STRUCTURAL INFLENCES AND CIRCULAR BUSINESS MODELS

Ph.D. Senior Researcher Gabriela-Cornelia PICIU
Financial and Monetary Research Center „Victor Slăvescu", Bucharest, Romania.
E-mail: gabriela_piciu@yahoo.com

Abstract: *The purpose of the presentation of the article is realized or imagined about the whole on the structural influences of the circular economy, the care needed for structural modifications and adaptation. Modifying the business models is the main reason for the care needed to create or have the functions necessary to configure or reconfigure resources for us or for their existence. The article discusses structural differentiation in terms of confidentiality and barriers to integrate into the pieces, and must model in the regime, regulate community placement and redistribute internal resources, for compatibility with requirements and environmental conditions, for the implementation of the circular business model, with large investigations and longer time horizons for generating revenue.*

Keywords*: circular economy, economic growth, sustainable development, markets.*
Classification JEL: *O11, O44, Q53.*

1. Introduction

In a circular economy, the more efficient use of materials allows the creation of a greater value, both through cost savings, as well as by developing new markets or increasing existing ones. These markets can be understood as early-stage business environments, in which economic units offer and compete with a new type of business models based on profits obtained as a result of circularity implementation.

Some economic units have a slow start in the implementation of a circular business model, due to organizational inertia and resistance to this radical transformation.

While managers in economic units that continue with the status quo of the linear model can plan and forecast their future based on historical data, for managers who have implemented the circular business model, there is a limited value of historical data.

The limits of the use of resources, energy and the importance of creating use values in terms of closing the loops are the basis of the reasoning of the circular economy. Changing the entire value chain by initiating a circular business model is based on the theory of resources, which proposes the construction and completion of the resource portfolio of an economic unit, which gives it a lasting advantage.

In this context, the challenge is to establish and organize activities in the reverse value chain, which covers all activities from the return of the product to the potential recovery of the maximum value of the products through recovery and recycling activities.

2. Structural influences

Moving to a circular model can lead to cost savings by reducing waste, better supply chain management, lower sensitivity to resource price volatility, and longer customer relationships.

High investment requirements create entry barriers, which restrict the number of potential collaborators a manufacturer can choose when establishing alliances. Thus, switching to a circular system can lead to high-concentration industrial structures, which means that the industry is dominated by a relatively small number of actors in its early stages.

In highly concentrated industries, it is important for network actors to build and maintain collaborative relationships, because mutual dependencies are significant, because the concentration of a small number of economic units connected through a network of links tends to lead to high industry profitability.

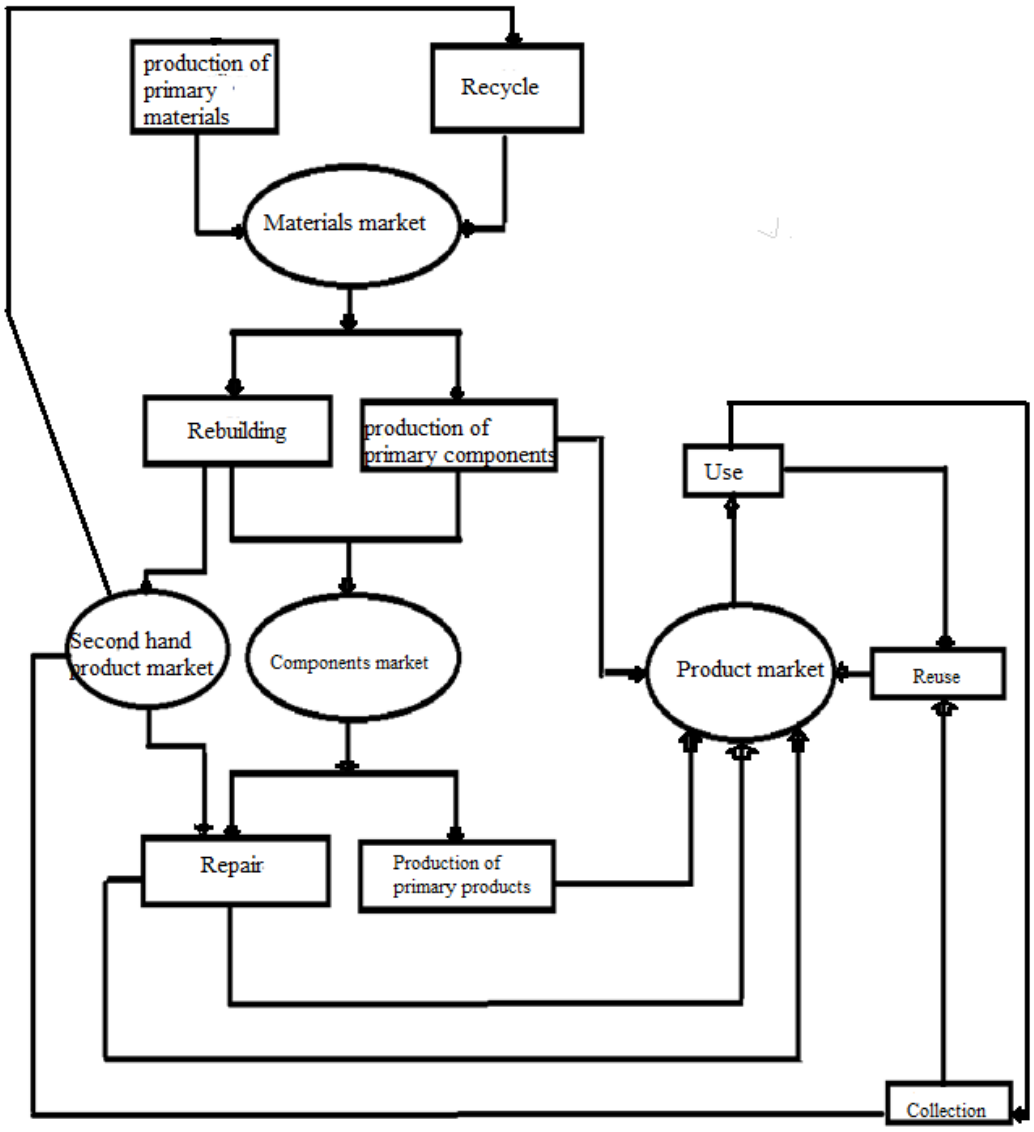
Consequently, because the decisions of structural alignment are made by the top management, their creativity, capacity and commitment are relevant factors for the research examining the transition to the circular business models.

3. Business circular models

The circular business models imply a substantial uncertainty regarding the profitability. In the circular economy, in almost every stage of the active circular process there is a market: a market for final goods, for goods at the end of the life cycle, for unprocessed waste, semi-processed waste, recycled materials, reconditioned products, used repaired products, etc. (Figure 1).

In each of these markets, the secondary goods compete directly with the primary goods.

Figure 1. Markets of circular economy



Source: Graphic construction of the author

The competition of primary and secondary goods in markets is what makes the circular economy promising, it creates the hope that secondary goods and materials could compete and reduce the production of primary goods and materials.

However, interactions between primary and secondary goods are more difficult to predict, and lack of consumer knowledge is also a problem. Some companies that have circular products have difficulty selling their products, especially when it is a price-governed market and a circular product is more expensive than an average product.

The markets in which the economic units compete may have an unclear structure, the product is unclear or absent, and the circular activities can be considered experimental, unstructured and at high risk.

With an uncertain framework as to how tenders should be executed, manufacturers and other actors in the circular process form new types of relationships and collaborations with third-party suppliers. Thus, suppliers of virgin materials have to compete with suppliers of reused materials, and if they are as valuable as virgin materials or if they have a higher and more sustainable value due to recycling, manufacturers will choose reused materials because their prices do not it differs substantially.

The presence of substitutes affects the competitive intensity within an industry, for the benefit of the producers, which have a greater bargaining power. a dominant position in the market.

In industries that are heavily affected by resource shortages and rising demand, suppliers are raising the price of virgin materials. In the long term, minerals, metals and energy sources need to be replaced with renewable alternatives.

The optimal use of resources in manufacturing strengthens the negotiating position of the producers in relation to the suppliers of materials, and the decrease of the demand for materials due to the technological improvement, minimizes the dependence of the producers on the suppliers.

The immediate short-term effect of the transition to business circular models is the outsourcing by manufacturers of reverse logistics operations to third-party suppliers. Logistics services, which are usually outsourced to third-party suppliers, include transportation, warehousing, inventory, value-added services, information services and redesigning the supply chain. The differences between the structures of the industry can affect the relationship between the manufacturer and these service providers.

The new types of structures, which are characterized by concentration and market power, influence the network relations, the positions of the economic units within it and the performance of the industry. The redesign of a product causes its manufacturer to require employees in the reverse supply chain to develop unique expertise, for example, for disassembly, inspection and repair of used products, all of which require substantial investment from third-party service providers.

High investment requirements create entry barriers, which restricts the number of collaborators a producer can choose when establishing collaborations.

Thus, the transition to a circular system can lead to structures with a high degree of concentration, which means that the industry is dominated by a rather small number of actors in its initial stages.

In highly concentrated industries, it is important for network actors to build and maintain collaborative relationships, because mutual dependencies are significant. Therefore, the shift to the circular economy may result in industries with strong links between companies.

Economic units operating in the circular economy by building strong and tight positions in the new industries and markets that are formed Therefore, the companies that

are facing the challenge of carrying out activities in the circular economy by building strong and tight positions in the new industries and emerging markets

There are other significant differences in the implementation of the circular economy between the production companies. In their circular projects, some manufacturers have focused on modularizing their products and components to facilitate their disassembly and repair for reuse.

This approach implies that companies use the same components for different product categories, thus leading to more homogeneous products. In this case, it is easier for manufacturers to find third-party service providers to help disassemble and inspect used products, because the requirements for this in terms of training, specific skills and expertise are relatively small.

Thus, the negotiating position of the producers in relation to these service providers is improved by reducing switching costs. Also, the reduced investment requirements of the service providers increase the rivalry, making it easier for new actors to access the industry, and greater competition (less concentration) between these economic units, allows the producers to occupy a central position in the strategic networks.

For third-party service providers, the quick and easy processing of returned products due to increased modularization or standardization can provide opportunities to gain scale benefits, serving more manufacturers, which can lead to cost advantages. Market entry is fast, because modular product design has made reusing them easier, faster and cheaper.

In the circular economy there are four categories of barriers: cultural, technological, market and regulatory, which are interconnected. For example, cultural barriers determine regulatory barriers, and these, in turn, can determine market barriers, with regulations that frequently create markets.

Market barriers can determine technological barriers from certain market forces, for example financing for a particular technology is required for the emergence of technologies.

Also, there are multiple possible interaction effects between the different categories of barriers. For example, if technological barriers "lack of impact data" exist, market players may have a limited interest in implementing circular business models, thus encouraging the persistence of "limited funding for circular business models" and low pressure to remove "laws." and regulations".

In turn, this can make the products and services of the circular economy more expensive, which may further lead to "lack of awareness and interest of consumers" (Figure 2). The interactions between the four interrelated categories of barriers of the circular economy can lead to a chain reaction, to its failure, thus leaving the linear economic system unchanged.

Another example in terms of the interconnection between regulatory and market barriers is limited circular procurement, which may result in limited funding for circular business models because circular firms may not be able to convincingly prove that they exist. a market for their products in the absence of such purchases. This, in turn, may further undermine the development of a global consensus among decision-makers regarding the transition to the circular economy. Therefore, regulatory barriers can create market barriers that create new regulatory barriers.

The lack of communication and awareness makes it difficult for both manufacturers to sell their products, especially when it is a market governed by price and a circular product is more expensive than a linear product, as well as buyers who have no knowledge to sell. see additional values that circular products have. The knowledge of circular

products is lacking, and it is difficult for economic units to indicate in terms of value what is circular to their product.

Figure 2: Types of barriers in the circular economy

Cultural barriers	Regulatory barriers	Market barriers	Technological barriers
The culture of the hesitant company	Limited circular purchases	Low prices for virgin materials	Ability to deliver high quality remanufactured products
Limited availability to collaborate in the value chain	Obstruction of global laws and regulations	Standardization	Circular design
Lack of consumer awareness and interest	Lack of global consensus	High onvestment costs	Too few projects to prove their validity on a large scale
It operates in a linear system		Limited funding for business circular models	Lack of impact data

Source: Kirchherra, J., Piscicellia, L., Boura, R., Kostense-Smitb, E., Mullerb, J., Huibrechtse-Truijensb, A., Hekkerta, M., (2018). Barriers to the Circular Economy: Evidence From the European Union (EU), Ecological Economics 150, 264–272

Market barriers are considered, especially the low prices of virgin materials and the high investment costs for circular business models. Markets for secondary raw materials, products of the recycling and reprocessing sector, are facing particularly difficult market conditions, with economic units failing to achieve low prices for recycled materials, which barely cover the costs of collection and processing, along with price volatility and competition. from virgin materials at lower prices.

A viable business model for creating markets for secondary raw materials depends on reliable and predictable markets, any weakness of which will affect the entire supply chain, until recycled materials are collected. There is no motivation to collect the material if there is no final market for it.

Reduced prices for recovered materials

Commodity prices are influenced by a different set of factors than those that influence secondary commodities. The prices of secondary materials are established according to the cost and efficiency of the collection and processing of waste, mediated by market demand. In the case of plastics, the fall in the price of oil has lowered the price of virgin plastics to the lowest, equal to that of the recovered plastics.

A surplus of the market for virgin materials, accompanied by the decrease in demand, lowers prices, which makes secondary raw materials not competitive. Under these conditions, the economic units opt for virgin materials, when purchasing the raw materials.

Because the business cycles of virgin and SRM production are so different, the damage to our sector and the circular flow of SRM cannot be easily reduced.

Vulnerability through price volatility

Price volatility is particularly pronounced on the secondary commodity market, and may cause instability between the entry and exit prices, insofar as operators may even face negative net margins.

Some economic units cannot implement strategies so that the commodity market is at the right price point, such as storing secondary raw materials or reducing production by restricting the flow of waste collected in the processing unit. The high costs of waste collection and processing make these activities continue uncontrolled, regardless of the state of the secondary raw materials market.

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4. Conclusions

The article aims to identify the barriers to entry in the circular economy, how the state is involved in the formation of the market mechanism, as well as the evaluation of the sources of financing of the economic agents that have implemented the circular model.

For this purpose, an explanation of the theoretical basis of the concept of active circular process is made and a theoretical analysis of the value creation and implementation of the business models in the circular economy.

One difficulty analysed in structural adaptation is uncertainty, which can influence and slow down the ability of managers and economic units to identify circular business models and define new value propositions that align with the circular economy.

Starting from theoretical orientations that highlight how the circular business model is implemented in practice, the main barriers to entry are identified, and the logical model for interpreting the relationships established within the circular economy is developed.

Given that government regulation and market interventions are direct means of enabling innovation for the transition to the circular economy, institutional conditions that facilitate and encourage investments to improve natural capital and social equity are analysed, with research focusing on government interventions in particular.

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