Homogeneity of European Union and Western Balkan Countries According to Travel and Tourism Sustainability

Spójność Unii Europejskiej i krajów Bałkanów Zachodnich w kontekście zrównoważonego rozwoju podróży i turystyki

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Abstract

Managing the future policy and strategy of tourism development is becoming increasingly challenging due to the constantly changing environment. It is crucial to identify key dimensions and implement the concept of sustainable development to ensure tourism development is sustainable. This paper aims to research the dimensions of sustainable tourism development in European Union countries and the Western Balkans. The goal is to analyze the homogeneity of these countries in terms of sustainability of tourism and travel. Additionally, this paper aims to determine the level of deviation of the Western Balkans from the European Union countries in terms of economic, ecological, and social sustainability of tourism development. Identifying critical components of tourism sustainability in these countries is important for creating strategic guidelines to manage tourism and directing supply and demand in the dynamic tourism market.

Key words: sustainable tourism; T&T Development Index; European countries; homogeneity of countries; claster

Streszczenie

Zarządzanie przyszłą polityką i strategią rozwoju turystyki staje się coraz większym wyzwaniem ze względu na stale zmieniające się otoczenie. Istotne jest zidentyfikowanie kluczowych wymiarów i wdrożenie koncepcji zrównoważonego rozwoju, aby zapewnić zrównoważony rozwój turystyki. Celem artykułu jest zbadanie wymiarów rozwoju zrównoważonej turystyki w krajach Unii Europejskiej i Bałkanach Zachodnich. Celem jest analiza spójności tych krajów pod względem zrównoważoności rozwoju turystyki i podróży. Celem artykułu jest także określenie poziomu odstawania Bałkanów Zachodnich od krajów Unii Europejskiej pod względem zrównoważenia gospodarczego, ekologicznego i społecznego rozwoju turystyki. Identyfikacja kluczowych elementów zrównoważonego rozwoju turystyki w tych krajach jest ważna dla stworzenia strategicznych wytycznych do zarządzania turystyką oraz kierowania podażą i popytem na dynamicznym rynku turystycznym.

Słowa kluczowe: turystyka zrównoważona; Indeks Rozwoju T&T; kraje europejskie; spójność krajów; klaster

1. Introduction

Sustainable tourism development is a concept that has been attracting the attention of the academic and professional public in the field of tourism development and management since the 1980s. Tourism has significantly contributed to the economic development of many countries, and the creation of new jobs, but it has also contributed to crises related to climate change, pollution, waste, and biodiversity. Warnings about the negative impacts of tourism come from world organizations, such as the World Economic Forum, according to which *traditionally*

governments of tourism bodies have spent far more on destination marketing than on destination management and this must change (WEF, 2022). This would mean that managing destinations sustainably and respecting the principles of sustainable development is crucial to ensure the sustainability of the tourism industry. Greater focus should be on efforts and activities that influence tourism to record positive changes. In these efforts, tourism demand management is extremely important. Tourism growth will continue and the demand for travel and tourism will increase. An approach to development that respects the growth of tourism, but such growth *in a way that is appropriate to the tourists, the destination environment and the host population* (Liu, 2003, p. 472) is necessary. *Strategic approaches to transitioning to a sufficiency approach to tourism and leisure is essential if sustainability is to be secured* (Higgins-Desbiolles, 2018, p. 157).

Over the years, different forms of tourism have emerged that uphold the principles of sustainable tourism, such as ecotourism and alternative tourism. *Diversity of views on sustainable tourism and the complexity of the concept* (Cernat, Gourdon, 2007, p.) attracts attention when creating methodological frameworks for identifying key elements and their connections. Nevertheless, all these frameworks are rooted in the concept of sustainable development, which has three dimensions: economic, ecological, and social. This is incorporated in the UNWTO definition of sustainable tourism, according to which sustainable tourism is defined as *tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities* (European Commission, 2005, p.17). UNWTO emphasizes the need for sustainable tourism to make optimal use of environmental resources that constitute a key element in tourism development, and respect the socio-cultural authenticity of host communities. *A holistic understanding of sustainable tourism entails bringing the economic, environmental and the social cultural dimensions together* (Editorial, 2016, p. 290). However, some authors (Miller, 2001; Ko, 2005) emphasize other dimensions of sustainable development specific to tourism. Thus, the conceptual framework for assessing the sustainability of tourism can include the political dimension, technical, cultural or ecosystem quality.

This paper analyzes the homogeneity of European Union countries and Western Balkans in terms of sustainable tourism development. Identifying the key segments of development policy is crucial for future guidance of tourism development, as it can highlight strengths and weaknesses. The tourism industry faces numerous challenges, such as an increasing demand for services, a lack of qualified workers, depletion of natural resources, and uncertainty around climate change. Overtourism and high pressure for demand also add to the challenges. Sustainable development of tourism can contribute to addresses these challenges. For countries in the Western Balkans, benchmarking analysis can help determine their level of sustainable tourism development. By following the practices of countries that have achieved high levels of sustainable development, one can improve their own policies and focus on critical dimensions to achieve more sustainable and resilient tourism development.

2.   Methodological framework

Considering the complex nature of sustainable tourism, a systematic approach is required to determine the level of sustainability achieved in specific areas. To assess sustainability, a series of indicators must be established, which can be challenging to quantify and incorporate into the methodology. The importance of indicators lies in their ability to express the degree of sustainable tourism development, making it possible to evaluate whether countries or destinations are progressing towards sustainability.

In this sense, the Sustainable Tourism Benchmarking Tool (STBT) methodological framework was developed. (Cernat, Gourdon, 2007) By using this methodological framework for comparing the achieved level of sustainable development of tourism in different countries, it was determined that *similar level of tourism activity across countries might induce different economic benefits and might have different consequences for the socio-ecological environment. Therefore, the STBT is a useful tool to assess the heterogeneity of developing countries and detect main problems each country faces in their tourism development strategy* (Cernat, Gourdon, 2007, p. V). This methodological framework was developed for developing countries and can serve as a useful tool for decision makers, researchers and businesses that deal with the management of tourism development and tourism activities. The main shortcoming of this model is the lack of qualitative data and the exclusive reliance on quantitative data. The model of sustainable tourism, which contains two key indicators – stakeholder and environment, was applied in research by Lee and Hsieh (2016). Each of the indicators consists of several determinants. *The stakeholder dimension included five sub-dimensions: tourists, residents, for-profit organization, government and non-government organization. The environment dimension included six sub-dimensions: loss of renewable resources, rate of ecosystem degradation, environmental impact of tourism activity, rate of reuse/recycling, health of the human population, and loss of non-renewable resources* (Lee, Hsieh, 2016).

The methodological framework for comparing the level of achieved sustainable development of tourism in 118 countries in the world was developed by the World Travel & Tourism Council (WTTC) in 2007. In 2021, the methodological framework was changed and harmonized with the current economic, ecological and social changes and perceptions at the global level. Thus, in 2021, the Travel and Tourism Development Index (TTDI) (WEF, 2021) was published, which represents the evolution of the Travel and Tourism Competitiveness Index (TTCI).

The transition from TTCI to TTDI reflects the index's increased coverage of travel and tourism (T&T) development concept, including the expanding role of sustainability and resilience in T&T growth (WEF, 2021). In this way, the issues of sustainable development and the challenges and threats that tourism faces at the global level become dominant in the conception of future development. The TTDI index consists of five subindexes, 17 pillars and 112 indicators. Subindexes of TTDI are: Enabling Environment, Travel and Tourism Policy and Enabling Conditions, Infrastructure, Travel and Tourism Demand Drivers and Travel and Tourism Sustainability.

This paper focuses on the Travel and Tourism Sustainability subindex and its three components: Environmental sustainability, Socioeconomic resilience and conditions, and Travel and tourism demand pressure and impact. The goal of the paper is to analyze the homogeneity of the EU countries according to the sustainability of the development of tourism and travel, i.e., potential drivers of such development, as well as the countries of the Western Balkans. Additionally, the paper aims to determine how much the Western Balkan countries deviate from the EU countries regarding to economic, ecological, and social sustainability of tourism development.

The hypotheses from which the research is based are:

1) EU countries are homogeneous according to drivers that support the implementation of sustainable tourism development.

2) WB countries have a lower level of sustainable tourism development compared to EU countries.

The information used for this research was obtained from the World Economic Forum Report *Travel & tourism development index 2021: Rebuilding for a sustainable and resilient future* from 2022.

The research was conducted in two parts. Firstly, an analysis of the drivers contributing to sustainable tourism development was performed for both EU and WB countries. Secondly, the countries were grouped into homogeneous units based on their positioning according to these drivers.

3. Results & Discussion

3.1. Analysis of positioning of EU and WB countries according to environmental sustainability, socioeconomic resilience and conditions, and travel and tourism demand pressure and impact

Maintaining a clean environment is crucial for sustainability, especially in the tourism industry. Tourists now seek out destinations that have a clean and well-preserved environment, while avoiding heavily polluted areas. Unfortunately, tourist activities often lead to water pollution, waste production by companies and tourists, as well as air pollution caused by transportation.

The quality of the environment is crucial in attracting tourists, as many people seek a peaceful atmosphere to unwind. However, the increase in tourism can pose health and well-being challenges, especially in cities where air pollution levels are high enough to cause serious illnesses. Studies have shown that visiting polluted cities can have detrimental effects on the health of international travelers, particularly those who are more vulnerable (Vilcassim, Callahan, Zierold, 2021). Places with poor air quality may lose their attractiveness, and health-conscious travelers may choose to avoid them (Denstadli, Jacobsen, 2014). Tourism is a significant and growing contributor to climate change. *Tourism is responsible for 8% of warming from CO_2 and other long-lived greenhouse gases* (Gössling, Balas, Mayer, Sun, 2023) In order to make a tourist destination attractive, it is necessary to monitor and regulate the amount of greenhouse gas emissions per person, implement the use of renewable energy, include local energy transition in environmental strategy and planning (Kourtit, Nijkamp, Scholten, 2023), properly manage wastewater, and protect natural resources. Additionally, it is important to adhere to environmental treaties.

The *resource paradox* emphasizes the existence of the reciprocal link between tourism and the natural resources of an area (Kariminia, Ahmad, Hashim, 2012). *Natural resources are the base of tourism development* (Stanišić, Milićević, Krstić, 2022, p. 64), and consequently tourism industry puts pressure on them through infrastructure development, resource consumption, and waste production. Tourist activities significantly affect the flora and fauna. Pickering and Hill (2007) discovered that nature-based tourism activities were crushing, shearing off, and uprooting plants. They noticed that these effects lead to changes in the vegetation, such as loss of biomass, flowers, fruit, and other productive structures, a decline in cover, an increase in litter, harm to seedlings, and a change in the species composition. The site's hydrology, soil conditions, including nutrients and erosion, as well as the introduction of weeds and pathogens, will all alter as a result of these operations. According to a study by Ballantyne and Pickering (2013), 42% of the plant species in Europe are in danger due to tourism and recreation. Therefore, it is crucial to utilize these resources sustainably.

Socioeconomic Resilience and Conditions represent a framework in which tourism activities contribute to the socioeconomic well-being of local communities or countries. To achieve this, it's crucial to involve the local community in tourism activities and provide them with employment opportunities. Additionally, socially responsible business practices should be implemented within the tourism industry. *Gender equality, inclusion of a diverse workforce, greater workers' rights and reducing the number of young adults not in education, employment or training are all important for improving employee productivity and creating a larger and higher-quality labor pool* (WEF, 2021). Tourism should play a vital role in the development of local communities, improving access to resources and enhancing the quality of the environment. This contributes to a more enjoyable and fulfilling

experience for tourists visiting the destination. When the local population is enthusiastic, motivated, and actively involved in providing tourist services and participating in tourism activities, it creates a much more pleasant experience for tourists.

Travel and Tourism Demand Pressure and Impact is a pillar that in modern conditions of development is very important to analyze at and monitor because *unmanaged tourism development can lead to destinations operating beyond their capacity, leading to overcrowding, damaged natural and cultural resources, strained infrastructure, increased housing prices and overall reduced livability for local residents* (WEF, 2021, p. 52). The spatial dispersion of tourism, as well as the quality of towns and city centers, are becoming important indicators of the sustainable development of tourism.

Taking into account the irreversibility and limitations of many elements of the natural environment, the increasing level of interference in the natural environment through the exploitation, destruction and pollution will lead to a situation in which the socioeconomic development is impossible without resources (Neidziolka, 2014, p.158). All dimensions of sustainable development of tourism are interconnected and interdependent. In order to attain positive economic outcomes from tourism, it is essential to utilize natural resources, hire local workers, and receive support from the friendly host community. Good management of the dimensions of sustainable tourism requires *informed participation of all relevant stakeholders as well as strong political leadership to ensure wide participation and consensus building* (Neidziolka, 2014, p. 160). If the industry, at any scale, cannot be convinced that committing to sustainability principles is in its own direct interest, then the efforts of other stakeholders will have minimal impact (Buttler, 1999, p. 20).

Table 1. Value and rank of T&T Sustainability subindex and its components in EU countries (WEF, 2021)

EU-27	T&T Sustainability subindex		Environmental Sustainability pillar		Socioeconomic Resilience and Conditions pillar		T&T Demand Pressure and Impact pillar		EU-27	T&T Sustainability subindex		Environmental Sustainability pillar		Socioeconomic Resilience and Conditions pillar		T&T Demand Pressure and Impact pillar	
	Rank	Value	Rank	Value	Rank	Value	Rank	Value		Rank	Value	Rank	Value	Rank	Value	Rank	Value
Austria	6	4,9	5	5,1	6	6	80	3,8	Italy	33	4,5	40	4,3	20	5,4	91	3,7
Belgium	14	4,7	31	4,4	16	5,6	56	4,1	Latvia	26	4,6	10	4,8	21	5,4	104	3,5
Bulgaria	36	4,4	19	4,6	35	4,8	82	3,8	Lithuania	23	4,6	11	4,8	18	5,4	99	3,6
Denmark	3	5	6	5,1	2	6,1	92	3,7	Luxembourg	12	4,7	7	4,9	15	5,6	94	3,7
Croatia	57	4,1	25	4,5	31	5,1	117	2,8	Malta	19	4,6	36	4,3	23	5,3	48	4,2
Cyprus	25	4,6	41	4,3	24	5,3	58	4,1	Netherlands	5	4,9	9	4,8	3	6,1	74	3,9
Czech Republic	16	4,7	24	4,5	9	5,8	89	3,7	Poland	35	4,4	58	4,1	29	5,2	79	3,8
Estonia	24	4,6	17	4,6	13	5,7	106	3,5	Portugal	28	4,5	44	4,2	17	5,5	78	3,8
Finland	1	5,2	2	5,3	1	6,2	46	4,2	Romania	47	4,3	34	4,3	47	4,4	62	4
France	22	4,6	14	4,7	10	5,7	108	3,4	Slovak Republic	29	4,5	15	4,6	19	5,4	102	3,5
Germany	10	4,9	13	4,7	8	5,9	73	3,9	Slovenia	20	4,6	12	4,8	5	6	116	3,1
Greece	51	4,2	33	4,4	36	4,8	110	3,4	Spain	32	4,5	39	4,3	25	5,3	81	3,8
Hungary	34	4,4	22	4,5	37	4,7	72	3,9	Sweden	2	5	1	5,4	4	6	98	3,6
Ireland	8	4,9	21	4,5	12	5,7	19	4,6									

In Table 1, it is evident that all EU countries are highly evaluated and ranked based on the T&T Sustainability subindex. Among the top-ranking countries in the world are Finland (1), Sweden (2), Denmark (3), Netherlands (5), and Austria (6). Conversely, Greece (51) and Croatia (57) received the lowest ratings among the EU countries. The T&T Sustainability subindex score in this group ranges from 5.2 (Finland) to 4.1 (Croatia).

Regarding the Environmental Sustainability pillar, Sweden (1), Finland (2), Austria (5), and Denmark (6) are the highest-ranked EU countries. Poland ranks at the 58th place globally, which is the lowest among the EU countries. The scores for the Environmental Sustainability pillar range from 5.3 to 4.4.

When we examine the rankings of EU countries based on the Socioeconomic Resilience and Conditions pillar, we can see that they have high rankings and evaluations. Finland is ranked at the first place, followed by Denmark. The Netherlands, Sweden, and Slovenia rank third, fourth, and fifth, respectively. However, Poland is ranked the lowest, at 47th position in the world. The scores for these countries range from 6.2 (Finland) to 4.4 (Romania).

On the other hand, if we analyze the T&T Demand Pressure and Impact pillar, EU countries do not receive high marks, thus their ranking on the world list is not high either. The highest-ranked country in this group is Finland, on 46th position in the world with a score of 4.2. The lowest-ranked is Croatia, at 117th place in the world with a score of 2.8, according to the pressure of tourist demand in this country's destinations.

This analysis indicates that *high-income European countries tend to be some of the top TTDI performers and include rich cultural and non-leisure assets and quality transport and tourism infrastructure that allow for the absorption of large quantities of visitors. However, they still tend to score below average for the T&T Demand*

Pressure and Impact pillar due to factors such as shorter lengths of stay, higher seasonality, and a very high level of concentration of interest in a small number of attractions (WEF, 2021, p. 29).

Table 2. Value and rank of T&T Sustainability subindex and its components in WB countries (authors own calculations)

WB	T&T Sustainability subindex		Environmental Sustainability pillar		Socioeconomic Resilience and Conditions pillar		T&T Demand Pressure and Impact pillar		WB	T&T Sustainability subindex		Environmental Sustainability pillar		Socioeconomic Resilience and Conditions pillar		T&T Demand Pressure and Impact pillar	
	Rank	Value	Rank	Value	Rank	Value	Rank	Value		Rank	Value	Rank	Value	Rank	Value	Rank	Value
Albania	54	4,2	27	4,4	39	4,7	111	3,4	North Macedonia	93	3,7	91	3,7	56	4,2	113	3,3
Bosnia and Herzegovina	94	3,7	105	3,5	50	4,4	112	3,3	Serbia	73	4	78	3,8	51	4,4	93	3,7
Montenegro	53	4,2	64	4	42	4,5	64	4									

WB countries are ranked according to the T&T Sustainability subindex from 54th place on the global list (Albania) to 94th place (Bosnia and Herzegovina). The values of the subindex range from 4.2 to 3.7, which is shown in Table 2.

When it comes to the Environmental Sustainability pillar, Albania stands out as the 27th country in the world, while Bosnia and Herzegovina has the worst rank as the 105th country in the world.

The pillar Socioeconomic Resilience and Conditions in WB countries is the highest rated, with all countries ranking in the top half of the global list. Albania is the best positioned, as the 39th country with a score of 4.7, while North Macedonia is the worst rated at 56th place in the world and a score of 4.2.

Based on the T&T Demand Pressure and Impact pillar, the WB and EU countries are not highly rated and rank in the lower half of the global list. The highest rank within this group is Montenegro, which is placed at 64th position in the world. However, Albania, Bosnia and Herzegovina, and North Macedonia are ranked 111th, 112th, and 113th respectively. The scores for this pillar range from 4 (Montenegro) to 3.3 (North Macedonia).

An observation is that WB countries rank worse on the overall T&T Sustainability subindex compared to EU countries. In this way, the initial hypothesis that WB countries have a lower level of sustainable tourism development compared to EU countries was confirmed. However, both these groups of countries attract a large number of tourists and face high tourism demand pressure, which, according to the WEF, *may be partially explained by these economies' typically below-average scores for transport infrastructure* (WEF, 2021, p. 29).

This positioning of the EU and WB countries based on the dimensions of sustainable tourism serves as a basis for further analysis. The goal is to identify the key dimensions of sustainable development using cluster analysis.

2.2. Homogeneity analysis of EU and WB countries according to travel and tourism sustainability
Based on the results of descriptive statistics, shown in Table 3, it is noted that the average values of T&T Development Index, T&T Sustainability subindex, and its pillars in EU countries are significantly higher compared to WB countries. At the same time, the dispersion in the values of these indicators, expressed by the standard deviation, in EU countries is the largest in the case of Socioeconomic Resilience and Conditions (0.4636), while in WB countries the dispersion in the values of Socioeconomic Resilience and Conditions is the smallest (0.1816).

Table 3. Descriptive statistics (authors own calculations)

Group		T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
EU	Mean	**4.5519**	**4.6259**	**4.6222**	**5.4963**	**3.7444**
	Std. Deviation	0.3130	0.2565	0.3320	0.4636	0.3577
	Minimum	4.10	4.10	4.10	4.40	2.80
	Maximum	5.20	5.20	5.40	6.20	4.60
	Range	1.10	1.10	1.30	1.80	1.80
WB	Mean	**3.6800**	**3.9600**	**3.8800**	**4.4400**	**3.5400**
	Std. Deviation	0.2167	0.2510	0.3420	0.1816	0.3049
	Minimum	3.40	3.70	3.50	4.20	3.30
	Maximum	3.90	4.20	4.40	4.70	4.00
	Range	.50	.50	.90	.50	.70

EU countries show the smallest dispersion in T&T Sustainability subindex values (0.2565). It can also be observed that the minimum value of the T&T Development Index in EU countries is higher than its maximum value in WB countries. Additionally, it is clear that the minimum value of the T&T Development Index in EU countries is

higher than the maximum value in WB countries. It is crucial to highlight the key components of development that WB countries should strive for to attain the level of tourism development quality as that of EU countries.

Table 4. Differences between mean values (authors own calculations)

	T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
EU-WB	0.87	**0.67**	0.74	1.06	**0.20**

The subject of further analysis is the differences in the average values of the indicators between EU and WB countries (Table 4). The largest difference is in the Socioeconomic Resilience and Conditions (1.06), while the smallest is in T&T Demand Pressure and Impact (0.20). In this way, it is possible to indicate that socioeconomic resilience is an important driver of tourism development in EU countries. It also indicates that labor productivity, training opportunities, workers' rights, labor market resilience, and gender equality are at significantly higher levels in EU countries compared to WB countries.

In order to test the significance of the observed difference, the Mann-Whitney U test was applied. This test belongs to the group of non-parametric tests and is applied in testing the significance of the difference in the average values of two independent samples.

Table 5. Test statistics (authors own calculations)

	T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
Mann-Whitney U	.000	3.000	8.000	3.500	39.500
Wilcoxon W	15.000	18.000	23.000	18.500	54.500
Z	-3.516	-3.376	-3.102	-3.331	-1.461
Asymp. Sig. (2-tailed)	**.000**	**.001**	**.002**	**.001**	**.144**

According to the results of the conducted testing, the difference between WB and EU countries is only not significant when observing T&T Demand Pressure and Impact (p=0.144), while the average values of all other indicators differ significantly (Table 5) . This highlights the presence of tourism demand pressure and overtourism in both EU and WB countries. Overtourism is a global issue affecting various destinations. Its negative impact threatens the sustainable development of tourism and the socioeconomic living conditions of the local people.

Hierarchical cluster analysis was applied in order to group EU countries into homogeneous groups. Within Group linkage was chosen as the grouping method, and Squared Eucliedian distance as the distance measure. By cluster analysis, EU countries are grouped into 4 homogeneous units (clusters) (Table 6).

Table 6. Cluster structure (authors own calculations)

Cluster 1 N=6	Cluster 2 N=8	Cluster 3 N=4	Cluster 4 N=9
Austria	Belgium	Bulgaria	Croatia
Denmark	Cyprus	Greece	Czech Republic
Finland	Ireland	Hungary	Estonia
Germany	Italy	Romania	France
Netherlands	Malta		Latvia
Sweden	Poland		Lithuania
	Portugal		Luxembourg
	Spain		Slovak Republic
			Slovenia

The observation is that the largest number of EU countries are classified in the fourth cluster according to similarities in the level of sustainability and *areas for development of each country to support their efforts to enhance the long-term growth of their T&T sector* (WEF, 2022). There are eight countries in cluster 2, four countries are in the first cluster, while Bulgaria, Greece, Hungary, and Romania belong to the third cluster. It is observed that there are differences between the EU countries in the level of sustainability of tourism activity, its quality, and the management of the development of tourism and travel. In this way, the initial hypothesis that EU countries are homogeneous according to drivers that support the implementation of sustainable tourism development was not confirmed.

Based on the analysis of the descriptive measures of the selected indicators by cluster (Table 7), it is noted that the countries with the highest values of the selected indicators are in the first cluster, except when it comes to T&T

Demand Pressure and Impact. This indicates that Austria, Denmark, Finland, Germany, the Netherlands, and Sweden perform better in terms of tourism sustainability, environmental sustainability, and socioeconomic resilience.

Table 7. Clusters descriptive statistics (authors own calculations)

Cluster	Measure	T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
1	Mean	**4.8167**	**4.9833**	**5.0667**	**6.0500**	**3.8500**
	Std. Deviation	.18348	.11690	.27325	.10488	.20736
	Minimum	4.60	4.90	4.70	5.90	3.60
	Maximum	5.10	5.20	5.40	6.20	4.20
	Range	.50	.30	.70	.30	.60
2	Mean	**4.6375**	**4.5875**	**4.3000**	**5.4125**	**4.0125**
	Std. Deviation	.30677	.15526	.11952	.17269	.29970
	Minimum	4.30	4.40	4.10	5.20	3.70
	Maximum	5.20	4.90	4.50	5.70	4.60
	Range	.90	.50	.40	.50	.90
3	Mean	**4.3000**	**4.3250**	**4.4500**	**4.6750**	**3.7750**
	Std. Deviation	.16330	.09574	.12910	.18930	.26300
	Minimum	4.10	4.20	4.30	4.40	3.40
	Maximum	4.50	4.40	4.60	4.80	4.00
	Range	.40	.20	.30	.40	.60
4	Mean	**4.4111**	**4.5556**	**4.6889**	**5.5667**	**3.4222**
	Std. Deviation	.30185	.18105	.14530	.26926	.29486
	Minimum	4.10	4.10	4.50	5.10	2.80
	Maximum	5.10	4.70	4.90	6.00	3.70
	Range	1.00	.60	.40	.90	.90

In the third cluster (Bulgaria, Greece, Hungary, and Romania) are the countries with the lowest values of indicators related to the development of tourism. The level of sustainable development of tourism and travel, as well as socioeconomic resilience and conditions, are the lowest in the countries that belong to this cluster. The average value of tourism demand pressure and impact is the highest in the second cluster, while it is the lowest in the fourth cluster.

In order to test the significance of the difference in the average values of the scores of the selected indicators between the clusters, the Kruskal Wallis Test was applied (a non-parametric test used in testing the significance of the difference in the average values of several independent samples).

Table 8. Test statistics for Kruskal Wallis Test (authors own calculations)

	T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
Chi-Square	10.928	17.545	20.536	19.552	14.136
Df	3	3	3	3	3
Asymp. Sig.	.012	.001	.000	.000	.003

The test results showed that there is a significant difference between the clusters in the average values of these indicators (Table 8). Further analysis is now being conducted to determine the significance of the difference in average indicator values between WB countries and each group of countries (cluster). For this purpose, the Mann-Whitney U test was applied (Table 9).

The test results show that there are notable differences between the WB countries and all clusters of EU countries when examining the T&T Development Index, T&T Sustainability subindex, and Environmental Sustainability pillar.

When examining Socioeconomic Resilience and Conditions, only in the case of comparing the tourism development performance of WB countries and countries belonging to Cluster 3, there is no significant difference in the average values. In all other comparisons, there is a statistically significant difference in the average values.

In the case of the T&T Demand Pressure and Impact indicator, the difference in average values is statistically significant only between countries belonging to Cluster 2 and WB countries. In this cluster is the highest average value of T&T Demand Pressure and Impact. In all other comparisons, the difference is not statistically significant. This result is consistent with the result shown in Table 5.

Table 9. Test statistics – Mann-Whitney U test (authors own calculations)

	Measure	T&T Development Index (score)	T&T Sustainability subindex (score)	Environmental Sustainability pillar (score)	Socioeconomic Resilience and Conditions pillar (score)	T&T Demand Pressure and Impact pillar (score)
Cluster 1 – WB	Mann-Whitney U	.000	.000	.000	.000	6.500
	Wilcoxon W	15.000	15.000	15.000	15.000	21.500
	Z	-2.757	-2.783	-2.745	-2.757	-1.563
	Asymp. Sig. (2-tailed)	**.006**	**.005**	**.006**	**.006**	**.118**
Cluster 2 – WB	Mann-Whitney U	.000	.000	6.500	.000	4.500
	Wilcoxon W	15.000	15.000	21.500	15.000	19.500
	Z	-2.936	-2.956	-2.007	-2.948	-2.291
	Asymp. Sig. (2-tailed)	**.003**	**.003**	**.045**	**.003**	**.022**
Cluster 3 – WB	Mann-Whitney U	.000	1.000	1.500	3.500	5.000
	Wilcoxon W	15.000	16.000	16.500	18.500	20.000
	Z	-2.470	-2.262	-2.091	-1.634	-1.240
	Asymp. Sig. (2-tailed)	**.014**	**.024**	**.037**	**.102**	**.215**
Cluster 4 – WB	Mann-Whitney U	.000	2.000	.000	.000	21.500
	Wilcoxon W	15.000	17.000	15.000	15.000	66.500
	Z	-3.010	-2.805	-3.020	-3.020	-.135
	Asymp. Sig. (2-tailed)	**.003**	**.005**	**.003**	**.003**	**.893**

It is noted that WB countries do not differ significantly from EU countries only according to the T&T Demand Pressure and Impact indicator. Also, according to the values of the selected indicators, the WB countries are the most similar to the countries grouped in Cluster 3. This indicates that the WB countries, according to the characteristics of the sustainability of tourism development and its environmental and socioeconomic components, are largely similar to the performance of tourism activities in Bulgaria, Greece, Hungary, and Romania. In this way, it is possible to give recommendations on key drivers of tourism development in the direction of achieving the concept of sustainability in WB countries, based on past experience, and the quality of tourism development strategies and programs of these EU countries.

The Republic of Serbia in its tourism development policy certainly recognized these characteristics and Bulgaria, Hungary, and Romania are the countries against which the benchmarking analysis is made, that is, these countries are recognized as competitors in relation to Serbia. The criteria on the basis of which these countries were chosen as competitive destinations in the Strategic Tourism Marketing Plan of the Republic of Serbia until 2025 refer to the fact that these are Danube countries, that they belong to the region of Southeast Europe, and that they are countries with a similar tourist offer (Ministry of Tourism and Youth of the Republic of Serbia, 2021, p. 4). In this way, it was confirmed that WB countries are the most similar in terms of the achieved level of sustainable tourism development to the EU countries that are classified in the third cluster, namely Bulgaria, Hungary, Greece, and Romania.

4. Conclusions

The tourism industry is facing a number of challenges, including a surge in service demands, a scarcity of skilled workers, the depletion of natural resources, and uncertainties surrounding climate change. These challenges are further compounded by overtourism and high demand. In order to address these issues, sustainable tourism development is critical. The establishment of a set of indicators is necessary for assessing sustainability. Indicators play a significant role in expressing the level of sustainable tourism and enable countries or destinations to evaluate their progress toward achieving sustainability.

After examining the sustainable tourism development of WB countries in comparison to those of EU countries, it was found that WB countries have significantly lower levels of tourism sustainability in all its dimensions. The analysis clearly indicates that EU countries are global leaders in terms of sustainable travel and tourism, with all EU countries ranking highly. Finland is the top-ranked country globally, while Croatia has the lowest ranking among EU countries. Additionally, EU countries lead in environmental sustainability, with Sweden ranking first and Poland at 58th globally, as well as socioeconomic resilience and conditions, with Finland ranking first and Poland at 47th globally. The conclusion is that WB countries rank lower than EU countries overall in tourism sustainability, with WB countries ranking in the second half of the global list. Albania ranks 54th globally in terms of tourism sustainability, while Bosnia and Herzegovina ranks 94th.

Based on our analysis of various indicators, it has come to our attention that the variance in socioeconomic resilience is a significant factor to consider in the development of tourism. This suggests that socioeconomic resilience plays a critical role in the tourism industry in EU countries. Additionally, EU countries exhibit notably higher levels of labor productivity, training opportunities, workers' rights, labor market resilience, and gender equality

when compared to WB countries. These findings underscore the importance of considering socioeconomic factors in tourism development and emphasize the need for continued efforts to mitigate disparities between EU and WB countries.

We have found that there is a relatively minor difference in tourist demand pressure between EU and WB countries. Both EU and WB countries face tourism demand pressure and overtourism, with a large number of tourists visiting and creating high demand. However, Finland ranks only 46th on the global list for tourism demand pressure, while Croatia falls even lower than all WB countries at 117th in the world. Albania, Bosnia and Herzegovina, and North Macedonia are among the worst rated in the world, ranking 111th, 112th, and 113th respectively. Overtourism is a global issue that can negatively impact the sustainable development of tourism and the local socioeconomic conditions.

It has been observed that the level of sustainability, quality, and management of tourism activity varies among EU countries. Based on sustainability dimensions, EU countries can be grouped into 4 clusters. Countries such as Austria, Denmark, Finland, Germany, the Netherlands, and Sweden perform best regarding tourism sustainability, environmental sustainability, and socioeconomic resilience. Meanwhile, Bulgaria, Greece, Hungary, and Romania have the lowest values in terms of sustainable tourism development and socioeconomic resilience.

In comparison, there are notable differences in tourism development, and environmental sustainability between the WB countries and EU countries. However, when it comes to socioeconomic resilience and conditions, there is no significant difference between WB countries and Bulgaria, Greece, Hungary, and Romania. Nevertheless, there is a statistically significant difference between WB and EU countries in all other comparisons. Through careful analysis of past experiences and thorough evaluation of tourism development strategies and programs in these EU countries are imperative to provide concrete recommendations for the enhancement of tourism development in WB countries. These recommendations must focus on the fundamental drivers of tourism growth, while simultaneously working towards sustainable solutions. The research in this paper represents the basis for future analyzes that should identify specific recommendations for improving the level of sustainable tourism in WB countries.

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