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SMEs and Transition to Circular Economy

Abstract

The circular economy³ is not an end in itself; it is a tool that contributes to overarching goals such as climate neutrality and resource preservation. The paper analyses the nexus between small and medium-sized enterprises⁴ and circular economy. The subject of research can be presented in the form question what is the role of SMEs in the implementation of CE? The aim of this paper is to contribute to the development of the circular economy by SMEs, including innovation as a link between SMEs and the circular economy (CE). The paper explains how the link between SMEs and the circular economy (CE) has been established. The concept of CE is actually an economic model for systems of production and consumption in a closed cycle and an important tool in achieving climate neutrality. It can be concluded that SMEs, given that they constitute a significant part of the economy, are considered major employers, and possess the ability to quickly adapt to market changes, represent an important factor in the implementation of the circular economy (CE). In the implementation of innovative solutions, SMEs face

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³ In the following text, we will use the acronym CE for the circular economy, as it is commonly used in the literature

⁴ Small and medium sized enterprises- SMEs.

challenges such as required investments, the need for qualified personnel, and the time necessary for implementation. It is important to identify the factors that influence the ability and willingness of SMEs to integrate circular economy (CE) principles into their operations.

Keywords: *Circular economy, Small and medium enterprises.*

1. Introduction

The circular economy makes a significant contribution to achieving sustainable development goals, which highlights the inevitability of the transition from a linear to a circular economy. Given that the main goal of the European Green Deal is for Europe to become a climate-neutral continent, it is crucial to accelerate the transition to a circular economy in order to achieve climate neutrality by 2050.

The extension of the principles of the European Green Deal to the region in the form of the Green Agenda for the Western Balkans represents an adaptation to the priorities of the European Green Deal for the economies of the Western Balkans. One of the five pillars of the Green Agenda for the Western Balkans is the circular economy. By signing the Sofia Declaration on the Green Agenda for the Western Balkans on November 10, 2020, the Republic of Serbia, along with other economies, committed to adopting and implementing the concept of the Circular Economy.

By involving small and medium-sized enterprises (SMEs) a resilient, climate-neutral, resource-efficient and fair economy, as envisioned by the European Green Deal, can be achieved. In a changing world, in the era of globalization, the importance of micro, small and medium-sized enterprises and their contribution to the implementation of the circular economy is crystal clear. In other words, the application of circular economy practices at the level of SMEs is a significant step toward achieving sustainable development goals.

2. Literature review

A review of the relevant literature reveals numerous definitions of the concept of circular economy, as well as the connection between circular economy and SMEs. A large number of

diverse studies in the fields of CE and SMEs highlight the importance of this topic. CE is at the center of attention of the academic community, policymakers and the business sector.

It has been established in the literature that the circular economy model is an inevitability and that the transition towards a circular economy cannot be achieved in a single step it is not a state but rather a process. Therefore, it is entirely understandable that, based on the available literature, the circular economy does not have a universally accepted definition.

A review of the literature has shown that the circular economy is crucial in the fight to achieve climate neutrality, that it represents a model where economic growth is decoupled from resource consumption and that (SMEs) play a key role in the economic development of countries, which highlights the importance of SMEs in the implementation of the circular economy.

Indeed, in a changing world, in the era of globalization, the importance of micro, small, and medium-sized enterprises and the circular economy is crystal clear. SMEs, which make up 90% of businesses, account for more than 70% of employment and 50% of GDP worldwide, remain the core of the economy for most societies. (UN, 2024). Moreover, the application of circular economy (CE) practices at the level of small and medium-sized enterprises (SMEs) is considered a faster path to achieving sustainable development goals, highlighting its potential for environmental and economic benefits (Massari & Giannoccaro, 2023).

In line with the fact and based on the reviewed literature, that the topics of circular economy and SMEs are interconnected. Special attention should also be given to the role of small and medium-sized enterprises (SMEs). They are drivers of the transition, crucial in many supply chains, and often significantly affected by changes in policies and the regulatory framework. Given their smaller size and resources, SMEs may require additional support to adapt their production processes to implement the Green Deal framework" (European Commission, 2024, p. 50-54).

"Small and Medium Enterprises (SMEs) play an essential role in the provision of employment, contribute to the growth of GDP, economic growth and development of many countries." (Pulka & Gawuna, 2022, p.1)

The circular economy is closely linked to innovation, as "Moreover, innovations of various types are a key driving force behind the concept of the circular economy" (Marković, Krstić & Radenović, 2020, p.6), while on the other hand, the innovative capacities of SMEs are recognized, as "SMEs are important for developing innovative solutions" (European Commission, 2024, p. 54).

Studies have shown that CE orientation in SMEs involves integrating circular economy principles into their operations, products, and services (Schmidt et al., 2021, 4171-4187), which further clarifies the connection between CE and SMEs.

3. Research method

The research method applied in this paper is a systematic analysis and synthesis of views from the selected literature on the topic of defining Circular economy and SMEs, the role of small and medium-sized enterprises in the development of the circular economy. Numerous topics were reviewed, data was analyzed, and data extraction and integration were performed in order to process the topic SMEs and transition to circular economy.

4. Hypotheses

Based on the analysis of the concept of CE and the concept of SMEs, the following hypotheses were set:

H1: There is a positive relationship between the Circular Economy and SMEs

H2: SMEs are essential in the shift towards CE

5. Analysis and proof of hypotheses

In the analysis of the first hypothesis H1: Between the Circular Economy and SMEs, there is a positive relationship, it is assumed that small and medium enterprises (SMEs) play a key role in the economic development of many countries, and that the circular economy is becoming crucial, due to its significant impact on resource efficiency and sustainability: "SMEs are often part of supply chains" (European Commission, p. 92), because SMEs often serve as suppliers, manufacturers, distributors, or service providers, supporting larger companies and industries, but it is important to stand out that "SMEs have significant innovative capabilities" (European Commission, p. 93) and according innovation capacity play a crucial role in the circular economy. In addition, Small and Medium Enterprises (SMEs) contribute significantly to the European GDP and play a pivotal role in the ecological transition from a linear to a circular economy (Gennari, 2022, p. 1423).

Circular economy, as an important and interesting line of research aimed at achieving climate neutrality, is becoming increasingly significant, and the contribution of SMEs is becoming more influential precisely because they are "flexible and can quickly adapt to market changes, generate employment, impact increasingly diverse economic activity, contribute to exports and trade, and are a fundamental factor in the development of a competitive economy" (RZS, 2023, p. 19).

The implementation of Circular Economy (CE) practices at the Small and Medium Enterprise (SME) level is indeed recognized, as a crucial step toward achieving sustainable development targets. "At the beginning of the 21st century, human societies face a world with limited natural resources, a growing population, and expanding production systems that heavily consume materials and energy while generating significant waste and pollution (Dell' Angelo, Rulli & D' Odorico, 2018, p. 276).

SMEs, as a key part of the economy, can significantly contribute to the transition to a circular model, and the EU's commitment to introducing CE as a solution to serious resource-related issues further confirms the positive connection between the circular economy and SMEs. In other words, it can be concluded that SMEs are the key link of the circular economy. CE has garnered significant attention and recognition for its potential to address pressing global challenges related to sustainability, resource efficiency, and economic growth (Ahmadov, Durst & Gerstlberger, 2023, p.3).

In the analysis of materials to prove our second hypothesis H2: SMEs are essential in the shift towards CE, it is necessary to consider the following: "According to numerous authors, in order to establish the transition to CE, it is necessary to achieve the transition to CE at all three levels (micro, meso, and macro levels), which implies involvement at all levels, including the state, cities, and individual enterprises. These three levels can be interpreted as the three levels of the circular economy system: micro, meso, and macro systems of the circular economy" (Kirchherr, Reike & Hekkert, 2017, p. 224).

Successful implementation of circular economy in a given region or country significantly depends on the implementation of this process by Small and Medium-Sized Enterprises (SMEs). Consistently, industrial policy became increasingly linked with innovation and entrepreneurship policies (Benner, 2019, p. 2).

It is known that the circular economy is associated with innovative solutions, as SMEs are important for developing innovative solutions (European Commission, 2024, p. 54), this leads

to the view that only the full mobilization of SMEs can achieve the resilient, climate neutral, resource efficient and fair economy that the European Green Deal seeks to realize. As the most important goal of the European Green Plan is for Europe to be a climate-neutral continent, it is crucial to speed up the transition to a circular economy, in order to achieve climate neutrality by 2050. This is also confirmed by the statements (Wilts, 2022) that the circular economy is not an end in itself, but rather an instrument that contributes to comprehensive goals such as climate neutrality and resource conservation. "It is well known that the circular economy is connected with innovative solutions, as well as that SMEs are key drivers in developing and implementing these innovations" (European Commission, 2024, p. 54).

On the other hand, the connection between the circular economy and SMEs is of exceptional importance, as SME's constitute a large part of the economy, as concluded from the data provided by the European Commission: "99% of European businesses are SMEs. They provide jobs to more than 85 million European citizens. SMEs are at the heart of innovation and entrepreneurship" (European commission, 2024). As can be observed in the further context of the paper, the analysis of Structural Business Statistics by enterprise size (number of employees) can be presented as follows:

- **Micro enterprises** – Enterprises that employ fewer than 10 people.
- **Small enterprises** – Enterprises that employ between 10 and 50 people.
- **Medium enterprises** – Enterprises that employ between 50 and 250 people.
- **Large enterprises** – Enterprises that employ over 250 people (European Commission, 2003, p. 14).

Based on statistical data obtained from the European Commission documents, it can be concluded that in 2022, microenterprises in the EU employed more people than any other size category of enterprises, the data is presented at Table1: Economic structure of enterprises per size class, in EU-27 for 2022) and Table 2: Economic structure of enterprises per size class, in EU-27 for 2023.

Table 1. Economic structure of enterprises per size class, in EU-27 for 2022

	Number of enterprises		Number of persons employed	
Class size	Number	Share	Number	Share
Micro	22 744 173	93.5 %	38 790 351	29.4%

Small	1 332 200	5.5%	25 602 334	19.4%
Medium-sized	204 786	0.8 %	20 493 722	15.5%
SMEs	24 281 159	99.8%	84 886 407	64.4%
Large	43 112	0.2%	46 918 978	35.6%
Total	24 324 271	100.0%	131 805 385	100.0%

Source: European Commission, Annual Report on European SMES 2022/ 2023, Grow and Joint Research Centre, ISBN 978-92-68-06174-9, ISSN 1831-9424, doi:10.2760/028705, Luxembourg: Publications Office of the European Union, p.3

Table 2. Economic structure of enterprises per size class, in EU-27 for 2023

Class size	Number of enterprises		Number of persons employed	
	Number	Share	Number	Share
Micro	24 209 297	93.6 %	40 803 310	30%
Small	1 387 888	5.4%	26 770 763	19.7%
Medium-sized	210 551	0.8 %	21 156 339	15.5%
SMEs	25 807 736	99.8%	88 730 412	65.2%
Large	43 420	0.2%	47 355 823	34.8
Total	25 851 156	100.0%	136 086 235	100.0%

Source: European Commission , Annual Report on European SMES 2023/ 2024, Grow and Joint Research Centre, ISBN 978-92-9469-822-3, ISSN 2467-0162, doi:10.2826/355464, Luxembourg: Publications Office of the European Union, p.3

When analyzing the data presented in previous tables it can be concluded that SMEs in the European Union provided in 2022 some 64.4% number of persons employed. Similar values were also recorded in 2023. SMEs employ about 88 730 412 number of persons in 2023 and 84 886 407 persons in 2022. SMEs represent a significant share of the total number of companies in the EU, about 99%, and can be considered the largest employers in the market (Brodny & Tutak, 2022, p. 2)

SMEs have great potential to contribute to the implementation of CE as they are considered major employers and the most widespread type of business, but also due to their flexibility in adopting new technological models. The implementation of CE in SMEs enables them to not only economically advance but also make a positive contribution to the planet. Thus, SMEs are considered drivers of the economy, innovation, and employment, and represent a

significant category for the transition to CE, which confirms our second hypothesis H2: SMEs are essential in the shift towards CE.

6. Conclusion

Circular economy (CE) attracts much attention from governments and companies. CE has attracted considerable attention and recognition for its potential to address pressing global challenges related to sustainability, resource efficiency and growth economics. SMEs, whose economic and social roles in the EU are very significant, are particularly important for achieving this goal. Transition to the circular economy includes implementation circular economy in SMEs, which constitute about 99 % of all European enterprises. When analyzing the data presented, it can be concluded that the SMEs has a major impact on implementation circular economy.

In the next phase of the research, it is necessary to analyze the representation of SMES/total enterprises for individual countries.

Literature

1. Ahmadov, T., Durst, S., Gerstlberger, W., & Kraut, E. (2023). SMEs on the way to a circular economy: insights from a multi-perspective review. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-023-00380-2>, p. 3.
2. Benner, M. (2019). Industrial Policy in the EU and its Neighbourhood: Learning from Policy experimentation, *Economies*, 7 (2), MDPI, <https://doi.org/10.3390/economies7020044>, p. 2.
3. Brodny, J., & Tutak, M. (2022). Digitalization of Small and Medium–Sized Enterprises and Economic Growth: Evidence for the EU-27 Countries. *Journal of Open Innovation: Technology, Market and Complexity*, Vol. 8., No 67, p. 2.
4. Dell' Angelo, J., Cristina Rulli, M. & D'Odorico, P. (2018). The Global Water Grabbing Syndrome, *Ecological Economics*, Vol. 143, ISSN 0921-8009, <https://doi.org/10.1016/j.ecolecon.2017.06.033>, p. 276.
5. European Commission. (2003). The new SME definition User guide and model decoloration. *Enterprise and Industry publications*, p. 14.

6. European Commission. (2020). Commission Staff working document. Guidelines for the Implementation of the Green Agenda for the Western Balkans *Accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions An Economic and Investment Plan for the Western Balkans*, {COM(2020) 641 final}, SWD(2020) 223 final, p.1.
7. European Commission. (2024). Annual Report on European SMES 2023/2024, *Grow and Joint Research Centre*, ISBN 978-92-9469-822-3, ISSN 2467-0162, doi:10.2826/355464, Luxembourg: Publications Office of the European Union, p. 50-54.
8. European Commission. (2024). Annual Report on European SMES 2023/2024, *Grow and Joint Research Centre*, ISBN 978-92-9469-822-3, ISSN 2467-0162, doi:10.2826/355464, Luxembourg: Publications Office of the European Union, p. 54.
9. European Commission. (2023). Annual Report on European SMES 2022/2023, *Grow and Joint Research Centre*, ISBN 978-92-68-06174-9, ISSN 1831-9424, doi:10.2760/028705, Luxembourg: Publications Office of the European Union, p. 3.
10. European commission. (2024). Entrepreneurship and small and medium-sized enterprises (SMEs), downloaded 15. 10. 2024 from https://single-market-economy.ec.europa.eu/smes_en).
11. Gennari, F. (2023). The transition towards a circular economy. A framework for SMEs. *Journal of Management and Governance*, 27, <https://doi.org/10.1007/s10997-022-09653-6>, p.1446.
12. Kirchherr, J., Reike, D. & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, No127, doi: 10.1016/j.resconrec.2017.09.005, p. 224.
13. Marković, M., Krstić, B. & Rađenović, T. (2020). Circular economy and sustainable development, *Economics of sustainable development*, Vol 4., No 2, Society of Economist "Ekonomika" Niš, doi: 10.5937/ESD2001001M, p. 6.
14. Massari, G., & Giannoccaro, I. (2023). Adopting GRI Standards for the Circular Economy strategies disclosure: the case of Italy, *Sustainability Accounting, Management and Policy Journal*, ISSN: 2040-8021, downloaded 15. 10. 2024 from <https://www.emerald.com/insight/content/doi/10.1108/sampj-07-2021-0284/full/html>.

15. Musa Pulka, B., & Sani Gawuna. M. (2022). Contributions of SMEs to Employment, Gross Domestic Product, Economic Growth and Development. *Jalingo Journal of Social and Management Sciences*, Vol 4., No1.
16. Republički zavod za statistiku. (2024). Radni dokument, Preduzeća u Republici Srbiji prema veličini, 2023, br.128, ISSN 1820 – 0141, p.19.
17. Schmidt, C. V. H., Kindermann, B., Behlau, C. F., & Flatten, T. C. (2021). Understanding the effect of market orientation on circular economy practices: The mediating role of closed-loop orientation in German SMEs. *Business Strategy and the Environment*, Wiley, 30(8), 4171–4187. <https://doi.org/10.1002/bse.2863>.
18. Vlada Republike Srbije (2020). Startegija industrijske politike Republike Srbije 2021-2030, str. 2.
19. United Nations. (n.d.). Micro, small and Medium-sized Enterprises Day, downloaded from <https://www.un.org/en/observances/micro-small-medium-businesses-day>.