International Journal of Social and Education (INJOSEDU) e-ISSN: 3047-6151
Vol. 2 No. 5 May 2025, hal., 1183-1191

SOCIO-ECONOMIC IMPACTS OF CIRCULAR BUSINESS MODELS: A COMPREHENSIVE LITERATURE REVIEW

Loso Judijanto
IPOSS Jakarta, Indonesia
losojudijantobumn@gmail.com

Silvia Ekasari
STIE Manajemen Bisnis Indonesia
silvia.ekasari@stiembi.ac.id

Abstract

This research aims to explore the social and economic impacts of implementing circular business models through a comprehensive literature review. Circular business models offer solutions to address sustainability challenges, by promoting the principles of recycling, reuse and waste reduction to optimise resources. The review shows that this approach contributes to economic sustainability by creating efficiencies in the value chain, while introducing opportunities for technological innovations that support better resource management. Moreover, from a social perspective, circular business models can create quality jobs, promote community empowerment, and reduce social inequality. However, the implementation of this model faces a number of challenges, such as organisational resistance, large investment needs, and complex policy adaptations. Thus, while the circular business model has great potential for positive impact, it requires cross-sector collaboration for successful implementation.

Keywords: Socio-economic Impact, Circular Business Model, Comprehensive Literature Review

Introduction

Since the last few decades, the concept of a linear business model based on the principle of "take, make, dispose" has dominated the global economic system. While this model has contributed significantly to economic growth and technological advancement, it has also given rise to various environmental concerns such as increased waste, natural resource depletion, and ecosystem degradation. In response to these challenges, circular business models have gained global attention as a sustainable and more efficient alternative (Lieder & Rashid, 2016) .

Circular business models aim to preserve the value of products, materials, and resources for as long as possible in the economic cycle. Through strategies such as product redesign, reuse, repair, and recycling, this model offers the potential to reduce adverse environmental impacts and create a more sustainable economy (Prieto-Sandoval et al., 2018) .

The circular business model is an economic framework orientated towards the optimal use of resources with the principles of regeneration, waste reduction, and product life extension. Unlike the traditional linear model that often ends in disposal,

the circular model seeks to keep materials, products, and energy in the economic cycle, either through recycling, reuse, product improvement, or transformation into new materials (Ellen MacArthur Foundation, 2015) . This approach focuses on design innovation, better resource management, and the application of technology to sustain sustainable economic systems without damaging ecosystem capacity (Schroeder et al., 2019) .

The relevance of the circular business model in global economic development is significant as it is able to address the environmental and social challenges facing the world today, such as climate change, natural resource depletion, and increased waste. In an era of rapid population growth and urbanisation, this model promotes the establishment of a more resilient economic system, increases efficiency in resource use, and creates new economic opportunities, such as green jobs and technological innovation (Millar et al., 2019) . In addition, the integration of circular business models by global companies can also provide competitive advantages, build sustainable brand reputation, and contribute to the achievement of sustainable development goals (SDGs) set by the United Nations. However, the implementation of circular business models not only impacts environmental aspects, but also has significant socio-economic implications (Murray et al., 2017) .

The socio-economic impacts of circular business models include changes in job creation, people's consumption patterns, industry structure, and income distribution. On the one hand, it can generate new employment opportunities in sectors such as recycling and refurbishment, as well as drive innovation in product design and supply chain management. On the other hand, the transition to circular business models can also pose challenges such as changes in traditional occupations, the need for new skills, and technological adaptations that require large investments (Rizos et al., 2017) . To understand the far-reaching implications of circular business models, thorough and comprehensive research is necessary. This literature review aims to explore and analyse the various socio-economic impacts of circular business models, as well as identify the opportunities and challenges faced in the transition towards a circular economy.

Research Methods

The study in this research uses the literature method. The literature research method is a research approach that focuses on collecting, analysing, and interpreting information from written sources such as books, scientific journals, articles, official documents, or previous research reports (Green et al., 2006) ; (Galvan & Galvan, 2017) . This method aims to understand existing theories, concepts, or findings, build a framework, and identify research gaps to support further research. The process involves searching and selecting relevant literature, critically evaluating the validity and reliability of sources, and synthesising information to answer research questions or form a theoretical foundation. This method is particularly useful in a variety of academic

fields to develop in-depth perspectives without the need to dive directly into primary data collection in the field (Torraco, 2005) ; (Tranfield et al., 2003) .

Results and Discussion

Social Impact of Circular Business Models

Circular business models bring a variety of significant social impacts in modern society. One of the main impacts is the reduction of waste generated by economic activities. By adopting the principle of circularity, companies can minimise the amount of materials that end up in landfills, thereby reducing pollution and improving the environmental quality of people's lives. This approach also encourages more sustainable consumption practices, where consumers are encouraged to use items that are more durable and easy to repair, instead of disposable products that quickly become waste (Geissdoerfer et al., 2017) .

In addition, circular business models encourage the creation of new jobs that focus on repairing, recycling and redesigning products. These jobs not only reduce unemployment but also upskill workers in green technology and resource management. This contributes to local economic growth by developing new sustainable industries and strengthening the economy of local communities (Stahel, 2016) .

The establishment of social justice is also one of the positive impacts of implementing a circular business model. With product design that considers its entire life cycle, manufacturers can be more transparent about the origin of materials and working conditions in their supply chain. This increases accountability and ensures that workers at all levels earn fair wages and work in decent conditions, thereby reducing social injustice (Bocken et al., 2016) .

Public education and awareness has also increased along with the implementation of circular business models. Campaigns and educational programmes on the importance of resource conservation and waste management create a more environmentally conscious society. The younger generation, in particular, is taught sustainability values that can be applied in their daily lives and in the future, supporting more environmentally friendly behavioural changes (Rizos et al., 2016) .

The paradigm shift from a linear to a circular economy also allows communities to be more empowered in creating local solutions to environmental problems. Community innovations in recycling and repairing goods are becoming more common, which in turn strengthens communities and reduces dependence on imported goods. This practice also introduces micro-business models that contribute to the local economy (Geng et al., 2019) .

In addition, circular business models can help reduce economic inequality by enabling more equitable access to products and services. Products that are recycled or made from recycled materials are often more affordable than new goods, thus

providing groups of people with different income levels the opportunity to engage in sustainable consumption practices (Merli et al., 2018) .

Public health is also maintained through circular business models. Reduction of industrial waste and overuse of natural resources reduces air, water, and soil pollution, all of which contribute to improved public health. A cleaner and healthier environment reduces the risk of pollution-induced diseases, thereby improving overall quality of life (Kirchherr et al., 2017) .

Finally, the adoption of circular business models changes the way people perceive the value and function of the goods they own. People are encouraged to appreciate the materials and resources used in each product, leading to a more mindful and responsible relationship towards consumption and disposal. This creates a more supportive and collective social culture in the quest for environmental sustainability and shared prosperity.

Economic Impact of Circular Business Models

A circular business model is an approach that aims to optimise resource utilisation, reduce waste, and create a sustainable economy. It replaces the traditional linear model ("take, make, dispose") with a more efficient system, where products and materials are designed to be reused, repaired, or recycled. The implementation of circular business models has significant economic impacts for businesses, communities, and governments (Korhonen et al., 2018) .

Firstly, circular business models can result in production cost savings for companies. By prioritising the use of raw materials that can be recycled or reused, companies can reduce the need to purchase new raw materials. In addition, efficiency in the production process also supports the reduction of energy and transport costs. These savings open up opportunities for companies to increase their profitability (Kalmykova et al., 2018) .

Second, the emergence of new industries based on circular principles is a catalyst for economic growth. Recycling, product renovation, and innovation in sustainable design are driving the creation of new jobs. Labour with specialised skills in recycling, circular design or product maintenance will be increasingly in demand, opening up economic opportunities for communities (Moraga et al., 2019) .

Third, the circular business model creates price stability of raw materials in the market. In the linear model, dependence on natural resources often leads to volatile price fluctuations due to limited supply and global dynamics. With a circular system, the availability of raw materials is better maintained, resulting in more manageable and sustainable prices in the long run (Geissdoerfer et al., 2017) .

Fourth, the positive impact on the economy is also seen in the reduction of environmental costs. Waste generated in a linear business model often requires high costs for management, either through recycling or waste treatment. In a circular model,

waste is minimised and can even be reused as a productive resource, resulting in lower environmental costs. This also relieves the financial burden of the government in waste management (Pieroni et al., 2019) .

Fifth, the adoption of circular business models encourages technological innovations that support process efficiency and sustainability. The development of new technologies such as bio-material utilisation, advanced recycling methods, and renewable energy not only has a positive environmental impact, but also opens up new revenue opportunities in the technology sector. Such innovations can increase the competitiveness of companies on an international scale (Ghisellini et al., 2016) .

Sixth, the community as consumers can also enjoy the economic benefits of this business model. Products that are designed to be repaired, reused, or leased allow consumers to have access to quality goods at more affordable prices. This more frugal consumption pattern supports the general economic well-being of society (Lüdeke-Freund et al., 2019) .

Seventh, on a macro scale, circular business models contribute to more sustainable economic growth. By encouraging resource efficiency and reducing the exploitation of nature, countries can reduce dependence on imports of raw materials. This becomes a strategic opportunity to increase national economic independence (Lieder & Rashid, 2016) .

Overall, the transformation towards circular business models brings about a range of positive economic impacts. From the perspective of companies, communities and countries, this approach creates a more efficient, innovative and sustainable ecosystem. Therefore, the adoption of circular business models is both a challenge and an economic opportunity in this modern era, especially in the face of environmental crisis and global change.

Benefits and Challenges in Implementing Circular Business Models in Society and the Economy

Circular business models offer many benefits to society. One of the main benefits is the reduction of waste and environmental pollution. With an approach that emphasises on recycling, reusing, and extending the life cycle of products, people can enjoy a cleaner and healthier environment. In addition, circular business also supports the creation of more responsible consumption patterns, as people begin to understand the importance of resource efficiency without compromising future needs (Prieto-Sandoval et al., 2018) .

The implementation of circular business models can encourage people to be more aware of the importance of protecting the ecosystem. With innovations that are aligned with sustainability principles, people are encouraged to reduce the use of disposable products. This lifestyle not only reduces pressure on nature, but also

improves the overall quality of life due to a healthier environment (Ellen MacArthur Foundation, 2015)

From an economic perspective, circular businesses can create new opportunities. When circular-based production and consumption are implemented, innovations emerge that lead to waste management business models, product recycling, as well as green technology development. This opens up new jobs, such as in the renewable energy sector, efficient product design, or the recycling industry, which ultimately impacts local and national economic growth (Schroeder et al., 2019) .

Circular business optimises the use of resources so as to reduce dependence on new raw materials. For example, in the manufacturing industry, raw materials derived from used products can be reused, saving production costs. This efficiency also helps reduce the exploitation of natural resources, which has been one of the world's major problems (Millar et al., 2019) .

The circular business model increases the economy's resilience to fluctuations in raw material prices due to its focus on utilising resources that already exist. By minimising the need for new materials, businesses can be more stable despite global crises affecting the market. This resilience is particularly important in the face of changing economic dynamics due to climate or geopolitical disruptions (Murray et al., 2017) .

However, the implementation of circular business models is not free from challenges. One of the biggest obstacles is the lack of education and awareness among the public. Many people do not understand the importance of circular principles and are still stuck in linear consumption patterns. Massive education campaigns and community engagement are key to changing this perspective (Rizos et al., 2016) .

From the industry side, a key challenge is the high initial cost of adopting circular business enabling technologies. Companies often have to invest substantial funds to develop recycling systems, change product designs to be more sustainable, or build waste management infrastructure. Furthermore, not all businesses have access to circular process-enabling technologies, which is a major barrier to implementation (Geissdoerfer et al., 2017) .

In the policy context, existing regulations often do not fully support circular business models. For example, many countries do not have incentives for sustainability-focused companies. Without clear and favourable policies, it is difficult for businesses to shift to this model due to financial risks and legal uncertainties (Stahel, 2016) .

Consumers are also a challenge in implementing circular business. The habit of buying disposable products and ignoring the recycling process makes most consumers reluctant to accept circular-based products because they are considered impractical or expensive. Therefore, innovative marketing strategies are needed to change consumer preferences so that they support this business pattern (Bocken et al., 2016) .

The implementation of circular business models requires close collaboration between the government, industry players, communities, and educational institutions. Without strong cooperation, efforts to build a circular economy will be slow. The government needs to issue supportive policies, industries must be willing to innovate, communities need to be educated, and educational institutions must develop relevant technologies to support circular implementation (Geng et al., 2019) .

By understanding these benefits and challenges, the path to a circular economy and society becomes clearer. While the challenges are complex, with a shared commitment, the transformation to a sustainable future can be realised. Circular principles not only create opportunities but also provide effective solutions for the environment, society and economy.

Conclusion

Circular business models present significant socio-economic impacts, especially in the context of resource sustainability and inclusive economic development. By integrating the principles of recycling, reuse and waste reduction, this approach helps reduce dependence on finite natural resources, thereby creating a more efficient and sustainable business ecosystem. Moreover, the shift of companies towards circular models generates new opportunities for technological innovation and the development of green practices that support the transformation of the global economy.

Socially, the circular business model contributes to the creation of higher quality and sustainable jobs. With a focus on local value chains and post-consumption product processing, the model helps to increase labour capacity through training, knowledge, and competencies relevant to the circular economy. In addition, the approach supports the empowerment of local communities, the strengthening of micro-businesses, and the creation of inclusive economic opportunities, thereby positively impacting social inequality and poverty alleviation.

However, the implementation of circular business models requires adaptation, including a change in mindset, significant investment, and strong policy support. Companies, governments, and communities need to collaborate to create an ecosystem that supports this model, whether through economic incentives, promotion of public awareness, or infrastructure development. Despite these challenges, the literature review shows that the positive impacts of circular business models are far greater, both in economic and social terms.

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