

University Business Academy in Novi Sad
Faculty of Applied Management, Economy and Finance Belgrade



MEFKON

INNOVATION AS AN INITIATOR OF THE DEVELOPMENT
"INNOVATIONS – DEVELOPMENT PROSPECTS"

International Thematic Monograph – Thematic Proceedings

I N N O V A T I O N S



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University Business Academy in Novi Sad
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FOREWORD

In contemporary society, the notions of “innovation” and “innovating” have become very significant, that being so to an extent that, in the majority of the missions and visions of contemporary companies, the use of this word has become mandatory. From a broader perspective, too, however, the essence of all developmental changes mainly reflects in innovativeness. Innovations are all around us. The fact that innovations are, to such an extent, present in the overall field of the human activity imposes the need for innovativeness to become the introductory point in carrying out the analysis of the complexity of the newly-emerging economy, society and culture, also including an individual. This process is further implicative of the unavoidable consideration of the innovation-development feedback. Thence exactly arises the driving motive for the Faculty of Applied Management, Economics and Finance in Belgrade to deal with the foregoing, together with the co-organizers, at the Fifth International Scientific-Professional Conference, entitled “Innovation as an initiator of the development”.

This international scientific conference is traditionally organized with the aim of demonstrating that innovation is not only a part of an enterprise’s business strategy, but also drives economic wellbeing and influences the progress of one whole country.

Suitably to the theme and the goal of the scientific conference, the two sessions are established: Session 1 – Innovations – development prospects (Thematic Proceedings), and Session 2 – Innovative activities – contemporary challenges and solutions (International Conference Proceedings). The choice of the conference theme and the omnipresence of innovations, as well as the offered larger number of the thematic fields, have influenced the inclusion of the papers by many distinguished university professors, eminent researchers, experts and scientific workers both from Serbia and from abroad in this publication.

As a result of the Conference, the *Thematic Proceedings* are published in one volume and the same will be available to a wider scientific audience. The papers in this publication significantly contribute to the establishment of an inextricable liaison between innovations and development. Simultaneously, we have demonstrated that the field of innovations is definitely no longer only related to technical-technological progress. In

accordance with that, the papers may also be beneficial to both the scientific and the professional public and to all those interested in the impact of innovations on development.

Belgrade,
December, 2019

Editors
Darjan Karabašević, PhD
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AN MCDM ASSESSMENT OF ACHIEVING THE 12TH GOAL OF THE 2030 AGENDA

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Abstract: The responsible consumption of natural resources has become a critical issue because the unrenovable resource base could be exhausted in future decades. In order of enabling sustainable development, the General Assembly adopted the *2030 Agenda for Sustainable Development* that involves 17 Sustainable Development Goals (SDG) and 169 targets pointed to the different aspects of production and living. In this paper, we try to discover how far get the countries in Southern Europe regarding the 12th SDG – *Responsible consumption and production*. The assessment of the progress of the given countries is performed relative to the five indicators. The Entropy method is used for the determination of the criteria significance while the final ranking of the countries is done by application of the EDAS method.

Keywords: 2030 Agenda, 12th SDG, Entropy, EDAS, Southern Europe, natural resources, consumption

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1. INTRODUCTION

Industrial development has led to increased consumption of natural resources. Especially endangered are unrenovable natural resources because industrial production is mainly based on its utilization. Besides, the pressure on the environment grows which results in its serious damage and climate changes. The problem of unplanned and exaggerated consumption of natural resources that jeopardize future production, as well as the existence of humans, become an important topic in international debates. People, their activities and choices could seriously affect, positively or negatively, the environment and could contribute or hinder the achieving of sustainable development in all aspects (Jackson, 2014). Although, there could be noted the increasing interest of the researchers for the questions about sustainability (Dobrovolskienė *et al.*, 2019).

In order of achieving the sustainable development, the General Assembly accepted the *2030 Agenda for Sustainable Development* (in further text denoted as 2030 Agenda) which is directed to the improvement of the state of the planet and bringing the well-being to the people, especially in undeveloped parts of the world (<https://www.un.org/development/desa/disabilities/envision2030.html>). This Agenda contains 17 Sustainable Development Goals (SDG) directed to the different fields connected to sustainable development. Each of the SDGs involves the appropriate number of targets and indicators which enables monitoring of accomplishment in the process of achieving a certain goal. The *12th SDG* named *Responsible consumption and production* is particularly important regarding achieving a higher level of responsible using of the resources.

The application of the 2030 Agenda requires the overcoming of various policy and scientific obstacles (Terama *et al.*, 2016). The existence of the quantitative targets ensures a possibility for resolving these issues and increasing the ability of the action plans to achieve the decoupling of resource use and economic growth (Nash, 2009). The policy-makers need quantitative indicators that will help them in making guidelines for national industries pointed to the responsible consumption. With that aim, Wagner and Wellmer (2009) proposed a four-level hierarchy of natural resources as a base for the development of a resource efficiency indicator. Bringezu *et al.* (2016) concluded that sustainable natural resource consumption requires an appropriate government and management that relies on the scientific indicators and peace of information.

The SDGs are defined from the global aspect but which of them will be a priority in a particular country depends on the problems that the country is faced with (Salvia *et al.*, 2019). Although the 169 targets support the 17 goals, some of the targets are still ambiguous and complex for measuring (Biermann *et al.*, 2017). Therefore, Hoekstra *et al.* (2017) proposed the IPAT equation as an aid in the monitoring of the progress towards 6th SDG. Collste *et al.* (2017) developed an iSDG model to provide a real representation of real-world development. Pogge and Sengupta (2016) assessed the SDGs from the perspective of human rights. In order of the progress assessment regarding certain goals, the SDG composite index is introduced and Diaz - Sarachaga *et al.* (2018) elaborated in their paper does this index is a representative measure of improvement in achieving the SDGs. Besides the mentioned, remains the question of how we will measure our progress towards SDGs relative to the other countries easily and comprehensively. With that aim, in this paper, we proposed the application of the Multiple-Criteria Decision-Making (MCDM).

MCDM represents a part of the operational research and management science which methods gain significant popularity in the last three decades (Popovic *et al.*, 2019). The authors developed many MCDM methods which are used for

resolving various real-world decision-making problems. An adequate overview of the MCDM methods could be found in the paper of Zavadskas *et al.* (2014) and Gavade (2014). By introducing the proper extensions of the MCDM methods the uncertainty and vagueness of the environment are acknowledged and involved in the decision-making process (for example Stanujkić & Meidutė-Kavaliauskienė, 2018; Liao *et al.*, 2018).

The main intention of this paper is to give the rank of the countries from Southern Europe relative to the 12th SDG - *Responsible consumption and production* and for that purpose, the Entropy and EDAS methods are used. The reason for evaluating the countries from this part of Europe is because the Republic of Serbia is situated there. It is a signatory of every significant convention pointed to the achieving of the sustainable development and preservation of the environment and natural resources and we want to define its position towards achieving the 12th SDG four years after introducing the 2030 Agenda. The mentioned MCDM methods represent a useful aid in this evaluation process which enables achieving the primary goal: defining the position of the Republic of Serbia amongst the other countries from Southern Europe in an easy and comprehensive way. With that aim the rest of the paper is organized as follows: in section 2 the used methodology is explained; the case study is presented in section 3; and at the end the conclusion is given.

2. METHODOLOGY

The problem of defining the rank of the Southern Europe countries relative to the 12th SDG will be resolved by applying the Entropy and EDAS methods, as we stated previously. The Entropy method will be used for defining the significance of the considered criteria, while the EDAS method will be used for the final assessment and ranking. In the further text, both methods will be explained in detail.

2.1. Entropy method

Shannon (1948, 1964) proposed the Entropy method, which quickly becomes very popular and widely used in various fields because of its simplicity and reliability. Besides the other MCDM methods popular for determination of the criteria weights such as: Analytic Hierarchy Process - AHP (Saaty, 1980), Step-wise Weight Assessment Ratio Analysis - SWARA (Keršuliene *et al.*, 2010) and Pivot Pairwise Relative Criteria Importance Assessment - PIPRECIA (Stanujkić *et al.*, 2017), authors applied the Entropy method as well (Wang & Lee, 2009; Gou *et al.*, 2017). Defining the criteria significance is performed by using the following Equation:

$$w_j = \frac{1 - e_j}{\sum_{j=1}^n (1 - e_j)}, \quad (1)$$

where $j = 1, \dots, n$.

The output entropy e_j of the j_{th} factor is calculated as:

$$e_j = -\frac{1}{\ln(m)} \sum_{j=1}^n r_{ij} \ln(r_{ij}), \quad (2)$$

where $j = 1, \dots, n$.

The total sum of the obtained criteria weights should satisfy the term: $\sum_{j=1}^n w_j = 1$.

2.2. EDAS method

The Evaluation Based on Distance from Average Solution - EDAS is introduced by Keshavarz Ghorabae *et al.* (2015), and represents a relatively novel MCDM technique. The guiding idea of the EDAS is reflected through the introducing of two distance measures: the Positive Distance from Average (PDA) and Negative Distance from Average (NDA). Additionally, the assessment of the alternatives is performed relative to higher values of the PDA and lower values of the NDA.

Until now, the EDAS method is used for the facilitation of the decision-making process in various fields. For example, Karabasevic *et al.* (2018) used it in the case of personnel selection in the IT industry. This method was, also, useful in creating the model for the selection of the adequate architectural shapes of residential houses for single-families (Juodagalvienė *et al.*, 2017). Recently, the authors have developed the extensions of the EDAS method to appreciate the vagueness of the environment to a greater extent. These extensions are used in the evaluation process in different fields and we will mention some of them. The selection of the site for disposal of the solid waste is performed by applying the intuitionistic fuzzy EDAS (Kahraman *et al.*, 2017). Stanujkic *et al.* (2017) proposed the extension of the EDAS method by involving the interval grey numbers. Kutlu Gündoğdu *et al.* (2018) applied a fuzzy EDAS method in the hospital selection while Karaşan *et al.* (2019) assessed the social responsibility projects by using the interval-valued neutrosophic EDAS technique.

For the purpose of this paper, we will apply the EDAS method that is based on the using of crisp numbers. The computational procedure of the EDAS method, that relies on that one presented in the paper of Karabasevic *et al.* (2018), can be precisely presented as follows:

Step 1. First perform the selection of the available alternatives, the evaluation criteria and form the decision-making matrix X , shown as follows:

$$X = \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{12} & x_{22} & \dots & x_{2n} \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot \\ x_{1n} & x_{2n} & \dots & x_{mn} \end{bmatrix} \quad (3)$$

where x_{ij} represents the performance rating of the alternative i on the criterion j .

Step 2. Define the average solution according to all criteria, shown as follows:

$$x_j^* = (x_1, x_2, \dots, x_n), \quad (4)$$

where

$$x_j^* = \frac{\sum_{i=1}^m x_{ij}}{m}. \quad (5)$$

Step 3. Compute the positive distance from average d_{ij}^+ and the negative distance from average d_{ij}^- , according to the type of criteria (benefit and cost), in the following way:

$$d_{ij}^+ = \begin{cases} \frac{\max(0, (x_{ij} - x_j^*))}{x_j^*}; & j \in \Omega_{\max} \\ \frac{\max(0, (x_j^* - x_{ij}))}{x_j^*}; & j \in \Omega_{\min} \end{cases}, \quad (6)$$

$$d_{ij}^- = \begin{cases} \frac{\max(0, (x_j^* - x_{ij}))}{x_j^*}; & j \in \Omega_{\max} \\ \frac{\max(0, (x_{ij} - x_j^*))}{x_j^*}; & j \in \Omega_{\min} \end{cases}, \quad (7)$$

where Ω_{\max} and Ω_{\min} denotes the set of the benefit criteria and the cost criteria, respectively.

Step 4. Determine the weighted sum of PDA, Q_i^+ , and the weighted sum of NDA, Q_i^- , for all alternatives, by using the following Eqs.:

$$Q_i^+ = \sum_{j=1}^n w_j d_{ij}^+, \quad (8)$$

$$Q_i^- = \sum_{j=1}^n w_j d_{ij}^-. \quad (9)$$

Step 5. Normalize the values of the weighted sum of the PDA and the weighted sum of the NDA for all alternatives, as follows:

$$S_i^+ = \frac{Q_i^+}{\max_i Q_i^+}, \quad (10)$$

$$S_i^- = 1 - \frac{Q_i^-}{\max_i Q_i^-}, \quad (11)$$

where S_i^+ and S_i^- denote the normalized weighted sum of the PDA and the NDA, respectively.

Step 6. Calculate the appraisal score S_i for all alternatives, as follows:

$$S_i = \frac{1}{2}(S_i^+ + S_i^-). \quad (12)$$

Step 7. The alternatives should be ranked according to the decreasing values of the appraisal score. The alternative with the highest S_i is the best choice among the considered alternatives.

3. A CASE STUDY

3.1. Data

The crucial intention of the Agenda 2030 that was adopted by all United Nations Member States in 2015 is to ensure the continual improvement of the conditions on the planet in the next fifteen years. The main targets are: decreasing the inequality, improve the health and education, enhance the economic growth and all that with preservation of the environment and natural resources (<https://sustainabledevelopment.un.org/sdgs>). All these intentions are summarized in the 17 goals that are represented in **Table 1**.

Table 1. 17 SDGs

Goal number	Name
1	No poverty
2	Zero hunger
3	Good health and well-being
4	Quality education
5	Gender equality
6	Clean water and sanitation
7	Affordable and clean energy
8	Decent work and economic growth
9	Industry, innovation, and infrastructure
10	Reduced inequality
11	Sustainable cities and communities
12	Responsible consumption and production
13	Climate action
14	Life below water
15	Life on land
16	Peace and justice strong institutions
17	Partnerships to achieve the goal

Source: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

As **Table 1** shows each goal treats a particular problem that the modern world is facing. But, the common denominator of them all is that they are pointed to the preservation and enhancement of the conditions under which people live. In order of adopting the mentioned list of goals countries worldwide conducted activities relative to the prioritization of given goals regarding their particular problems. For example, the Republic of Serbia performed the mapping of the strategic framework connected to the goals of sustainable development in the 2030 Agenda (<https://rsjp.gov.rs/wp-content/uploads/2017/11/Agenda-UN-2030.pdf>).

As we stated previously, each goal is elaborated in the set of appropriate targets. In order of monitoring the improvement towards the mentioned goals and targets, a set of indicators is developed. **Table 2** shows the indicators for 12th SDG and the targets are omitted because of the length of the paper.

Table 2. Indicators of the 12th SDG

Number	Indicator
12.1.1	Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies
12.2.1	Material footprint, material footprint per capita, and material footprint per GDP
12.2.2	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
12.3.1	(a) Food loss index and (b) food waste index
12.4.1	Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting the information as required by each relevant agreement
12.4.2	Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment
12.5.1	National recycling rate, tons of material recycled
12.6.1	Number of companies publishing sustainability reports
12.7.1	Number of countries implementing sustainable public procurement policies and action plans
12.8.1	The extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; (d) student assessment
12.a.1	Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies
12.b.1	Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools
12.c.1	Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels

Source: <https://unstats.un.org/sdgs/indicators/indicators-list/>

Only for the marked indicators exist the data and for that reason only they will be involved in further analysis.

3.2. Application of the proposed methodology

Table 3 presents the input data for the countries from Southern Europe without Andorra because for that country we could not find the complete data. The evaluation procedure will be based on the 5 indicators because the information connected to the others is not currently available.

Table 3. *12th SDG selected indicators for the countries from Southern Europe excluding Andorra for 2010*

		C_1	C_2	C_3	C_4	C_5
		Material footprint per capita	Material footprint per unit of GDP	Domestic material consumption per capita	Domestic material consumption per unit of GDP	International agreements on hazardous waste
		tonne/per capita	kg/US\$	tonnes per person per year	kg/US\$	number of agreements
		min	min	min	min	max
A_1	Albania	8.25	2.49	8.26	2.5	4
A_2	Bosnia and Herzegovina	7.52	2.23	7.9	2.4	4
A_3	Croatia	12.97	1.21	9.66	0.9	4
A_4	Greece	28.43	1.3	14.43	0.66	4
A_5	Italy	19.18	0.64	10.93	0.36	4
A_6	Malta	19.82	1.19	12.74	0.77	4
A_7	Montenegro	21.61	4.78	4.37	0.97	4
A_8	Portugal	22	1.15	18.24	0.95	4
A_9	San Marino	104.52	1.76	10.32	0.17	1
A_{10}	Serbia	14.36	4.63	10.69	3.45	4
A_{11}	Slovenia	22.49	1.17	16.76	0.87	4
A_{12}	Spain	23.28	0.88	13.14	0.5	4
A_{13}	Northern Macedonia	10.37	2.86	8.53	2.36	4

Source: <https://sdg-tracker.org/sustainable-consumption-production>

We determined the weights of criteria by applying the Entropy method. The results are obtained by using Eqs. (1) and (2) and they are presented in **Table 4**.

Table 4. *The criteria weights*

Criteria	w_j
C_1	0.3707
C_2	0.2156
C_3	0.0636
C_4	0.3138
C_5	0.0364

Source: Author's calculations

The obtained result shows that the greatest significance has the criterion C_1 - *Material footprint per capita* while the least significant is criterion C_5 - *International agreements on hazardous waste*.

After that, the positive distance from the average and negative distance from the average are calculated by applying the Eqs, (6) and (7). In **Table 5** the results for the positive distance from the average are presented.

Table 5. *The positive distance from the average - d_{ij}^+*

	C_1	C_2	C_3	C_4	C_5
A_1	0.6593	0.0000	0.2644	0.0000	0.0612
A_2	0.6895	0.0000	0.2964	0.0000	0.0612
A_3	0.4644	0.4017	0.1397	0.3060	0.0612
A_4	0.0000	0.3572	0.0000	0.4911	0.0612
A_5	0.2079	0.6835	0.0266	0.7224	0.0612
A_6	0.1815	0.4116	0.0000	0.4063	0.0612
A_7	0.1076	0.0000	0.6108	0.2521	0.0612
A_8	0.0915	0.4313	0.0000	0.2675	0.0612
A_9	0.0000	0.1297	0.0809	0.8689	0.0000
A_{10}	0.4070	0.0000	0.0480	0.0000	0.0612
A_{11}	0.0713	0.4215	0.0000	0.3292	0.0612
A_{12}	0.0386	0.5649	0.0000	0.6145	0.0612
A_{13}	0.5718	0.0000	0.2403	0.0000	0.0612

Source: Author's calculations

Table 6 represents the results for the negative distance from the average.

Table 6. *The negative distance from the average - d_{ij}^-*

	C_1	C_2	C_3	C_4	C_5
A_1	0.0000	0.2313	0.0000	0.9276	0.0000
A_2	0.0000	0.1027	0.0000	0.8505	0.0000
A_3	0.0000	0.0000	0.0000	0.0000	0.0000
A_4	0.1740	0.0000	0.2851	0.0000	0.0000
A_5	0.0000	0.0000	0.0000	0.0000	0.0000
A_6	0.0000	0.0000	0.1346	0.0000	0.0000
A_7	0.0000	1.3636	0.0000	0.0000	0.0000
A_8	0.0000	0.0000	0.6244	0.0000	0.0000
A_9	3.3163	0.0000	0.0000	0.0000	0.7347
A_{10}	0.0000	1.2895	0.0000	1.6601	0.0000
A_{11}	0.0000	0.0000	0.4926	0.0000	0.0000
A_{12}	0.0000	0.0000	0.1702	0.0000	0.0000
A_{13}	0.0000	0.4142	0.0000	0.8197	0.0000

Source: Author's calculations

Eqs. (8) and (9) are applied for computation of the weighted sums of PDA and NDA for considered alternatives. Then, the normalized weighted sum of the PDA and NDA are obtained by using Eqs. (10) and (11). Finally, the appraisal scores S_i is obtained by using Eq. (12) (**Table 7**).

Table 7. *The weighted and the normalized weighted sums of PDA and NDA*

	Q_i^+	Q_i^-	S_i^+	S_i^-	S_i
A_1	0.2634	0.0485	0.5789	0.9322	0.7556
A_2	0.2766	0.0375	0.6080	0.9475	0.7778
A_3	0.3659	0.0000	0.8041	1.0000	0.9020
A_4	0.2333	0.1270	0.5128	0.8224	0.6676
A_5	0.4550	0.0000	1.0000	1.0000	1.0000
A_6	0.2857	0.0422	0.6279	0.9409	0.7844
A_7	0.1600	0.0867	0.3517	0.8788	0.6152
A_8	0.2131	0.1959	0.4682	0.7260	0.5971
A_9	0.3057	0.7149	0.6719	0.0000	0.3360
A_{10}	0.1561	0.1424	0.3431	0.8008	0.5720
A_{11}	0.2228	0.1546	0.4896	0.7838	0.6367
A_{12}	0.3311	0.0534	0.7277	0.9253	0.8265
A_{13}	0.2294	0.0562	0.5043	0.9214	0.7128

Source: Author's calculations

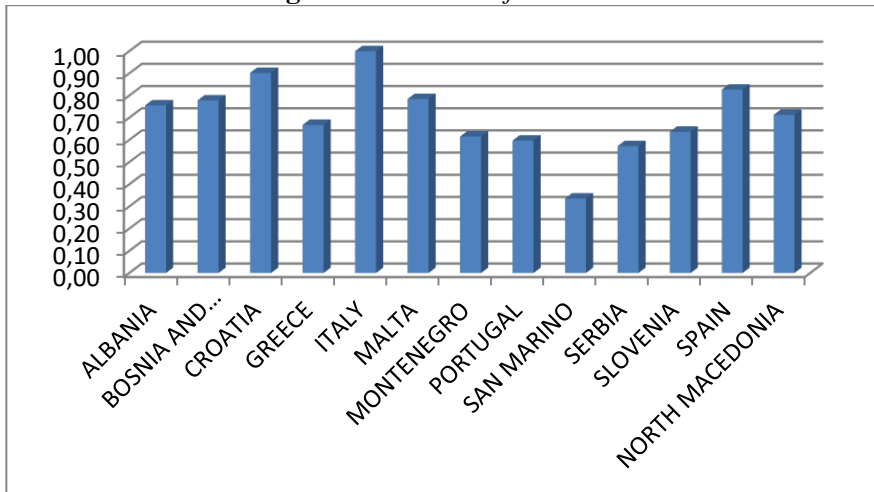
The overall ranking order of the considered countries is presented in **Table 8** and depicted in **Figure 1**.

Table 8. *The final rank of countries*

Country	S_i	Rank
A_1	0.7556	6
A_2	0.7778	5
A_3	0.9020	2
A_4	0.6676	8
A_5	1.0000	1
A_6	0.7844	4
A_7	0.6152	10
A_8	0.5971	11
A_9	0.3360	13
A_{10}	0.5720	12
A_{11}	0.6367	9
A_{12}	0.8265	3
A_{13}	0.7128	7

Source: Author's calculations

Figure 1. *The rank of countries*



Source: Author's calculations

Obtained results show that the most successful country regarding the achieving of the 12th SDG is Italy while in the last place is San Marino.

CONCLUSION

Sustainability issues have come in the center of the interest of the scientists and governments, recently. This results in the creating of many strategies and agendas pointed towards achieving sustainable development in many aspects and in 2015 General Assembly adopted the *2030 Agenda for Sustainable Development*. This 2030 Agenda contains 17 crucial goals and each of them is elaborated in a particular number of targets. In order of enabling the monitoring of progress towards given goals and targets, the set of indicators relative to each goal is formed. Unfortunately, some of the indicators are still unavailable because the data about them is still not gathered.

The very intriguing question is how to measure the progress of a country in comparison with other countries in an easy way. In order of achieving that in this paper we proposed an MCDM approach based on the application of the Entropy and EDAS methods. Entropy is used for determining the significance of the evaluation criteria and the key reason for that is reflected through its objectiveness because it does not depend on the standpoint of a decision-maker. The final assessment of the considered countries and their ranking is performed by applying the EDAS method. Even though the EDAS method has been recently proposed, it is used for the facilitation of the decision-making process in various fields and we considered that it will be convenient for applying in our case, too.

Our research attention was point to the assessment of the progress of the countries from Southern Europe towards the 12th SDG goal. Particularly, we want to examine the position of the Republic of Serbia, which is classified as a country in Southern Europe, relative to the responsible production and consumption of natural resources. The final results show that the leading country according to achieving this goal is Italy, while the last place takes San Marino. Unfortunately, the Republic of Serbia is on the twelve position which is the penultimate place. This indicates that the Republic of Serbia should invest a lot of effort towards riching the considered goal.

The proposed methodology enabled a successful ranking of the considered countries in an easy way and show full potential in this case. The main shortage of this paper is that the procedure is based on the application of the crisp numbers. Introduction of the fuzzy, grey or neutrosophic numbers will provide the involving of the uncertainty and vagueness of the environment in the proper degree. Besides, the more complete picture of the achievements of the countries would be obtained in the case when we have the data about the greater number of indicators relative to a certain goal. Also, ranking based on the assessment of the achievement of all 17 goals will more clearly indicate which country has better results connected to a certain goal, and which has the best performance of all.

REFERENCES

- Biermann, F., Kanie, N., & Kim, R. E. (2017). Global governance by goal-setting: the novel approach of the UN Sustainable Development Goals. *Current Opinion in Environmental Sustainability*, 26, 26-31.
- Bringezu, S., Potočník, J., Schandl, H., Lu, Y., Ramaswami, A., Swilling, M., & Suh, S. (2016). Multi-scale governance of sustainable natural resource use—challenges and opportunities for monitoring and institutional development at the national and global levels. *Sustainability*, 8(8), 778.
- Collste, D., Pedercini, M., & Cornell, S. E. (2017). Policy coherence to achieve the SDGs: using integrated simulation models to assess effective policies. *Sustainability Science*, 12(6), 921-931.
- Diaz - Sarachaga, J. M., Jato - Espino, D., & Castro - Fresno, D. (2018). Is the Sustainable Development Goals (SDG) index an adequate framework to measure the progress of the 2030 Agenda?. *Sustainable Development*, 26(6), 663-671.
- Dobrovolskienė, N., Tamošiūnienė, R., Banaitis, A., Ferreira, F. A., Banaitienė, N., Taujanskaitė, K., & Meidutė-Kavaliauskienė, I. (2019). Developing a composite sustainability index for real estate projects using multiple criteria decision making. *Operational Research*, 19(3), 617-635.
- Gavade, R. K. (2014). Multi-Criteria Decision Making: An overview of different selection problems and methods. *International Journal of Computer Science and Information Technologies*, 5(4), 5643-5646.
- Ghorabae, M. K., Zavadskas, E. K., Olfat, L., & Turskis, Z. (2015). Multi-Criteria Inventory Classification Using a New Method of Evaluation Based on Distance from Average Solution (EDAS). *Informatica*, 26(3), 435-451.
- Gou, X., Xu, Z., & Liao, H. (2017). Hesitant fuzzy linguistic entropy and cross-entropy measures and alternative queuing method for multiple criteria decision making. *Information Sciences*, 388, 225-246.
- Hoekstra, A., Chapagain, A., & van Oel, P. (2017). Advancing water footprint assessment research: Challenges in monitoring progress towards Sustainable Development Goal 6. *Water*, 9(6), 438.
- Jackson, T. (2014). Sustainable consumption. In *Handbook of sustainable development*. Edward Elgar Publishing.
- Juodagalvienė, B., Turskis, Z., Šaparauskas, J., & Endriukaiytė, A. (2017). Integrated multi-criteria evaluation of house's plan shape based on the EDAS and SWARA methods. *Engineering Structures and Technologies*, 9(3), 117-125.
- Kahraman, C., Keshavarz Ghorabae, M., Zavadskas, E. K., Cevik Onar, S., Yazdani, M., & Oztaysi, B. (2017). Intuitionistic fuzzy EDAS method: an application to solid waste disposal site selection. *Journal of Environmental Engineering and Landscape Management*, 25(1), 1-12.

- Karabasevic, D., Zavadskas, E. K., Stanujkic, D., Popovic, G., & Brzakovic, M. (2018). An approach to personnel selection in the IT industry based on the EDAS method. *Transformations in Business & Economics*, 17(2), 54-65.
- Karaşan, A., Kahraman, C., & Boltürk, E. (2019). Interval-valued neutrosophic EDAS method: an application to prioritization of social responsibility projects. In *Fuzzy Multi-criteria Decision-Making Using Neutrosophic Sets* (pp. 455-485). Springer, Cham.
- Keršulienė, V., Zavadskas, E.K., & Turskis, Z. (2010). Selection of rational dispute resolution method by applying new Step-wise Weight Assessment Ratio Analysis (SWARA). *Journal of Business Economics and Management*, 11(2), 243-258.
- Kutlu Gündoğdu, F., Kahraman, C., & Civan, H. N. (2018). A novel hesitant fuzzy EDAS method and its application to hospital selection. *Journal of Intelligent & Fuzzy Systems*, (Preprint), 1-13.
- Liao, H., Xu, Z., Herrera-Viedma, E., & Herrera, F. (2018). Hesitant fuzzy linguistic term set and its application in decision making: a state-of-the-art survey. *International Journal of Fuzzy Systems*, 20(7), 2084-2110.
- Nash, H. A. (2009). The European Commission's sustainable consumption and production and sustainable industrial policy action plan. *Journal of Cleaner Production*, 17(4), 496-498.
- Pogge, T., & Sengupta, M. (2016). Assessing the sustainable development goals from a human rights perspective. *Journal of International and Comparative Social Policy*, 32(2), 83-97.
- Popovic, G., Stanujkic, D., & Karabasevic, D. (2019). A framework for the evaluation of hotel property development projects. *International Journal of Strategic Property Management*, 23(2), 96-107.
- Salvia, A. L., Leal Filho, W., Brandli, L. L., & Griebeler, J. S. (2019). Assessing research trends related to Sustainable Development Goals: Local and global issues. *Journal of Cleaner Production*, 208, 841-849.
- Saaty, T.L. (1980). *The Analytic Hierarchy Process: planning, priority setting, resource allocation*. McGraw-Hill, New York.
- Shannon, C. E., & Weaver, W. (1964). *The mathematical theory of communication*. The University of Illinois Press, Urbana.
- Shannon, C.E. (1948). A Mathematical Theory of Communication. *Bell System Technical Journal*, 27(3), 379-423.
- Stanujkic, D., Zavadskas, E. K., Karabasevic, D., Smarandache, F., & Turskis, Z. (2017). The use of the pivot pairwise relative criteria importance assessment method for determining the weights of criteria. *Romanian Journal of Economic Forecasting*, 4, 116-133.
- Stanujkic, D., Zavadskas, E. K., Ghorabae, M. K., & Turskis, Z. (2017). An extension of the EDAS method based on the use of interval grey numbers. *Studies in Informatics and Control*, 26(1), 5-12.

- Stanujkić, D., & Meidutė-Kavaliauskienė, I. (2018). An approach to the production plant location selection based on the use of the Atanassov interval-valued intuitionistic fuzzy sets. *Transport*, 33(3), 835-842.
- Terama, E., Milligan, B., Jiménez-Aybar, R., Mace, G. M., & Ekins, P. (2016). Accounting for the environment as an economic asset: global progress and realizing the 2030 Agenda for Sustainable Development. *Sustainability Science*, 11(6), 945-950.
- Wagner, M., & Wellmer, F. W. (2009). A hierarchy of natural resources with respect to sustainable development—A basis for a natural resources efficiency indicator. In *Mining, Society, and a Sustainable World* (pp. 91-121). Springer, Berlin, Heidelberg.
- Wang, T.C. & Lee, H. D. (2009). Developing a fuzzy TOPSIS approach based on subjective weights and objective weights. *Expert Systems with Applications*, 36, 8980-8985.
- Zavadskas, E. K., Turskis, Z., & Kildienė, S. (2014). State of art surveys of overviews on MCDM/MADM methods. *Technological and Economic Development of Economy*, 20(1), 165-179.
- <https://www.un.org/development/desa/disabilities/envision2030.html> (15. 10. 2019).
- <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (15. 10. 2019).
- <https://sustainabledevelopment.un.org/sdgs> (15. 10. 2019).
- <https://unstats.un.org/sdgs/indicators/indicators-list/> (15. 10. 2019).
- <https://rsjp.gov.rs/wp-content/uploads/2017/11/Agenda-UN-2030.pdf> (15. 10. 2019).

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