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SUSTAINABLE GROWTH IN SMALL OPEN ECONOMIES

INTERDEPENDENCE BETWEEN ENVIRONMENTAL QUALITY AND ECONOMIC ASPECTS OF SUSTAINABLE TOURISM DEVELOPMENT IN TRANSITION COUNTRIES

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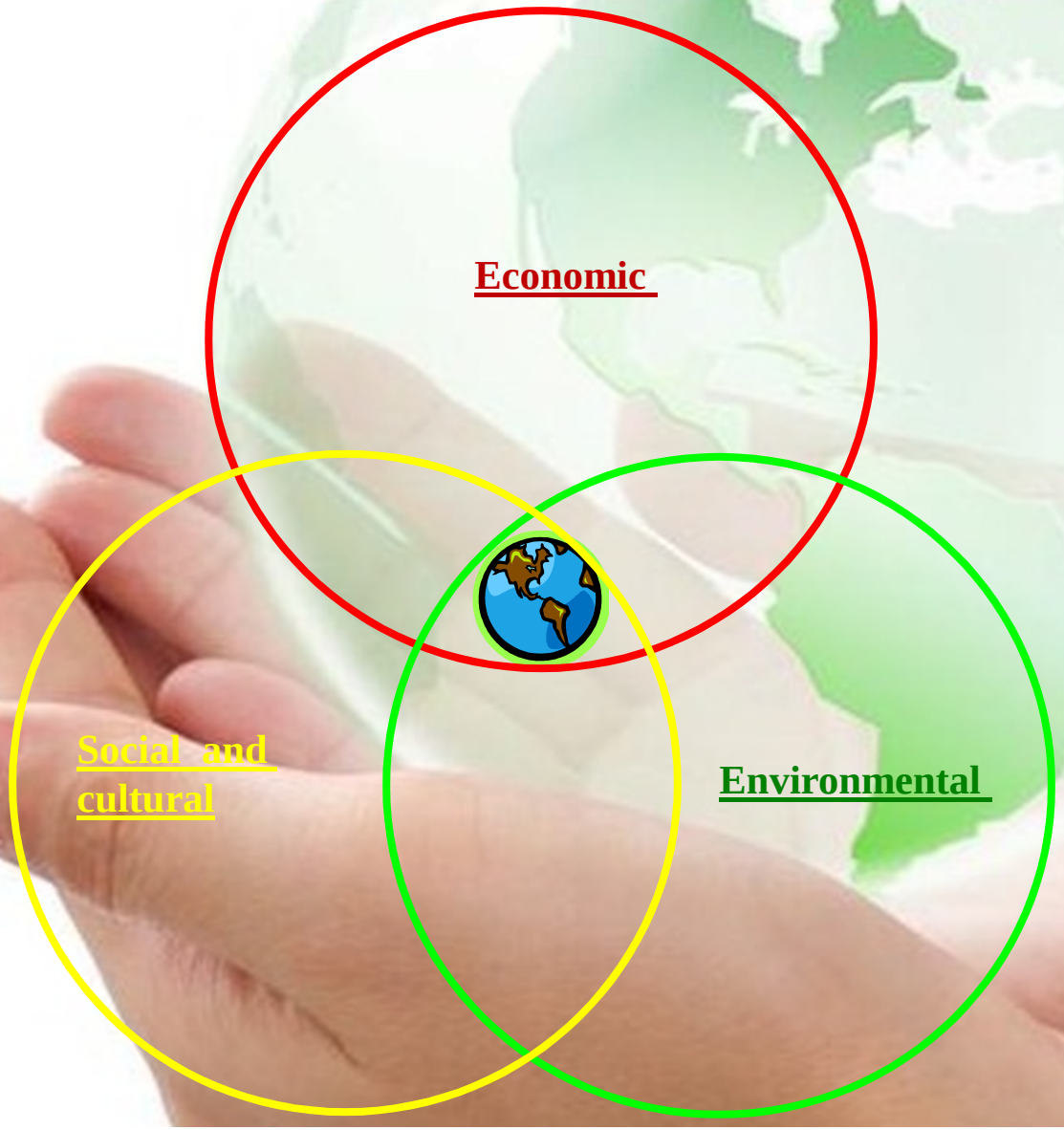
THE BASIC PRINCIPLES OF THE SUSTAINABLE TOURISM DEVELOPMENT



THE PURPOSE

- to analyze the influence of tourism on ecological and economic sustainability in transition countries that are the members of the European Union.

THE OBJECTIVE

- to quantify the interdependence between the environmental quality and economic sustainability of tourism development in the observed countries.

THE FOLLOWING METHODS ARE USED IN THE RESEARCH

TABLE 1 –*ECONOMIC VALUE CORE INDICATORS*

	Average expenditure per trip by categories (by resident)			Nights spent by residents	Nights spent by non-residents	Average length of stay by residents	Average length of stay by non-residents
	Transport	Accommodation	Durables and valuable goods				
Bulgaria	26.39	31.14	0.00	45.52	69.37	2.35	4.66
Czech Republic	11.82	15.02	0.23	43.82	32.37	2.80	2.68
Estonia	26.0	18.50	0.10	38.88	37.53	1.70	1.95
Croatia	46.75	40.49	0.00	58.15	75.39	3.50	5.24
Latvia	14.47	5.27	0.30	38.97	38.51	1.86	1.95
Lithuania	15.5	27.8	0.52	40.58	37.55	2.52	2.17
Hungary	12.28	28.80	0.19	47.83	39.01	2.44	2.63
Poland	22.08	35.68	0.47	41.35	34.52	2.70	2.42
Romania	31.82	23.03	0.13	44.23	34.58	2.48	1.99
Slovenia	17.56	54.07	0.01	36.85	45.64	3.06	2.45
Slovakia	19.33	46.24	1.30	34.77	37.44	3.03	2.58

Source: *http://ec.europa.eu/eurostat/data/database*

TABLE 2 – *CALCULATED VALUES OF S AND R*

		$w_{ij}*d_{ij}$						S	R
	f_1	f_2	f_3	f_4	f_5	f_6	f_7		
w_{ij}	0.101	0.176	0.086	0.31	0.33	0.172	0.088		
a_1	0.0589	0.0827	0.0860	0.1426	0.2831	0.1097	0.0155	0.77846	0.28313
a_2	0.1010	0.1408	0.0708	0.1200	0.0000	0.0670	0.0686	0.56823	0.14084
a_3	0.0599	0.1282	0.0767	0.0545	0.0395	0.1720	0.0878	0.61863	0.17200
a_4	0.0000	0.0490	0.0860	0.3100	0.3292	0.0000	0.0000	0.77417	0.32920
a_5	0.0933	0.1760	0.0662	0.0557	0.0469	0.1569	0.0880	0.68298	0.17600
a_6	0.0902	0.0947	0.0516	0.0771	0.0396	0.0942	0.0821	0.52954	0.09471
a_7	0.0997	0.0911	0.0734	0.1732	0.0507	0.1021	0.0698	0.66004	0.17317
a_8	0.0713	0.0663	0.0549	0.0873	0.0164	0.0766	0.0754	0.44841	0.08734
a_9	0.0432	0.1119	0.0774	0.1255	0.0169	0.0982	0.0867	0.55984	0.12550
a_{10}	0.0844	0.0000	0.0853	0.0276	0.1015	0.0432	0.0747	0.41668	0.10150
a_{11}	0.0793	0.0282	0.0000	0.0000	0.0388	0.0458	0.0712	0.26329	0.07928

TABLE 3 – *RANKING LIST BASED ON QS, QR AND Q_I (V=0.5)*

	QS	QR	Q_i (v=0.5)	Rank
Bulgaria	1.0000	0.8156	0.9078	10
Czech Republic	0.5919	0.2463	0.4191	6
Estonia	0.6898	0.3710	0.5304	7
Croatia	0.9917	1.0000	0.9958	11
Latvia	0.8147	0.3870	0.6008	9
Lithuania	0.5168	0.0617	0.2893	4
Hungary	0.7701	0.3757	0.5729	8
Poland	0.3593	0.0322	0.1958	3
Romania	0.5756	0.1849	0.3803	5
Slovenia	0.2977	0.0889	0.1933	2
Slovakia	0.0000	0.0000	0.0000	1

TABLE 4 – *THE QUALITY OF THE NATURAL ENVIRONMENT*

	The quality of the natural environment
Bulgaria	3.4
Czech Republic	4.6
Estonia	5.8
Croatia	5.8
Latvia	5.7
Lithuania	5.4
Hungary	4.5
Poland	4.5
Romania	4.0
Slovenia	5.9
Slovakia	4.4

Source: WEF, The Travel & Tourism Competitiveness Report for 2015

TABLE 5 – *CORRELATION ANALYSIS BETWEEN TOURISM ECONOMIC SUSTAINABILITY AND THE ENVIRONMENTAL QUALITY*

		Q_i (v=0.5)	The quality of the natural environment
Q_i (v=0.5)	Pearson Correlation	1	0.003
	Sig. (2-tailed)		0.992
	N	11	11
The quality of the natural environment	Pearson Correlation	0.003	1
	Sig. (2-tailed)	0.992	
	N	11	11

Source: Prepared by the authors (SPSS Statistics 19)

TABLE 6 – *THE MEMBERS OF CLUSTER AND DISTANCES FROM CLUSTER CENTER*

Cluster 1		Cluster 2		Cluster 3	
Members	Distance	Members	Distance	Members	Distance
Bulgaria	0.685432	Lithuania	0.180002	Estonia	0.128496
Czech Republic	0.259313	Slovenia	0.180002	Croatia	0.204178
Hungary	0.219987			Latvia	0.089855
Poland	0.243041				
Romania	0.166571				
Slovakia	0.314683				

Source: Prepared by the authors (Statistica 13)

TABLE 7 - *DESCRIPTIVE STATISTICS WITHIN THE CLUSTER ANALYSIS*

Descriptive statistics for the cluster 1 (Cluster contains 6 countries)			
	Mean	Standard - Deviation	Variance
Economic sustainability of tourism	0.412652	0.312812	0.097851
The quality of the natural environment	4.233333	0.458984	0.210667
Descriptive statistics for the cluster 2 (Cluster contains 2 countries)			
	Mean	Standard - Deviation	Variance
Economic sustainability of tourism	0.241302	0.0667843	0.004603
The quality of the natural environment	5.650000	0.353553	0.125000
Descriptive statistics for the cluster 3 (Cluster contains 3 countries)			
	Mean	Standard - Deviation	Variance
Economic sustainability of tourism	0.709012	0.250879	0.062940
The quality of the natural environment	5.766667	0.057735	0.003333

Source: Prepared by the authors (Statistica 13)

CONCLUSION

- The paper presents a holistic approach of determining economic tourism sustainability in transition countries because multi-criteria methods the allow quantification and comparison of the levels of tourism sustainability based on a large number of the indicators of sustainable tourism development.
- The research results indicate that transition countries such as Bulgaria, Latvia and Hungary should implement measures with the aim to increase the economic sustainability of tourism and the environmental quality while Croatia should implement the measures with the aim to increase the economic sustainability of tourism.

Thanks for attention...