


Chapter 21


Circular Economy and Circular Business Models in the Actual Global Ecological Context: Various Approaches

Dana Maria (Oprea) Constantin

 <https://orcid.org/0000-0002-5517-8151>

University of Bucharest, Romania

Sorinel Căpușneanu

 <https://orcid.org/0000-0003-3799-3993>

Titu Maiorescu University, Romania

Dan Ioan Topor

1 Decembrie 1918 University, Romania

Hassan Danial Aslam

The Islamia University of Bahawalpur, Pakistan

ABSTRACT

This chapter aims to synthesize some of the current issues of the circular economy and circular business models. Based on the international literature, the chapter highlights aspects such as the conceptual theoretical approaches of the circular economy and circular business models, interconnecting the principles of the circular economy, the difference between the linear and the circular economy, the circular economy and the sustainable development, the supply chain within the circular economy, possible business models of the circular economy, advantages and limitations in the successful implementation of the circular economy and supporting sustainability, other aspects of the circular economy and sustainability. The covered topics are based on the studies conducted by specialists and also present some author opinions on the sustainable development and circular economy. The chapter ends with the authors' conclusions on the impact of the circular economy and circular business models in the actual ecological context, launching possible future research topics for specialists.

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INTRODUCTION

Finding viable solutions for the sustainable economic growth has emerged as a result of the demographic growth and environmental pressure. The goal of a circular economy is to reduce the contribution of the raw materials and waste production to the environment by closing the economic and environmental loops of the resources. The urban areas offer the possibility of creating synergies within the economy in order to increase the efficiency of the resources use as a result of the high population density and shareholders. There is a pressing need for a sustainable development of society that protects and preserves the natural environment, and for these purpose economic, social and environmental policies must be tackled synergistically at all levels. Global warming is already highlighted by the analysis of long strata of metrological data, being a cause of both natural factors, variations in the solar radiation spectrum and volcanic activity, as well as anthropogens, by changing the composition of the atmosphere due to human activity. The use of fossil fuels is the core of the climate problem, which has led to an increase in the amount of carbon dioxide in the atmosphere by over 40% compared to the pre-industrial age (IPCC, 2013; Li et al., 2017; Rakoş et al., 2018). Also, the amount of methane doubled as a result of human activity (IPCC, 2013). Between 1880 and 2012, the global average temperature increased by 0.85°C, and for Europe by almost 1°C, with an increasing trend after 1990 (IPCC, 2013). Depending on the different greenhouse gas emission scenarios, global climate change projections for the 21st century have been projected, so that an increase of 1.8°C to 4.0°C is projected for the end of the century as compared to the current period. The society is already experiencing climate change and, in addition to efforts to reduce greenhouse gas emissions, efforts are also needed to adapt to the changes already made. The transition from the linear economy to a circular economy that uses concepts and instruments of industrial ecology (Saavedra et al., 2018) is absolutely necessary in the context of global climate change. Thus, this chapter provides a global perspective on the relationship between the circular economy and sustainability, highlighting some theoretical approaches of this relationship, the interconnection principles and the existing business models with great possibilities for implementation.

In order to unleash this circular economy-sustainability relationship in the actual environmental context, we tried to find answers to the following questions: (1) *What is the circular economy and what are its relationships with sustainability?*(2) *What are the underlying principles of the circular economy-sustainability relation and what are the interconnections between them?* (3) *What is the linkage between the circular economy, climate changes, supply chain and sustainability?* (4) *What are the business models that can be implemented in a circular economy?* (5) *Which are the advantages and limits in the successful implementation of the circular economy and supporting the sustainability?* The research methodology used consisted of: studying the national and international literature, performing comparative analyzes, issuing hypotheses and conclusions based on the investigations of the studied organisms and researchers. The chapter was organized in such a way that it could present answers to the questions under investigation.

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