

# ECONOMIC SCIENCES

## THE METHODOLOGICAL APPROACHES TO THE INTEGRATION OF THE CIRCULAR AND SUSTAINABLE ECONOMIES

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### Abstract

An integrated representation of the concepts of circularity and sustainability and raising awareness on sustainability along with circularity is one of the most important economic challenges in modern business.

The article proves that the unity of the concepts of sustainable development and circular economy empirically implies creation of benefits from the economic, as well as social and environmental protection point of view, but there are also contradictions between them. Improving the financial aspects of companies and maximizing profits does not mean the simultaneous achievement of social and environmental goals. The latter is its co-result in long run, and if social and environmental benefits are achieved by improving the financial performance of companies, then they become mutually beneficial conditions. In the maximization of profit and efficient use of resources, an important role is given to the technologies used in the circular economy, which hypothetically can ensure a low cost of production with fewer and recycled resources, have less impact on the environment and can increase the well-being of population.

The paper shows that with introduction of circular economy, conflicts with sustainability goals forms, mainly in social and especially ecological fields, then it should be managed by the relevant labor or environmental legislation, thus, in case of Georgia, small and medium enterprises suffer. Today, with succeeding development, more and more tasks are required to the manufacturers regarding the social and environmental sustainability. Competition for consumers puts transparency of information of resources and technology on the agenda, which manufacturers use, especially in the supply of agricultural products as well as production of food products, where a significant effect can be achieved with strict regulations.

Implementation of circular and sustainable development concepts requires political will, strong legislative intervention and a state strategy to rise social awareness. The formation of the circular economy fulfills the function of an intermediary to achieve the environmental safety goals along with the economic goals. Today, if the concept of sustainable development is essentially based on the regulatory role of the state, the rise of awareness and the activity of civil society, are also the result of the implementation of circular economy concept. If the sustainable development is essentially a political issue, where the importance of regulatory interventions of the state is great, its implementation depends on the social responsibility of companies, which can only be reflected in their long-term strategy. Circular economy is a bridge that ensures both economic profit and sustainable development. The regulations that stimulate the circular economy simultaneously serve the goals of sustainable development. Therefore, the emphasis on the circular economy becomes the way to achieve sustainability.

**Keywords:** Sustainable development, circular economy, state regulations, companies social responsibility.

### Introduction

The challenge for every country is to implement the concepts of sustainable and circular economies. They create new opportunities in almost every sector and are focused on the manufacturing of resources that will reduce environmental impact, cost of production and -emissions.

Recently, the problem of circularity along with the problem of sustainable development have received a lot of attention, and it is a subject of discussion among both researchers and politicians. Regarding these issues, discussion is going toward their importance and mutual interaction. Without circular economy, it is impossible to achieve the sustainability of economy, which, according to the widespread concept, involves economic, social and environmental actions ("people, earth and profit"). In the circular economy, waste is recycled, which significantly reduces the intensity of environmental impact, and is one of the effective tools to achieve sustainable development of the environment. And the orientation towards sustainable development

puts new requirements on the circular economy, where, together with technological changes, the concept and principles of sustainable development must be introduced, such as sustainable management and sustainable marketing, compliance with safety standards, conducting "green jobs" and various social measures for improving the social environment and etc.

In the maximization of profits and efficient use of resources, an important role is given to the technologies used in the circular economy, which can ensure the low cost of products made with less and recycled resources, and thus, have less impact on the environment. Based on the application of the circular economy concept, it is possible to ensure environmental protection, reduce environmental destruction, increase jobs, create more sustainable businesses, and achieve economic, ecological and social well-being.

It brings environmental benefits by replacing resources with more energy efficient ones. It uses resources (metals, minerals, energy sources, water, timber, soil, clean air and biodiversity) in limited quantities

and minimizes environmental impact. It also generates environmental benefits and ensures reduction of emissions and environmental pollution.

The circular economy creates social opportunities and jobs by using business models that are based on the requirements of social responsibility.

Nevertheless, circular development, from a narrow point of view, is related to the recycling of waste and is the mechanism of increasing the efficiency of operations of resources. It's true that sustainable development is practically related largely to environmental measures, although integration of economic, social and environmental aspects of sustainable and circular economies creates conceptual basis for effective solution of the development goals.

#### **Methodology**

The study of the problems of the unity of circular and sustainable economics is based on the qualitative and comparative analysis of the essential sides of these concepts. The article is based on the theoretical abstraction and logical analysis of the current situation of the problem. Research has problem-oriented character and includes heterogeneous and empirical approaches. The empirical basis of the research is the identification of the difficulties of their implementation in Georgia and the European Union, which determines the vectors of implementation of these concepts. Models and their comparative analysis make it hypothetically possible to talk about their compatibility. Theoretical integration of concepts has retroductive character, that benefits to advance conceptual theoretical framework of development economics.

#### **Perception of concepts and its contradictions**

It is not indisputable that circularity contributes to a more sustainable world, but not all initiatives for sustainability promote circularity. Circularity focuses on renewing and restoring resources, while sustainability is more broadly related to people, the planet and the economy (11).

The circular economy is also a means of achieving the Sustainable Development Goals (SDGs). In particular, there is a link with SDG 6 (clean water), SDG 7 (affordable and clean energy), SDG 8 (jobs and economic growth), SDG 12 (responsible consumption and production) and SDG 15 (life on the land). Aspects of the circular economy, such as the recycling of household waste, e-waste, and wastewater, represent a "toolbox" for meeting the SDGs (8).

The terms circular and sustainable economy are often used together and imagined - somewhat interchangeably, which, according to some authors, "unfortunately confuses and diminishes the importance and value of actions related to either of them.-- is unfortunately confusing and dilutes the importance and value of the actions related to either one" (11).

There is also an opinion that sustainability is an "umbrella" for the circular economy, with the emphasis that "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Any activity or process that strives to meet this vision has a place under this umbrella. Circularity and

the circular economy define a clear place "under the umbrella" about how to manage the transition (11).

One of the important problems that the circular economy faces when implementing the principles of sustainable economy is the belief of companies about the economic and social benefits. The connection between the circular and sustainable economy is defined by the fact that the implementation of the circular economy is presented as a condition of sustainability. In general, companies implementing circular concepts ensure sustainable development, although the opposite action is also allowed. There are many circular economy strategies where circularity can reduce harmful environmental impacts, but as the literature shows, circularity does not always ensure sustainable impacts (1). Hypothetically, there are contradictions and the possibility of incompatibility between these two concepts.

Although the circular economy lowers the price of raw materials, introduction of sustainable management increases the cost of its operation. The sustainable management principles in business activities requires additional expenditures for staff training, for continuous monitoring of partner companies in the supply chain, for preparation and distribution of sustainability reports, as well as for raising public awareness. Accordingly, its usefulness, which is finally reveals in the company's image and reputation, is manifested only in the long term in return for the loss of low-budget customers, increase in costs and decrease in profits. Its explanation by neoclassical approaches, demand-supply theory, is not fully possible.

Companies that operate in the circular economy also plan organizational sustainability strategies, although the requirements of sustainable development can be abstract, not flexible and real (9). As an example, according to the research carried out under the auspices of the United Nations in Georgia, small and medium-sized entrepreneurs in all surveyed municipalities declare environmental measures as a priority, but imagine it abstractly and conceive resources as limitless enough and plenty. For the practical implementation of tasks to reduce resources, use alternative energy sources, etc., they do not have any strategic plans (10).

Sustainability goals are not specific in nature, so they are not clearly defined in the concept of circularity (3). In general, empirical studies are not widely developed, and the study of the relationship between the concepts of circularity and sustainability is in an embryonic state. There are also no complete statistics on circularity and sustainability indicators. So far, no country has a database of circulation indicators in the national accounting system. Some assessments of various scenarios are made by the experts provisionally.

As for sustainability indicators, the questions of who should define sustainability, what should be sustainable, for what purpose, for whom and when, may be different in each specific case (2). The global sustainability goals of the United Nations are the starting point for determining the sustainability indicators for countries (6).

Perception that sustainability is broader concept than circularity is widespread. If we consider that the latter is part of it, then circularity measures should be

evaluated according to the same sustainability indicators.

Circularity is a condition for realizing sustainability also. Practically today, their relationship can be read from a social point of view, as the formation of a circular economy contributes to the creation of new jobs. The formation of new jobs in the circular economy is relatively predictable, which was especially demonstrated by the example of the EU countries. According to different resource recycling scenarios, EU countries have determined that the transition to a circular economy can increase outcomes in different sectors by 3 to 7 percent. Based on the increase in energy efficiency and the use of renewable energy, as well as the improvement of organization in manufacturing through efficient use of production resources, an additional 75,000 jobs will be created in Finland, 100,000 in Sweden, 200,000 in the Netherlands, 400,000 in Spain, and approximately 500,000 jobs in France (6).

According to another study, improving the EU's resource productivity by 2% could help creating two million additional jobs in 2030. It is also estimated that improvements of 2-2.5% in resource productivity could also have a small but positive net impact on EU GDP; however, any further improvements in resource productivity would entail net costs to GDP since abatement options become more expensive (6, 20-21).

Practically, in the narrow sense, the concept of circular economy is essentially related to the topic of recycling of waste. Many countries' policies are focused on recycling, re-using and preparing for re-use of wastes, which requires introducing of innovative technical and technological changes. Countries that have recently started to implement circularity are focused on the recycling of waste of specific products, and more developed countries, along with it, on reducing of emissions. In addition, the laws of the countries are aimed at reducing of emissions, not consumption, and business models and economic systems are basically linear. However, as experts confirm, awareness on circularity is still very low among both consumers and producers and the mentality of manufacturers is focused mainly on sales (5).

From the analysis of experience of various countries and scientific literature, it follows that the transition to a circular economy in general has a positive impact on macroeconomic outcomes. Its starting point is the application of principles of circularity in production of most important products for the economy, in industry sectors, and in some cases in cities and municipalities, while the implementation of principles of sustainability is determined mainly by the targeting indicators that refer to the countries macroeconomic development. Individual companies are focused on demonstrating sustainability and social responsibility through progress made in reducing the use of resources, improving energy efficiency and decreasing usage of some health-damaging components in operations.

There is a discussion in the scientific literature about the extent to which circularity and sustainability can be related to each other and which can become the main "umbrella" in the integration of these concepts (7, 733).

The unity of the concepts of sustainable development and circular economy empirically implies creation of benefits from the economic, social and environmental protection point of view, but contradictions between them arise when improving the financial aspects of companies and maximizing profits do not support the simultaneous achievement of social and environmental goals. The latter should be the consequent result of technological improvement of companies' operations, and if social and environmental benefits are achieved by the improving of companies' financial and technological achievements, then they become mutually supportive conditions.

In bringing the concepts of circularity and sustainability closer together, it is important to present them in an integrated way through indicators and to determine the compatibility of indicators of sustainability with circularity. Accordingly, the question arises whether sustainability should be prioritized in accordance with the principles of the circular economy. For example, the extended producers responsibilities (EPR), which in the European Union and associated countries (including Georgia) is recognized and regulated by the legislation, the collection, processing, recovery and recycling of waste production with defined quantitative and qualitative indicators, include environmental measures as well, which make the producer responsible for the consumption of their products after consumption (4, 23).

Should sustainability indicators be determined for companies for the production of special types of products at the state level, or should it be established through the mechanism of market competition? Today, extended requirements are placed on the manufacturers. Competition for consumers puts transparency of information of resources and technology on the agenda, which manufacturers use, especially in the supply of agricultural products as well as production of food products, where significant effect can be achieved with strict regulations.

In the circular economy, sustainability as a consequent result, does not require special regulations, and if the implementation of the circular model conflicts with sustainability, mainly in social and especially in ecological (construction, mining, etc.) aspects, then it should be managed by the relevant labor or environmental legislation, thus, sometimes especially small and medium enterprises suffer. For example, in Georgia technical standards by the national legislation on production of cheese, dairy products and other foods, and also protection measures for keeping and caring of animals in farms, make complications to small and medium size farmers. Its implementation is impossible due to lack of technical and financial resources, well-educated HR and competences of farmers.

At present in the policy agenda of Georgia is to develop related legislation, to reduce consumption, and to stimulate the use of not only end-of-life products, but also secondary raw materials, to improve of related technologies, and the growth of competences. Changing consumer buying styles and manufacturing methods are very important. All this measurements with the emphasis on the environmental problems comprise the development of total value chain and is to be supported

by the interventions of business, civil society and governmental actions. The forming integrated indicators at the national, as well as at the companies and regional levels, is the cornerstone of the implementation of circularity and sustainability concepts.

### Conclusions

Integrated implementation of the concepts of circular and sustainable development requires political will, strong legislative intervention and a strategy to influence people's awareness. The formation of the circular economy fulfills the function of an intermediary to achieve the environmental safety goals along with the economic goals. If the concept of sustainable development is essentially based on the regulatory role of the state, the awareness and the activity of civil society, its achievement is also the result of the implementation of the concept of circular economy. If the management of sustainable development is essentially a political issue, where the importance of regulatory interventions of the state is great, its implementation depends on the social responsibility of companies, which can only be reflected in their long-term strategy. Circular economy is a bridge that ensures both economic profit and sustainable development. The regulations that stimulate the circular economy simultaneously serve the goals of sustainable development. Therefore, the emphasis on the circular economy becomes the way to achieve sustainability.

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