaning. -Waste coming from selected municipal services – parks and gardens maintenance, as well as street clearing
In this category we may include similar-sources waste, with the same nature and composition, that: -Are not collected in the behalf of municipalities, but are directly collected through producers' liability schemes or private non-profit institutions that reuse and recycle mainly by separate collection. -Come from rural areas that do not have a regular waste collection service.	In this category we may include similar-sources waste, with the same nature and composition, that: -Are not collected in the behalf of municipalities, but are directly collected through producers' liability schemes or private non-profit institutions that reuse and recycle mainly by separate collection. -Come from rural areas that do not have a regular waste collection service.
In this category are not included: -waste coming from sewage and treatment network, including sewage sludge -waste coming from constructions and demolitions	In this category are not included: -waste coming from sewage and treatment network, including sewage sludge -waste coming from constructions and demolitions

Source: data processed by author

According to the table, we can observe the fact that, in order to evaluate the degree in which the member states accomplish the legislative objectives concerning waste and to compare their policies, a common definition is needed.

This evaluation has not the goal of evaluating local authorities' performances, and so, municipal waste should not be defined by who collects the waste, but by what it is collected (their composition).

4. Conclusions

In the present conditions the necessity to move from linear economy model to circular economy model is a primordial need. We began, on the one hand, from the stringent need of an optimal resource usage and so reducing primary resources addiction, workplaces development – higher than exploitation industries and nonrenewable energies – as well as, environmental protection; on the other side, from the necessity of reintroducing used products back in the circuit, avoiding/reducing their transformation into waste and ensuring optimum management implementation, one in which residual waste should be reduced to an absolute minimum quantity.

Positive results have been observed: the legislative changes, the waste quantities in garbage wholes, and they are more low, the reduction of dangerous substances for specific waste streams and the higher recycling quotas.

However, a series of aspects that need to be modified and improved has been observed: the negative impact on the environment determined by an expected waste generation growth, the incapacity of benefiting from various ways of reducing GHG emissions, as well as the lack of progress in terms of jobs in the environment services sector.

Hereinafter, defining new ambitious objective is necessary; in order to contribute to the accomplishment of the objective of promoting and supporting to the circular economy, efficient in terms of resource use and zero waste

Achieving the objectives or close them will vary considerably from a member state to another, from one region to another; can be challenging tasks for many of the member states and local and regional authorities, especially for those experiencing difficulties.

New targets:

- should be established after a detailed analysis of the causes of failure of current targets and their consequences;
- to base on deeper debate with the member states and their local and regional authorities related to necessary measurements for an efficient and successful monitoring and implementation.

The established targets must be correlated with the quality of the recycled/ recuperated materials, so that they will not damage the environment and human health and ensure the possibility of a loyal competition with primary resources; it will ensure the collection and recycling of waste who contain significant quantities of critical raw-materials.

All these ensure a strongly support for the necessity and benefits of transition to a circular economy, being the key-element to achieve all the objectives on resource efficiency, ensuring that economy can grow and be less addicted to primary resources, and it is distinguished by attention to the importance of waste disposal and their re-use

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