

## Circular economy in Bosnia and Herzegovina

<sup>a,\*</sup> Zijad Džafić, <sup>b</sup> Admir Omerbašić

<sup>a,b</sup> Department of Economics, Faculty of Economics, University of Tuzla, Bosnia and Herzegovina

### ARTICLE INFO

#### Keywords:

Circular economy  
Economic growth  
Competitiveness  
Sustainability  
Bosnia and Herzegovina

### ABSTRACT

The degradation of the environment is one of the most urgent challenges today. Since the industrial revolution, we have only known the model of linear economy that deals with the relationship between growth and consumption with the creation of large amounts of waste. As an alternative, a new concept of the modern economy, the circular economy. The underlying assumptions of such a system are characterized by a tendency towards efficient use, and recycling and re-use of resources as it would limit the negative environmental impacts of the economy, while reducing costs in economic activities with the aim of economic growth. Our goal in this paper is to highlight the role and significance of the circular economy (CE) and natural resources in the process of creation of competitive advantages in a globally connected world as well as in Bosnia and Herzegovina. Our companies have preferred the mass production method of material wealth based on the mass consumption of natural resources as the main economic development method while pursuing high economic growth and maximum economic profit. These days, this economic development method faces various limitations. Many problems, such as mass generation of wastes exceeding the natural purification capacity, enormous damage environment, deepening of natural disasters and global warming, various disputes surrounding natural resources. This analysis highlights that the use of CE tools can help economic policy makers and researchers to take into account the impact on the environment during strategic planning activities and projections of economic growth in BiH.

### I. Introduction

The circular economy (CE) is emerging as an alternative to solve various serious problems inherent in traditional economy, because the CE is an economy that guarantees economic development, environmental protection, and social development by satisfying people's demands while maintaining the value and use value of products or parts for as long as possible through various activities including reuse and recycling. In this regard, research on the CE has been deepened in recent years, and in this process, various examples of the CE have been created in various countries, regions, and companies, and various views related to the CE have been raised by various scholars and institutions (Lacy & Rutqvist, 2015). Ideas specific to the CE have appeared since the 18th century. Hans Carl von Carlowitz (1645-1714) was the first who introduced the concept of sustainability, advocating for sustainable use of the forest. John Law (1671-1729) and Richard Cantillon (1680-1734) tried to describe the circular flow of income and expenditure. In 1798, Thomas Malthus, in the work entitled "An Essay on the Principle of Population", pointed out that continued population growth would diminish the world's ability to feed itself. John Stuart Mill (1806-1873) postulated that the economy is governed, in fact, by the laws of nature and not by humans. He believed that it was preferable for the economy to reach a stationary stage that would facilitate the transformation of capitalism into a more humane economic system (Kirchherr, Reike & Hekkert, 2017).

The development of the concept of CE has also involved different approaches to how this type of economy is defined. Thus, the specialized literature contains over 100 definitions regarding the circular economy, focused on key concepts such as sustainable development, the 4Rs (Reduce, Reuse, Recycle, Recover), the systemic approach (micro, meso, macro), the waste hierarchy. It is possible to define the process of CE on different levels: worldwide, specific country, specific industry, and specific company. We would like to show the mechanism through which economic growth leads to environmental degradation and overexploitation of natural resources. (Bringezu, Ramaswami & Schandl, 2017). Starting from the common elements of these concepts, Kirchherr proposed a concise definition of the circular economy: "CE is an economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes". This required a shift from the traditional economic development method based on the extraction-manufacturing-use-disposal to a new economic development method that guarantees sustainable development. In other words, the economic growth pattern was recognized as unsustainable in the long run. We shall make a critical review of particular indicators of CE.

\* Corresponding author. E-mail address: [zijad.dz@gmail.com](mailto:zijad.dz@gmail.com) (Z. Džafić).

Received: 27 April 2023; Received in revised form 05 April 2023; Accepted 06 April 2023

<https://doi.org/10.58251/ekonomi.1287906>

According to the decision of the European Union, the transition to a circular economy is essential in order to ensure a sustainable development, a smart use of natural resources and to prevent dramatic changes of the climate on earth. To evaluate the progress to a circular economy of each country, ten main indicators with different sub-indicators grouped in four areas of economy were established by the European Commission and presented in the European Parliament on 16th January 2018. The area and the corresponding indicators are presented in Figure 1.

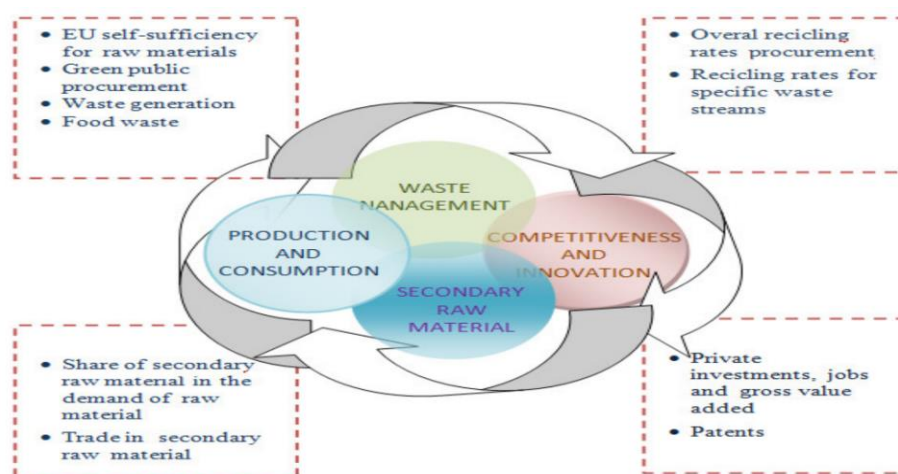


Figure 1. Measuring progress towards circular economy in the European Union.

Driven by the estimated population growth for 9 billion people by 2050, severe anthropological and environmental impacts are taking place, such as the decrease in biodiversity, which worsens the ecological imbalance on a large scale, and the scarcity of raw materials due to the demand extraction by millions of inhabitants, which causes fluctuations in market prices and instability in the world economic system (Arruda, 2021).

CE is based on design of manufactured products with added value and maximum use in longer life cycles; creation of versatile products with different uses, in different periods of their useful life, thus guaranteeing the reuse of a single good; restitution of solid waste to the industrial sector in an orderly manner, where the cost of secondary raw materials from recycling is competitive in the market; as well as a systemic approach to supply chain management, evaluating the interconnections between the energy produced, the extracted material, and the natural environment (Arruda, 2021).

However, there is a lack of consensus on the definitions and terminology of CE in the scientific community and a deformed and dissipated relationship with other concepts in sustainability such as green economy, clean production or industrial ecology (Beveridge & Guy, 2005).

Awareness of the importance of the circular economy exists not only among large but also small and medium-sized enterprises, which is confirmed by numerous scientific papers. Increasingly a set of academic literature have focused upon the role of these individuals as being in the vanguard of a shift to a new form of capitalist development that can help to directly address fears over global warming, climate change and their associated negative environmental impacts (Tilley, 2007). Sustainability entrepreneurs are those who attempt to combine the environmental, economic and social components of sustainability in a holistic manner and are said to have a different organizing logic to more conventional entrepreneurs (Hart, 2006).

Moreover, many of these sustainable entrepreneurs are said to operate their businesses in ways that run counter to popular perceptions of entrepreneurial behavior. In particular, sustainable entrepreneurs seek to use the enterprise as a tool for perpetuating resources involving “whole enterprise design” focused on sustainable development (Parrish, 2006).

## 2. The green agenda for the Western Balkans

The adoption of the green agenda for the Western Balkans consists of 5 main topics (Kamberović et al., 2020). First, climate change includes regional initiatives to align with the EU’s CLI legislation, preparation and implementation of long-term climate adaptation. Strategies to increase resilience, in particular through investments in climate protection. To implement this strategy, it is necessary to provide technical assistance to Emissions Trading Scheme and fossil fuel alternatives, to explore opportunities for early inclusion of the Western Balkans in EU Emissions Trading and inclusion of the region in the European climate pact and its activities. The clean energy transition will help to align with the EU. Legislation, the development of National Energy and climate plans, the development of water and public schemes for renovation and security of buildings, adequately funded by extending the “wave of EU reconstruction” to the Western Balkans, assistance to partners in the implementation of programs to address energy poverty in the region, joining the Western Balkans initiative “coal regions in transition”, and the assessment of the socioeconomic impact of decarbonization in the region. Smart and sustainable mobility implies the implementation of a regional plan for sustainable development. Transformation of railways, a strategy to increase the capacity of railways and develop new transport models, implementation of EU standards, through the European system management of railway traffic (Ec.europa.eu, 2023). Second, this is an important step towards horizontal changes in waste, recycling, sustainable production, and efficient use of resources and establishing sustainable development policies. It also implies regional improvement of the sustainability of raw material production and joint work on integration into the EU’s industrial wake-up chains. A regional strategy for the circular economy has been developed consumer initiatives, as well as the establishment of a regional agreement on preventing plastic pollution, with a special focus on the issue of marine litter. The European Commission has announced further measures in the EU’s CE action plan.

There will be 101 in 2021 present a number of initiatives, including a review to strengthen basic packaging requirements and reduce packaging and packaging waste, limit intentionally added microplastics and measures for unintentional release of microplastics, as well as a policy framework for bio-based plastics and biodegradable or compostable plastics. In 2021 and 2022 in 2020, the Commission will further present mandatory requirements for the content of recycled plastics and measures to reduce plastic waste for key products such as packaging, building materials and vehicles. Third, to develop and implement an action plan on biodiversity in the Western Balkans. The Balkans by 2030. The restoration of the forest landscape in the Western Balkans, the establishment of biological diversity and their integration into the development of the fight against climate change. Strengthen regional cooperation for the preservation of biodiversity and the implementation of the United Nations Convention on Biological Diversity. The exchange of knowledge between research centers of the Western Balkans and the EU, with the possibility of establishing Information Centre for biodiversity in the Western Balkans (Stefan, 2015).

Fourth, this includes the development of a regional strategy for air quality and the implementation of BAT according to the Industrial Emissions Directive. In the fight against regional it was agreed to carry out accreditation of air quality monitoring networks and to include the region in pan-European networks. It is planned to modernize the water and wastewater monitoring infrastructure as well as regional implementation of water and wastewater regulations through a common cooperation cycle on the prevention of cross-border pollution. There are also planned development infrastructure projects for waste and wastewater management (Topliceanu, 2023).

Fifth, initiatives for regional harmonization of agri-food and primary production sectors with the EU and food safety standards have been established health and well-being of plants and animals. Improving health care throughout the day food chain and labelling of food products in accordance with the food safety regulations. Support to improved consumer information and the movement of organic food through the promotion of organic and organic agriculture reduce the use of synthetic chemicals. In this process, collaboration is key between scientific and educational institutions and producers and processors in the agriculture-food sector and promotional actions to reduce waste in rural and coastal areas (along roads, in rural rivers). The common development initiative for sustainable development of rural areas through improvement of rural infrastructure within IPARD. In the famous concept of “planetary limits” presented by Stefan et al. (2015), The large use of fertilizers based on nitrogen and phosphorus in agriculture leads to exceeding the planetary limit of “biochemical fluxes”, contributing to the eutrophication of aquatic ecosystems and the associated loss of biodiversity. In addition, fossil fuels continue to play a dominant role in the production of fertilizers and energy use in agriculture, thus contributing to climate change (European Commission, 2022).

All financial grants so far have focused on the process of alignment with the EU acquis in accordance with the requirements of Chapter 27 and climate change. IPA III pre-accession financial instruments a dedicated financial framework for the implementation of the green agenda and sustainable connected and digital transformation of 14 billion for the period from 2021-2027. In 2018, Europe produced around 61.8 million tons of plastic, which represents 17% of world production. Packaging with a share of 40% and construction with a share of 20% represent by far the largest end-use markets (Tatić et al., 2020).

### 3. The current state of the economy in BiH

Bosnia and Herzegovina is an upper middle-income country which has accomplished a great deal since the mid-1990s. Bosnia and Herzegovina is a small and open economy, dominated by services, which accounted for 55% of GDP in 2021, with a moderately developed industrial and manufacturing sector (23% and 12%, respectively), and a limited agricultural base (about 6% of GDP). The gross domestic product (GDP) in Bosnia and Herzegovina was 23.37 billion US dollars in 2021, according to official data from the World Bank. The GDP value of BiH represents 0.01 percent of the world economy. The economy of BiH expanded by 2.6 percent in the 2022. BiH, through strategic documents, strives to improve competitiveness national economy, digitalization and a better social environment in line with global and European policies. However, the ways and the period for achieving these goals are not yet sufficiently harmonized and synchronized with each other (Işık et al., 2023; Džafić, et al., 2018).

Bosnia and Herzegovina is on an path from a middle-to high-income country while achieving greater social harmony. On this path, it is also committed to full integration into the European Union, which seeks to become the most dynamic and competitive, knowledge-based economy in the world, and to place itself at the center of the globalized world without remaining sideways to it (Džafić et al., 2018). Based on the current situation and respecting the element of the Lisbon strategy, BiH development policies focus on strengthening the role of knowledge and innovation, completing the internal market and strengthening growth and employment for greater social coherence. By doing so, they contribute to improving competitiveness, i.e., fulfilling the economic conditions for becoming a member of the EU society and better positioning themselves globally. BiH is now a partner in the stabilization and association agreement. At the heart of the consensus is the recognition of three dimensions: environmental, economic and social, which must be viewed with equal consideration in local, regional and national sustainable development strategies as well as international agreements reached under global governance to achieve sustainable development. The fourth strategic goal of the development strategy is sustainable development (Tatić et al., 2006).

### 4. Establishing functional institutional capacity for agriculture and Rural Development

Insufficient institutional building, lack of accredited laboratories and low level of professional education is a group of weaknesses that are listed in the SWOT analysis and have a common denominator in the non-existent or existing but unenforceable institutional infrastructure that poses serious obstacles to the normal functioning of the sector. The problem is that there is a general lack of institutional capacity for development in BiH. The lack of institutional support at all levels has continuously undermined the competitiveness of the agricultural and food sectors, resulting in a constantly increasing trade deficit in foreign trade in primary and processed agricultural products. The establishment of functional and responsible institutional capacity for agriculture and rural development would certainly lead to the improvement of this situation (Džafić, 2014). The lack of effective management and intuitively supported structures, combined with inadequate staff in key functions, hinders the competitiveness of the agri-food sector in BiH. The measures of the priority area will strengthen the general coordination of capacities at the state level and enable gradual harmonization of the policy and support measures needed to meet the conditions for membership in the EU and the WTO.

#### 4.1. The improvement of competitiveness fully takes into account the economic structure of BiH, in which agriculture and forestry and land.

Due to the poor economic and social situation, farms are not able to provide sufficient resources to modernize production on their own. Production is also less efficient and human resources are less used. With better equipment and modern machinery, it is possible to raise the level of production technology and significantly better manage production costs through a combination of production factors on the farm and manage the quality of the product that is directly dependent on the time needed to perform certain work operations. Small and medium-sized farms are the main obstacles to improving the competitiveness of agricultural production. In addition, knowledge of the characteristics of land profiles and agroclimatic characteristics of the territory would enable a more systematic approach in the planning of agricultural production. To achieve this, it is necessary to develop a project of digitalization of the Land Information System. Many existing processing capacities, in addition to providing the raw material base, require significant investments in the renewal and modernization of production technology and marketing. Several processing capacities must comply with EU standards when it comes to food quality and safety (Džafić, 2015). Processing capacities represent a significant potential for employment of labor force in rural area and development of small and medium-sized entrepreneurship. One of the main weaknesses of the agricultural sector is characterized by an unorganized market of agricultural products, a purchase system, a small volume of production and an unprotected position of agricultural producers in the face of competition.

#### **4.2. Using renewable and non-renewable natural resources to ensure sustainable development**

Renewable and non-renewable resources should be used in such a way that the total capital of the company is increased. By using renewable natural resources, natural capital is not reduced, and created capital (public and private) is increased, people are employed, and the quality of life is increased. The use of non-renewable resources consumes natural capital (e.g., available mineral wealth), but the created social capital would have to provide the preconditions for sustainable development –even when non-renewable resources are exhausted. So, before exhaustion, a replacement must be provided. Resources that are not used are worthless –this in fact shows the inability of the community to design its own development and take appropriate measures to make optimal use of all available resources. The measure is necessary in order to eliminate the identified weaknesses and non-harmonized work of all institutions at the level of BiH, entities, FBiH cantons and municipalities. Due to underdeveloped and weak capacities, as well as corruption, both domestic and foreign investors are discouraged for any ventures aimed at using renewable and non-renewable natural resources. Examples are numerous, so BiH is among the last in the world by many parameters, e.g., by using hydropower potential, irrigation of agricultural areas for the production of high-quality food, etc. The laws on concessions in the field of the use of natural resources and renewable energy sources are mostly applied without developed strategic documents, plans and programs, but this is discussed in more detail in the “improvement of skills in the labor market, vocational education and training” most often responds to the own-initiative offers of investors, and most often intermediaries, or tenders are announced completely unprepared.

#### **4.3. Meeting and increasing the mobility of goods and people, and contributing to overall sustainable social and economic development**

It is necessary to increase the performance of the work in terms of better planning of project implementation, more efficient work and significantly increase the results of road construction. Reforms, which are often a condition of the use of financial resources, met in time with the preparation of projects, especially in the railway sector. In determining the priorities for reconstruction and modernization, the degree of greater economic and financial cost-effectiveness and the resolution of transport problems, such as the use of river and rail transport, which are currently very neglected. Mobile capacities in some modes of transport, such as rail, air and water transport are in very poor quality and capacity. It is necessary to increase the capacity and modernize the mobile capacity. Some arrangements have already been made, such as leasing and recapitalization in air transport, and contracted tilting trains. The regional agreement on the joint development of the basic transport network of Bosnia and Herzegovina wide range of standards and directives. Establishing a transport community between the EU and the countries of Southeast Europe, which is under way, will increase BiH's obligations in this regard. All current agreements primarily require regional cooperation and joint development of transport, where BiH must not lag, because joint development and cooperation in time mean mutual competition. Existing transport does not meet the social and economic needs as it does in developed European countries, and therefore great efforts are needed to increase the functionality and cost-effectiveness of transport.

#### **5. Conclusion and policy recommendations:**

A linear economy, one that has dominated for more than two centuries, based on representatives of classical political economy (Smith, Ricardo, Petty) until recently rested on faith in the unlimited resources and environment, and was unaware of its environmental impact. It took a kind of crisis, resource depletion and climate change to finally understand and acknowledge the inefficiency and baselessness of the existing management model. The solution to these problems is the circular economy. The European Union has taken on the task of a complete exit from the linear, and transition to a new economy. The circular economy not only seeks to recover resources, but it is also fully in line with nature. Nonetheless to succeed, it needs the common strengths of all people, as well as the activities of policymakers, industries, and citizens. She is more and more aware of her potential, and her the effectiveness is confirmed by numerous examples from practice. In the near future, BiH, also as a future member of the EU, will have to transition to a circular economy.

Unfortunately, there is still not enough talk about the circular economy at the BiH level. Therefore, education and awareness of citizens will be the main prerequisite for the transition to the new economy, as well as investments. In addition to the lack of understanding circular economy, there is also the problem of waste, i.e., non-recognition of waste as a valuable resource, which is the main and first setting of the circular economy. However, in BiH, certain regulations, laws and strategies are adopted, as well as new policies in accordance with the principles of the circular economy that will enable economic growth and development.

The basic recommendation for the creators of economic policies is that key changes should be accompanied by strong support from the authorities through defined work priorities, taking into account the adoption of strategic documents related to the promotion of the circular economy. In the transition period, it will be necessary to redefine priorities, introduce legal norms in BiH harmonized with EU norms. It is necessary to actively monitor regulations from the EU policy area in the context of CE, and especially focus on the activities of EU policies regarding the coherent framework of production policies and their contribution to CE. Also, it is important to monitor the use of the best available techniques in the context of CE, and to actively raise the capacities of the BiH economy for the transition to the CE model.



**Data availability:** Not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.

**Compliance with ethical standards**

**Competing interests:** The authors declare that they have no competing interests.

**Ethics approval and consent to participate:** Not applicable.

**Consent for publication:** Not applicable.

**Funding:** Not applicable.

## References

- Arruda, E.H. (2021). Circular economy: A brief literature review (2015–2020), *Sustainable Operations Computers* 2, 79-86
- Beveridge, R., and S. Guy (2005) The Rise of the Eco-preneur and the Messy World of Env. *Innovation, Local Environment* 10.6: 665-76
- Bringezeu, S., Ramaswami, A., Schandl, H. and al (2017). Assessing global resource use: a system approach to resource efficiency and pollution reduction.
- Džafić, Z. and Omerbašić, A., (2018a). Innovativeness in Bosnian small and medium sized Enterprises. *Economic Review Journal of Economics and Business*, 16 (1), 7-22.
- Džafić, Z. and i Šišić Topalović, A. (2018b). The influence of the business environment on the microeconomic competitiveness of the dairy industry in Bosnia and Herzegovina. *Ekonomski vjesnik*, 31 (2), 305-318 <https://hrcak.srce.hr/214410>.
- Džafić, Z. (2015a). Entrepreneurship and SMEs in transition economies - the case of Western Balkan Countries, REDETE, Conference proceedings of the Fourth International Conference: Economic Development And Entrepreneurship In Transition Economies: Assessment of the last 25 years, going beyond the `transition` , Karl-Franzens-Universität Graz, Faculty of Economics Banja Luka, Graz Austria, 481-497, ([http://www.redete.org/doc/Fourth-REDETE-Conference\\_web.pdf](http://www.redete.org/doc/Fourth-REDETE-Conference_web.pdf)).
- Džafić, Z. (2015b). Patterns of growth and development of the BiH economy – Small and Medium versus Large companies, Third International conference, FINCONSULT, *Fojnica*, Proceedings, 462-484.
- Džafić, Z. (2014). Business environment – The Case of Western Balkan countries, *Economic Review J. of Economics and Business*, Vol. 12 (2).
- European Commission (2022). Measuring Progress towards Circular Economy in the European Union—Key Indicators for a Monitoring Framework. [ec.europa.eu/https://ec.europa.eu/environment/circular-economy/pdf/new\\_circular\\_economy\\_action\\_plan.pdf](https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf)
- Hart, J. (2006). The New Capitalists: Is it Possible to Make Moey and Really Make a Difference?, *Utne* 135, 39-43.
- Işık, C., Simionescu, M., Ongan, S., Radulescu, M., Yousaf, Z., Rehman, A., ... & Ahmad, M. (2023). Renewable energy, economic freedom and economic policy uncertainty: New evidence from a dynamic panel threshold analysis for the G-7 and BRIC countries. *Stochastic Environmental Research and Risk Assessment*, 1-16. <https://doi.org/10.1007/s00477-023-02452-x>
- Kamberović, S and al (2020). Gap analiza mogućnosti za ekonomsko jačanje primenom održivih poslovnih modela nakon pandemije covid-19 u Republici Srbiji, *Misija OEBS-a u Srbiji*, 75
- Kirchherr, J., Reike, D. and Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resour. Conserv. Recycl.* 221-232.
- Lacy, P. and Rutqvist, J. (2015). The Roots of the Circular Economy, In *Waste to Wealth*; Palgrave Macmillan London, UK, 19–23.
- Parrish, B.D. (2006). Beyond Cleaner Production Entrepreneurship and the Design of Sustainable Enterprise, *International Conference on Green and Sustainable Innovation*, Chiang Mai, Thailand, 237.
- Stefan W., (2015). Planetary boundaries: guiding human development on a changing planet, 347, 223, <https://science.sciencemag.org/content/347/6223/125985>
- Tatić, K., Džafić, Z., Haračić, M. and Haračić, M., (2020). The benefits of using cloud technology in Bosnia and Herzegovina, *Journal of Ekonomi* 04, 91–97, <https://dergipark.org.tr/ekonomi>.
- Tatić, K., Rovčanin, A. and Džafić, Z., (2006). Globalization, Competitiveness and Environment, *Economic research, Faculty of Economics and Tourism*, Pula, 19 (2), 29-40, <https://hrcak.srce.hr>.
- Tilley, F. (2007). Conceptualising Sustainability Entrepreneurship, *First World Symposium on Sustainable Entrepreneurship*, University of Leeds, UK.
- Topliceanu, L. (2023). Analysis Regarding the Implementation of the Circular Economy in Romania, *Sustainability*, 15 (1), 333, *Basel, Switzerland*.



Zijad Džafić (ORCID ID: [0000-0002-1567-891X](https://orcid.org/0000-0002-1567-891X)) is an Full Professor of Economics at the Faculty of Economics, University of Tuzla, Bosnia and Herzegovina, scientific field of Economic theory and policy. He received his B.A., M.A. and Ph.D. from University of Tuzla. Also, he had specialised economics at University of Bologna, Italy in period from June 1996 to July 1997. Core competences he gained during involvement in twenty four research and development programs comprise: Microeconomics, Entrepreneurs Economics, Industrial SMEs, Entrepreneurship and Sustainable Development. He have published numerous scientific papers (more than 60) and books (4) in the field of economics and entrepreneurship and was involved in few projects focused on SMEs and Entrepreneurship and in few projects focused on curriculum development and implementation of Bologna declaration. He was a Chief of the Department of Economics theory and politics and vice dean for research. He was involved in project: Entrepreneurship – Faculty Development Program – (organized by SEED, Southeast Europe Enterprise Development), Sarajevo. So far he has taught at many universities such as University of Pech, Hungary, University of Igdir, Pamukale University, Mehmedbey Karamanoglu University, Turkey, University of Graz, Austria through the Erasmus program.



Admir Omerbašić (ORCID ID: [0009-0008-3388-0709](https://orcid.org/0009-0008-3388-0709)) completed his bachelor's, master's degrees and Ph.D from the University of University of Tuzla, Bosnia and Herzegovina. His Ph.D. is entitled "Innovation as a function of microeconomic competitiveness of Small and Medium-sized Enterprises in BiH". Currently, he is working as a director of Tax Administration of Tuzla Cantom in BiH. His research interests are microeconomics and international economics.