CURRENT APPROACHES TO ECONOMIC SCIENCE. THE COLLABORATIVE ECONOMY VERSUS THE CIRCULAR ECONOMY

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Abstract: *This paper examines the current approaches to economic science, particularly on collaborative and circular economies. Economic science is closely related to the concept of limited resources. This is because economics is concerned with managing limited resources to satisfy unlimited human needs and wants. The idea of limited resources is central to economic science because it influences every aspect of how people make economic decisions and manage economic activities. Effective management of these resources is essential to achieving long-term economic and social goals. The collaborative economy and the circular economy are two key economic concepts that address how resources are used and distributed sustainably and efficiently in society. Both concepts are frameworks that aim to address the challenges of sustainability and resource efficiency, albeit in different ways. The collaborative economy is characterised by individuals and organisations sharing resources through digital platforms, such as goods, services, or information. This model promotes resource optimisation, cost-sharing, and social cohesion. On the other hand, the circular economy is an economic model that seeks to systematically reduce waste and maximise resource efficiency by designing products, services, and systems that prioritise the longevity and recyclability of materials. The paper explores collaborative and circular economies' theoretical foundations and practical applications. Although they have some overlap, these two concepts have different perspectives and approaches regarding resource management and sustainable economic growth. While the collaborative economy focuses on sharing and exchanging existing resources, the circular economy focuses on reshaping systems and products to reduce waste and sustainably optimise resource use. The study findings are based on a comprehensive literature review and empirical research on collaborative and circular economies. The analysis reveals that collaborative and circular economies have unique strengths and limitations. However, they also share common objectives, such as promoting sustainability, resource efficiency, and social inclusivity. These concepts have the potential to complement each other and contribute to a more sustainable and resilient economy.*

Keywords: *economic science; collaborative economy; circular economy.*

JEL Classification: *F63; F64; P18; Q51; Q56.*

1. Introduction

Economic science is a social science. It studies the subject-object relationship (the subject is not differentiated from the interrogated object) and seeks to understand the events. In this situation, the principle of observability is no longer valid (its presence would imply that the interrogated subject would become an object and thus no longer have other manifestations of will and be perfectly controllable, which is impossible), but the principle of

intelligibility manifest (Dinga, 2010). This principle ensures that human actions closely related to the real world can be rationally ordered and explained. In this human activity, the interrogating subject and the interrogated object logically "merge" into the subject-object unit. Economic science appeals to a formula in which a priori theory and the interpretation of historical data intertwine. (von Mises)
Economic theory has the power to influence and even transform the behaviour of economic agents, who in turn have the power to transform reality according to their understanding and action. Human action occurs globally, but it is divided into the external world of the questioning subject and his inner world. By reflecting on the global world, patterns are formed. (Părean, 2014, p. 47)
Economic science starts with the tense relationship between unlimited needs and limited resources. If, in the beginning, no emphasis was placed on this relationship and only the development of economic activities was pursued to satisfy financial requirements, later, over time, concerns were also quickly focused on how these activities were carried out and their effect on people and future generations.

2. Economic science

Economic science encompasses various subfields and approaches, including microeconomics, macroeconomics, development economics, behavioural economics, and environmental economics. Microeconomics focuses on the behaviour and decision-making of individual economic agents, such as consumers and firms, and how their choices affect prices, quantities, and market outcomes. It also examines how resources are allocated within specific industries and markets. Macroeconomics, on the other hand, studies the overall behaviour and performance of an economy as a whole. It analyses factors such as economic growth, inflation, unemployment, and government policies that impact the aggregate level of output and employment. Development economics focuses on understanding the factors contributing to economic growth and development in low-income countries. Behavioural economics explores the psychological and cognitive factors that influence economic decision-making, challenging traditional assumptions of rationality. Environmental economics examines the interactions between the economy and the natural environment, addressing sustainability and resource management issues. Economic science has evolved significantly, adapting to new challenges and incorporating insights from other disciplines. (Christensen et al., 2018)
Economic science aims to provide a theoretical framework for understanding and predicting economic behaviour. This framework allows economists to develop models and theories that can be tested and validated through empirical research. The future of economic science holds immense potential for advancements and innovations. As the world continues to evolve, so does the field of economics. New technologies, data analytics, and interdisciplinary approaches are expected to play a crucial role in shaping the future of economic science.
Economic science has evolved significantly over time, adapting to changes in the global economy and incorporating new methodologies and approaches. One of the critical areas of future development in economic science is integrating big data and advanced analytics. With the increasing digitisation of financial activities, vast amounts of data are generated daily. This data provides researchers valuable insights into economic trends, consumer behaviour, and market dynamics. Additionally, interdisciplinary approaches will likely influence the future of economic science.
Collaborations between economists and experts from other fields, such as psychology, sociology, and computer science, can lead to a more comprehensive understanding of economic phenomena and more effective solutions to financial challenges. For example, incorporating behavioural economics into economic research can provide insights into

individuals' decision-making processes and how they deviate from traditional rational behaviour.
This can help economists better understand economic phenomena and design policies that account for these behavioural biases. Furthermore, the future of economic science will likely see an increased focus on sustainability and environmental economics. With growing concerns about climate change and resource depletion, economists recognise the importance of integrating environmental considerations into economic analysis. This involves identifying the impact of economic activities on the environment and creating plans to achieve sustainable economic growth. Another critical aspect of the future of economic science is the exploration of alternative economic models. This includes considering alternative measures of economic well-being, such as happiness and well-being indicators, instead of solely relying on traditional measures like GDP.
There is a growing interest in exploring alternative economic systems prioritising resource efficiency and social welfare, such as the sharing economy and circular economy. Overall, the future of economic science is likely to be characterised by a multidisciplinary approach, incorporating insights from various fields and addressing pressing societal issues such as sustainability and well-being. However, it is essential to note that economic science itself is a constantly evolving field, and its future trajectory will depend on various factors such as technological advancements and societal changes. In today's rapidly changing world, the significance of accurate economic science and forecasting cannot be overstated. (Prieto-Sandoval et al., 2018)
The sharing and circular economies operate on economic science principles, prioritising efficiency, sustainability, and optimal resource allocation. The circular economy concept is becoming more relevant and gaining attention in several domains, such as strategic management, operations management, and technology management.
By studying economic science, researchers can better understand how individuals, firms, and governments make decisions and interact in various economic environments. This knowledge can inform policy decisions, optimise resource allocation, and promote economic growth and development.

2.1 Economic science – collaborative economy

The sharing economy, or collaborative consumption or peer-to-peer economy, is based on economic principles that emphasise efficient resource allocation and utilisation through sharing underutilised assets. The sharing economy recognises the potential for individuals and businesses to share their resources, skills, and services with others in a mutually beneficial way. This concept is guided by optimising resource allocation, reducing waste, and creating a more sustainable and inclusive economic system.
Economic science emerged and developed based on facts in people's daily lives. Economic activities involve the consumption of resources, and man carries out these activities to satisfy his needs. Emancipation led to a multiplication and diversification of needs. Because resources were limited and needs were numerous, people started collaborating to help each other meet these needs.
For centuries, it has been a tradition for people to help each other in critical moments of their lives (of joy, sadness, and even in different economic activities such as tilling the land). These collaborations were/are being made against people's desire to satisfy their needs better, efficiently, and cheaply.
As a result of the development of technologies and people's strategies, there is currently talk of the collaborative economy, the shared economy, and the "peer-to-peer" economy. Conceptualising the collaborative economy is difficult because there is no single and precise definition to establish this phenomenon, and therefore, there are multiple and heterogeneous definitions. (Sastre - Centeno, Inglada - Galiana, 2018)

The conceptualisation of the collaborative economy is the consequence of several elements that have enabled the efficiency and improvement of several economic practices. The sharing economy involves sharing resources among individuals and organisations to create, produce, distribute, trade, and consume goods and services. (Goudin, 2016, p. 10 apud Sastre - Centeno, Inglada - Galiana, 2018, p. 227)

The sharing economy gained popularity among the general public in 2011, with Airbnb and Uber achieving significant success (Martin, 2016). Since then, this system has been studied from various angles, including consumption practices, lifestyle, mobility, social movements, disruptive innovation, sharing paradigms, travel patterns, trust, and motivation. (Cheng, 2016; Mauri et al., 2018; Hossain 2020).

In the sharing economy, individuals participate in various activities such as bartering, borrowing, renting, trading, exchanging, and transporting. (Heo, 2016; Möhlmann, 2015; Hossain, 2020).

Moreover, it is a complementary approach to solving the problems arising from the market economy (Heylighen, 2017; Joo, 2015; Hossain, 2020). The participatory economy is based on the active involvement of citizens in the economy and their ability to influence the market. The trade flow is organised as a horizontal relationship between parties (peer-to-peer economy). These new ways of economic collaboration create diverse legal relationships that are often difficult to integrate into traditional legal systems and make it challenging to identify a correct legal qualification (Pană, 2022).

The collaborative economy is emerging as a global movement characterised by a context in which young entrepreneurs develop new products, services and solutions based on new business opportunities (Gansky, 2011).

A participatory economy is a possible solution for recovering the business environment where industrial production faces significant problems caused by the lack of raw materials. The collaborative economy relies on digital platforms and online marketplaces that connect buyers and sellers, allowing them to collaborate and share resources. These platforms act as intermediaries, facilitating user transactions and enabling them to exchange goods and services more quickly and efficiently. The concept depends mainly on the Internet and collaborative platforms, where producers and consumers trade almost anything, from physical goods, products, and accessories to experiences. Some popular economic sectors developed through these digital platforms are tourism (short-term accommodation), passenger transport, professional and technical services, education, and crowdfunding.

In this context, sharing can benefit consumers, the environment, the community, and innovative and forward-thinking businesses.

The uniqueness of this recent economic movement lies in the fact that sharing takes place and is mobilised according to people's strategies and movements. This movement takes place through technological factors that are more accessible in the market and that bring new, more conscious, and sustainable consumption behaviours into the social environment. So, the main characteristics of the sharing economy include:

- Digital platforms: Digital intermediaries such as mobile applications and websites facilitate user transactions and exchanges.
- Resource sharing: Individuals can share their resources, such as cars, homes, skills, or free time, with others to maximise their use and reduce individual costs.
- Accessibility: The sharing economy allows users to access services and goods on-demand and pay for their use instead of buying or owning them.
- Community-based economy: Some aspects of the sharing economy are community-based, encouraging interaction between members and creating a sense of belonging.

2.2 Economic science – circular economy

The circular economy builds upon the principles of economic science by advocating for a system that minimises resource consumption, waste generation, and environmental impact while maximising resource efficiency and financial value. The circular economy promotes a regenerative and restorative economic system, where products and materials are designed to be reused, repaired, or recycled instead of disposed of after a single use. This concept is rooted in the principles of economic science, specifically the study of resource allocation, production, and consumption patterns.

The collaborative economy considers developing economic activities to satisfy needs while respecting the environment. In contrast, the circular economy, which mainly focuses on respect for the environment in economic activity, is a concept that emphasises the sustainable and efficient use of resources through closed-loop systems of production and consumption.

The fact that people are free to adopt specific values and determine their actions should not be understood as people having the power to subordinate the laws of nature. It is not suitable for people's "freedom" to be explained in terms of their ability to carry out activities contrary to human nature. The fact that man is not omnipotent and omniscient does not mean that he is not "free"; the laws of nature limit the ability of each individual to carry out specific actions, but these do not affect the freedom of the individual will.

The economic value of the goods and services offered by the environment to society has been consistently overlooked or underestimated. They remained outside the mechanism of the market and the price system or were conjecturally connected to the system of economic levers from the dominant monetary policy positions, even if they continuously and everywhere manifested their vital character. (Părean, 2009, p. 40 – 41)

Thomas Robert Malthus raised the first alarm signal regarding environmental problems with the "law of population": food resources increase in arithmetic progression, while population increases in arithmetic progression. The traditional model of running economic activities was a linear one, according to the "take-produce-use-throw" model. Later, the approaches became very nuanced. Thus, within the Club of Rome, through the "Limits of Growth" Report (1972), the foundations of the circular economy models were laid, and alarm signals were raised regarding the management of the resources provided by the environment. (Meadows et al., 2004)

While several interpretations of the circular economy exist, a widely accepted definition is yet to be established. The Ellen MacArthur Foundation, revered as a prominent figure in circular economy practices, has presented a definition that is often referenced. Per this definition, the circular economy is an industrial model created to be vital and sustainable. (Ellen MacArthur Foundation, 2013). Kirchherr et al. provide a notable definition of the circular economy. They define it as an economic system that eliminates the "end of life" concept by promoting the reduction, reuse, recycling, and recovery of materials throughout the production, distribution, and consumption. This system operates at various levels, including the micro level (involving products, companies, and consumers), the medium level (in eco-industrial parks), and the macro level (encompassing cities, regions, nations, and beyond), with the ultimate goal of achieving sustainable development while also promoting environmental quality, prosperity, and social equity for present and future generations. (Kirchher et al., 2017)

The circular economy represents one response to the global trend of depleting natural resources. It aims to use the most significant possible volume of biodegradable materials that can be returned to nature and reused without polluting the natural environment.

Therefore, the circular economy is based on collecting, reusing, repairing, renovating, and recycling materials and products. This extends the life cycle of products and considerably

reduces the volume of waste people produce. Products that reach the end of their life and the materials from which they are made are preserved within the economy as many times as possible.
The circular economy is distinguished from other visions and paradigms of reducing energy and material consumption through a holistic (unitary) approach. It creates circular loops of flows of resources, materials, energy, and waste, including all activities in a society.
The circular economy is a production and consumption model that involves multiple cycles of use, reuse, repair, renovation, and recycling of existing materials and products. This model aims to extend the life cycle of products through the reuse and recycling of goods. Developing a closed-cycle economy allows for more sustainable use of resources and reduces waste. (Popa, 2021, p. 208)

3. The collaborative economy versus the circular economy

The sharing economy is an innovative economic model that facilitates sharing resources, time and skills among people. This model maximises the efficient use of resources and benefits the participants by providing ample opportunities to collaborate and support each other. The principles include:

- Sharing: People share their goods, spaces, and resources with others in their community. This can include sharing cars, homes, tools, sports equipment, and more.
- Access instead of ownership: People can access resources through sharing or rental platforms instead of buying goods or services. For example, people can use car-sharing or ride-sharing services to travel instead of buying a car.
- Community: The collaborative economy promotes creating and strengthening connections between people within local communities. Sharing and collaboration platforms facilitate interaction and cooperation between community members.
- Efficient use of resources: Sharing resources in the collaborative economy can help us use them more efficiently by avoiding duplication.
- Sustainability: The sharing economy can help reduce environmental impact and promote a more sustainable lifestyle by reducing overconsumption and promoting the sustainable use of resources.

The sharing economy changes consumer mindset, fosters community and addresses resource issues.
Regarding the circular economy, its principles can be summarised as follows:

- Product design for durability and recyclability: Products are designed to be easily repaired, upgraded and recycled.
- Prolonging product lifespans: Encouraging the extended use of goods and services through upkeep, fixing, and recycling.
- Recycling and recovering materials: Reintroducing materials and components into the economic circuit through recycling and recovery.
- Renewable energy: Promoting renewable energy and reducing dependence on finite resources.
- Circular exchanges: Encouraging closer relationships between companies to harness the waste and by-products of one industry as resources for another.

These principles aim to alleviate the strain on resources and minimise environmental impact. They are a crucial solution to climate change, resource depletion, and environmental pollution.
Collaborative and circular economies are separate ideas, but they can work together to promote effective resource use and minimise environmental harm. Ultimately, these concepts complement each other and can be used in tandem to achieve their goals.

The main objective in the "peer-to-peer" economy is to use existing resources efficiently and in collaboration with other consumers. It emphasises the sharing and access of resources between individuals and communities. In contrast, the circular economy aims to optimally use resources and minimise waste by remodelling products, recycling, and reusing materials and components in a closed economic loop.
Regarding consumption, the collaborative economy focuses on changing how consumers use goods and services, promoting free access instead of individual ownership of goods (with all the following legal implications) and sharing existing resources. The circular economy emphasises transforming how goods are produced, used and managed, focusing on creating more sustainable and resource-efficient systems.
Regarding the social aspect, the collaborative economy is based on the interaction between people, encouraging solidarity and cooperation. It promotes community. The circular economy is more oriented towards resource management's technical and economic aspects, although it also involves collaboration between stakeholders, including local communities.
In the collaborative economy, implementing the principles of the two concepts usually involves turning to digital platforms and social networks that facilitate sharing and access to resources. Conversely, the circular economy encompasses modifications throughout the whole supply chain and production systems, as well as recycling and waste management. These changes frequently necessitate governmental policies and regulations to promote and facilitate them.

5. In conclusion

It must be recognised That economic science involves the social, cultural, political, and even individual aspects of people within a given community.
Economic activities in the collaborative economy benefit individuals and society by promoting the efficient use of resources, increasing sustainability and developing local communities. However, addressing and resolving regulatory, privacy and economic justice challenges is essential to ensure this emerging economic model's fair and sustainable evolution.
The relationships that are established between man and nature depend to a large extent on the applied economic model. To overcome or alleviate the problems within this relationship, the classical or "linear" financial model, based on the "resource consumption - product - waste" principle, must be gradually replaced by the "circular" model, which assumes the "resource consumption" principle resources - product - the valorisation of waste that becomes a secondary resource". The circular economic model significantly contributes to developing novel economic ethics grounded in the holistic principle. This model emphasises the interconnectedness and interdependence of economic, social, and environmental factors in a way that aligns with the current global discourse on sustainable development. Adopting such a model could create new opportunities for businesses to promote circularity, reduce waste, and enhance resource efficiency while also contributing to realising broader societal goals. Accordingly, exploring the potential implications of this approach is invaluable for advancing our understanding of the intersection between economics and ethics in the modern era.
Collaborative and circular economies are two distinct but complementary approaches to promoting more efficient resource use and improving society's economic and ecological sustainability. Their combination can help create a more sustainable and resilient economy in the future.
The shared economy approaches the issue of resource consumption from the consumer's perspective, that is, the efficient and collaborative use of goods to have as little impact on natural resources as possible. In contrast to other approaches, the circular economy approach gives the producer's perspective prominence. It should produce goods so that

their use allows reuse (presupposing the wide competition of consumers) so that as few natural resources are used as possible, allowing future generations to enjoy the natural resources existing today.

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