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Circular Economy in the Transport Industry in Terms of Corporate Social Responsibility Concept

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Abstract

Purpose: The paper concerns the concept of moving away from a linear economy to a new global idea – the circular economy. The aim of the study is to present the idea of the practical application of the opportunities offered by the circular economy in the terms of corporate social responsibility. The authors focus on the example from the Transport-Shipping-Logistics (TSL) industry. In addition, they also present previously used pro-environmental solutions in TSL and Courier-Express-Parcel Services (CEP) area.

Design/methodology/approach: The paper is based on the analysis of literature related to pro-ecological activities and the idea of linear and circular economy in the context of the corporate social responsibility concept.

Findings: The result of the study is a consolidation the concept of the circular economy in terms of pro-ecological aspect of corporate social responsibility in TSL enterprises.

Research and practical limitations/implications: The article points out that the circular economy and other pro-environment practices are the guidelines of conduct for designing and developing corporate social responsibility strategies in the companies operating in the Transport-Shipping-Logistics industry.

Originality/value: The issues presented in the paper cover innovative aspects according to the latest European Union guidelines indicated in COM(2015) – *Communication from the Commission to the European Parliament, the European*

Economic and Social Committee and the Committee of the Regions: Closing the Loop – An EU Action Plan for the Circular Economy.

Paper type: theoretical paper.

Keywords: circular economy, corporate social responsibility, reverse logistics, sustainable supply chain, environmental practices in transport industry.

1. Introduction

Currently, among the contemporary business models, environmental issues are very important. The destruction of the natural environment is considered to be the one of the most serious problems of the today's world (Malina and Koniecznyński, 2004 p. 9). In contrast, transport activities are seen as considerably damaging to the environment (Turoń, Czech and Cieśla, 2016, p. 874). For this reason, creating pro-ecological aspects is a very important field particularly associated with transportation processes (Nebel and Wright, 1993, p. 259). In reference to corporate social responsibility, the sectors based on automotive – like Transport-Shipping-Logistics (TSL) and Courier-Express-Parcel Services (CEP) – by their association with the society and environment, should especially focus their attention on the application of eco-innovations (Spirko, Spirkova, Caganova and Bawa, 2016, p. 534).

All the practices of the European Union tend to work on the elimination of the negative impact on the environment according to the terms presented in COM (2015) *Communication from the Commission to the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Closing the Loop – An EU Action Plan for the Circular Economy*. Also for environmentally conscious customers eco-friendly products and services become more valuable (COM, 2015).

In the TSL industry, a number of environmentally friendly practices appeared following the EU policy and CSR strategies. Activities related to corporate social responsibility, focused on ecology, are observed to be the most common good practices among logistics companies in 2010–2014 (Turoń, Golba and Czech, 2015, p. 169). Similarly, the courier companies make efforts to be pro-environmental pioneers. Each of the six market-leading enterprises in the Polish Courier-Express-Parcel (CEP) Services industry engages in the activities related

to environmental protection (Turoń and Juzek, 2015, p. 183). Although, the environmental movement in the TSL area is widespread, today on the market there is observed the emergence of a new trend related to sustainable transport and production i.e. the circular economy.

The aim of the study is to study the idea of the practical application of the opportunities offered by the circular economy in the terms of corporate social responsibility. The authors focus on examples from the logistics area. Moreover, previously used pro-environmental solutions in the CEP industry are presented.

2. Ecological aspects in the corporate social responsibility concept

The pressure from ecological demands combined with economic demands has resulted in a conflict between ecology and economy (Adamczyk, 2001, p. 31). A number of the ecology demands related to issues such as:

- responsible use of natural resources;
- protecting the quality of water, soil and air;
- improving the quality of life;
- controlling production of waste;

is to be reconciled with the economic demands, which include:

- profitability of the company;
- the ability to compete on the market;
- productivity;
- the fight for customer satisfaction;
- good business sense;
- economic grow;
- sharing the benefits of innovation with suppliers and customers (Adamczyk, 2001, p. 31; Corbett and Kleindorfer, 2001, p. 107; Kumar and Chandrakar, 2012, p. 1; Lacy and Rutgvist, 2016, p. 43).

In consequence, companies have to face with the necessity of finding solutions to the problems of reconciling economy and ecology. However, what is most important, the idea has to be holistic i.e. good for both: the society and the enterprise which is the key issue for sustainable development (Szołtysek, 2009, p. 41; Lenny Koh, Birkin, Lewis and Cashman, 2007, p. 88). Focusing the activities on the ecological aspect of corporate social responsibility has led to the emergence of

the concept of ECSR (environmental corporate social responsibility). ECSR, in practice means, that the company's CSR strategy is based on ecological activities and the assumptions of sustainable development (Jabłoński, 2013, p. 141). Then, companies are required to carry out activities to protect the environment, create initiatives that are aimed at increasing environmental awareness and the implementation of innovations and new technologies, whose task is to reduce the harmful impact on the environment (Global Compact, 2016).

In the case of logistics, the sustainable development problems have changed the attitude of researchers and entrepreneurs to the issues related with the process flow in waste management (Turoń and Cieśla, 2015, p. 91). Then they began to be applied to variety of recommendations given by the concept of CSR in order to ensure good ecological practices. Corporate social responsibility includes four main issues that should be used in the ecological aspect of the responsible company according to the guidance on social responsibility provided by ISO 26000. These include issues such as (PN ISO 26000:2012):

- pollution prevention;
- sustainable use of resources;
- climate change mitigation and adaptation to climate change;
- protection of the environment along with the provision of biodiversity and restoration of natural habitats.

According to that standard, companies started to create a number of good practices aimed at improving their environmental performance by providing eco-efficiency (Hockerts, 1996, p. 6). In the case of transport companies, the key actions include the provision of eco-efficiency company, concerned to adhering to the basics of sustainable transport, the desire to have environmental offices or conduct educational activities for the stakeholders of companies (Turoń, Golba and Czech, 2015, p. 168). Among the examples from Courier-Express-Parcel Services there are four main areas of their eco-practices related to: management, way of transportation, ecological feature of services/products and ecological approach to offices and logistics warehouses (Turoń, Czech and Cieśla, 2016, p. 875). An overview of the most common practices in the CEP area is presented in Table 1.

Besides typical practices connected with environmental solutions in the logistic industry, we can observe the gradual implementation of a new solution for fair and responsible transport, focused on the idea of circular economy.

Table 1. Typical eco-practices in the CEP companies – the overview

No.	Aspect	Practices
1.	Management	<ul style="list-style-type: none"> – carbon footprint measurement – pro-social educational campaigns on environmental issues – pro-ecological management (mainly ISO 14001 or EMAS) – ecological audit of suppliers – lean green management solutions – green packages remanufacturing
2.	Sustainable transport	<ul style="list-style-type: none"> – reduction of CO₂ emissions – eco-driving trainings for drivers – alternative fuel vehicles – sustainable car fleet management – using vehicles with alternative powertrains (electric, hybrid) – using alternative types of vehicles when it is possible e.g. electric cargo bikes while restrictions are imposed on city traffic
3.	Offices and logistics warehouses	<ul style="list-style-type: none"> – monitoring energy consumption – monitoring paper and water consumption – eco- macroscopic and microscopic warehouses optimizations
4.	Eco-products and services	<ul style="list-style-type: none"> – usage of e-letters – usage of e-invoices – ecological envelopes and packages – eco-labelling

Source: own elaboration based on Gruber, Ehrler and Lenz (2013, p. 13); Fortes (2009, p. 57), Hesse and Clausen (2012, p. 24); Turoń, Cieśla and Czech (2015, p. 74); Turoń, Czech and Cieśla (2016, p. 875).

3. The idea of linear and circular economy

The idea of circular economy is a concept which is considered as “the answer to the global economic crisis and environmental problems” (Abec, 2014, p. 32). The circular economy is the opposite of the typical linear economic model, which assumes a certain life cycle of a product (Szołtysek, 2009, p. 73). The typical ecological life cycle of a product distinguishes three basic phases (Zielecki, 2006 p. 164):

- pre-production;
- production;
- post-production.

Pre-production is associated with the identification of customer needs connected with the product and then creating the concept and design of the product in accordance with the required technological processes (Zielecki, 2006 p. 165). Production is related to obtaining materials, manufacturing the product and finally the distribution process (Zielecki, 2006 p. 164). The last phase is the post-production. In that phase, take place the usage of the product, its utilization and recycling (Zielecki, 2006 p. 165). All of processes realized in production and post-production phases are interconnected with transport processes, which is of particular importance both for manufacturers and customers.

In the circular economy, the most important is to reuse an already used product (Corbett, 2015, p. 62). This idea changes the typical attitude to the product 'end-of-life' idea, because a product coming to its 'end-of-lifecycle' gets 'new life' in a new form (Abec, 2014, p. 32; Hąbek, 2016, p. 65). The main objective of the concept is to minimize the negative impact of the economy on the environment. This is due to the fact that products are not subjects to recycling. Therefore, the production of unnecessary waste and the use of new resources are avoided (Hąbek, 2016, p. 65).

Due to the departure of circular economy from the standard linear economy, we have to deal with the economy of a closed loop. This concept involves both the production line with a closed circuit and sustainable, closed supply chain (COM, 2015). This means that supply chains are then set to provide certain eco-efficiency (Hąbek, 2011, p. 98). In the case of logistics, the environmental performance (especially in the Courier-Express Parcel Services) is particularly important from the point of packaging the products. The circular economy introduces a new view at aspects related to reverse logistics and responsible packaging management. But to do the 'circular economy' in a properly, sustainable way it is necessary to focus on the main aspects of reverse logistics i.e. (De Brito and Dekker, 2013, p. 8; Ziółkowski, 2008, p. 491):

- finding ecological or economical motivation to adapt reverse logistics;
- using packages with proven material composition (made of certified biodegradable materials);
- using packages that can become a biological or technical element to be used after the first use by a customer;

presents its attitude to logistics in terms of CSR. They explain that logistics is an element, which connects world, but what is the most important – connects people. That is why logistic companies should focus on all sustainable solutions to optimize efficiency and reduce impact on the environment (DHL, 2016, p. 20).

In connection with these assumptions DHL proposes to use in its activities, the opportunities offered by the circular economy, which is based on three main areas of action (DHL, 2016, p. 21):

- rethinking reverse logistics;
- P2P drop-off networks;
- 4PL solutions.

Rethinking reverse logistics means that the organisation focuses on recycling and performing activities associated with the re-use of valuable products and materials that are received from customers. The items have to be received from clients and transported in a specially prepared for this flexible-cargo space in courier's vehicles. Such a solution has to fit the cargo space, which is divided into two parts: the place for packages to deliver and the place for storage of received packages and items. According to that idea, received products could be resold, refurbished or recycled (DHL, 2016, p. 22). P2P drop-off networks are individual packstations, designed for storage of customer products (mainly packages received during the delivery) to be returned in recycling or reuse processes (DHL, 2016, p. 23). The third possibility are the solutions offered by 4PL outsourcing. Through this type of platform, companies have a chance to acquire waste, manage them and distribute, to be able to re-use them during the production of a new item (DHL, 2016, p. 23).

Afterwards, by the use of each of these three solutions, products received from clients go to specially prepared warehouses, where an inspection of the items takes place. The inspection determines further procedures with the products. Depending on the decision, they may be resold, refurbished or recycled (DHL, 2016, p. 23). Some of the products such as packages are used again or recycled into new eco-efficient packages made of biodegradable materials.

DHL activities show that it is possible to achieve more sustainable supply chains using the circular economy. However, such solutions will not be easy to implement for TSL companies, since they integrate many business areas of the organisation together. The model presented by DHL indicates that currently when we are dealing with the classical model of economic 'take-make-waste', the opportunities offered by

circular economy provide a chance for directing logistics activities into systemic pro-ecological activities. Proceedings in this way are a real chance to solve the problems of sustainable development through a process of actions, not only by the using of individual eco-practices (Jiang and Zhou, 2014, p. 1683).

5. Summary

To summarize, any company that wants to call itself ‘responsible’ is obliged to pay attention to ecological aspects as a part of solving the sustainable development problems (Kisil, 2013, p. 99). To do this, companies use various forms and models of environmental management as a part of their corporate social responsibility strategies. Often, that models tend only to creating single good pro-ecological practices, without considering the real impact of business to environment. The use of green business model based on the idea of circular economy involves exactly reconciling with each of four basic factors including (Jabłoński, 2013, p. 134):

- legal requirements;
- eco-innovation;
- pro-ecological strategy;
- concept of corporate social responsibility.

In transport and logistics, it is necessary to remember that the organisation’s approach to the appropriate management of packaging products in the phase of storage and disposal is one of the basic criteria during assessing the company’s environmental impact (Malina and Koniecznyński, 2004, p. 15). This aspect should be particularly important for companies that want to implement not only the eco-friendly business models, but also the idea of circular economy.

Implementation of the circular economy has a chance to bring two main effects – the effect for the environment, and the effect for an enterprise. The circular economy allows to create fully sustainable supply chains. Moreover, it is also the opportunity to change the perception of transport as adversely affecting the environment to eco-friendly, with redounding a long-term value for the organisation.

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