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Vanessa Prieto-Sandoval, Carmen Jaca, Marta Ormazabal

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Towards a consensus on the circular economy

Vanessa Prieto-Sandoval*, Carmen Jaca, and Marta Ormazabal

University of Navarra, TECNUN, Industrial Management Department. San Sebastian, Spain.

*Corresponding author: Vanessa Prieto Sandoval, vprieto@tecnun.es. Tel. +34 943 219 877.

Abstract

The growing importance of the concept of the circular economy as a way to attain sustainable development has encouraged scholars to propose different ways to understand it. Given the large number of studies done on the circular economy, their differing approaches and their multiple applications, this paper attempts to propose a consensus view of the basic notions of the circular economy framework and highlight its relationship with eco-innovation. To that end, this study carried out a systematic literature review that resulted in four main outputs: a knowledge map of the circular economy, an analysis of the main notions of the concept, principles, and determinants of a circular economy. Finally, this study brings to light some remarkable examples of eco-innovations developed for implementation in the circular economy.

Keywords:

Circular economy, eco-innovation, systematic literature review, industrial ecology, paradigm shift.

1. Introduction

The concept of the circular economy (CE) has become very popular since it was introduced by policy makers from China and the European Union as a solution that will allow countries, firms and consumers to reduce harm to the environment and to close the loop of the product lifecycle (EU Commission, 2014; Murray et al., 2015). This contrasts with the entrenched, intensive linear economic activity that is depleting the planet's resources. The linear model began during the industrial revolution in the 17th century with the exploitative scientific and technological innovations which ignored the limits of the environmental and the long-term damage they were causing to society.

A shift to a CE requires eco-innovations to close the loop of the products lifecycle, get valuable products to others from waste and solve the needs of environmental resilience despite the tendency toward economic growth (Scheel, 2016). In the literature, the term eco-innovation is generally understood to mean "the production, application or exploitation of a good, service, production process, organizational structure, or management or business method that is novel to the firm or user and which results,

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