THE RELATIONSHIP BETWEEN THE OVERALL TRAVEL AND TOURISM COMPETITIVENESS INDEX AND ITS CULTURAL ASPECTS

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Abstract

Competitiveness of travel and tourism industry is often evaluates using Travel and Tourism Competitiveness Index (TTCI) that provides the opportunity to compare countries within number of areas related to travel and tourism. One of the essential factors influenced tourism competitiveness is cultural aspects. These aspects are part of the Cultural Resources and Business Travel pillar, which is composed of five subpillars; one of them is Number of World Heritage Cultural Sites. In this paper, we wanted to find out to what extent pillar of Cultural Resources and Business Travel (CR & BT) reflects the overall result of the Travel and Tourism Competitiveness Index. Moreover, we study the relationship between Cultural Resources and Business Travel pillar and Number of World Heritage Cultural Sites (No. of WHCS) subpillar. For this purpose, we use data obtained from Travel and Tourism Competitiveness Report for the years 2015 and 2017. Data of ranking within selected indicators of 37 European countries entered in the analysis. Results indicated that the strongest relationship has been proven between ranking within No. of WHCS subpillar and CR & BT pillar in 2017.

Key words: tourism, competitiveness, culture, cultural resources, World Heritage

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Introduction

Policymakers are always seeking forms, arrangements, steps and plans for increasing the social and economic prosperity of tourism destinations. Alberti and Giusti (2012) suggest that the prosperity of a destination is directly related to its competitiveness. At present, the aim of tourism policymakers is not only to attract more tourists, but to increase the tourism competitiveness of a managed destination. Cultural assets can attract tourists to a specific destination what bring resources to tourism sector and thus support competitiveness (Alberti & Giusti, 2012). One of the widely used indicators of the tourism competitiveness of

countries all over the world is Travel and Tourism Competitiveness Index (TTCI). The aim of present contribution is to explain the impact of Cultural Resources and Business Travel (CR & BT) pillar on TTCI and at the same time the impact of Number of World Heritage Cultural Sites (No. of WHCS) subpillar on TTCI among selected European countries, respectively European Union countries.

1   Theoretical Background

Competitiveness is one of the key factors of the success of countries in different areas at the global level (Kiseľáková, Šofranková, Čabinová, & Onuferová, 2018). The travel and tourism competitiveness of a country is the most discussed subject in recent years by the academic literature. Based on the Travel and Tourism Competitiveness Report published since 2008, we can say that several different determinants influence the country's overall competitiveness in this area (for more information see Vašaničová, Litavcová, Jenčová, & Košíková, 2017; Vašaničová, Litavcová, & Jenčová, 2018; Kalina, Vašaničová, & Litavcová, 2019). From a methodological point of view used for the period 2015-2017, the top indicator TTCI consists of four subindexes, which are created by several pillars and these pillars are made by further subpillars. For each country under consideration, the index is given by the overall score, which then determines the final ranking of the countries.

In general, the question may be which pillar has the most fundamental impact on the overall tourism competitiveness? In this paper, the focal point is only the impact of one pillar on tourism competitiveness, namely Cultural Resources and Business Travel. Moreover, within CR & BT pillar we take into account the impact of one subpillar - Number of World Heritage Cultural Sites – on overall tourism competitiveness. We take into consideration these two indicators due to the several facts resulting from existing literature. The tourists travel due to their internal and external motivators, while one of them should be culture attractions. Culture is one of the most significant tourist's motivators in choosing a given destination (Santa-Cruz & López-Guzmán, 2017; Correia, Kozak, & Ferradeira, 2013). It is known that the relationship between culture and tourism has been proven in recent decades. Mention link has been specifically identified as a particular form of tourism - cultural tourism, which is defined by Richards (2018, p. 13) as "a type of tourism activity in which the visitor's essential motivation is to learn, discover, experience and consume the tangible and intangible cultural attractions/products in a tourism destination". Growth knowledge of cultural tourism was also

characterized by fragmentation into a number of emerging niches; one of them is heritage tourism (Richards, 2018).

Algieri, Aquino, and Succurro (2018) investigated the determinants of competitive advantages in tourism services for the EU-28 countries over the period from 2000 to 2013. They have proven that the natural environment, cultural and historical heritage are statistically significant in explaining revealed tourism competitiveness. There is a presumption that if cultural heritages are one of the motivators for travelling, a country that has more heritages will be visited more than any other country that does not have so many sights. Specifically, Kim, Oh, Lee, and Lee (2018, p. 126) and Canale, De Simone, Di Maio, and Parenti (2019, p. 115) noted that "the designation of a World Heritage Site acts as a catalyst for tourism development". Moreover, showcasing cultural heritage sites raised expectations for increased tourism demand and revenue from tourism (Yang, Xue, & Jones, 2019). Therefore, the numbers of country's cultural sites that are included in the UNESCO classification of World Heritage Site should influence the country's tourism competitiveness. This confirms the importance of including subpillar No. of WHCS in the overall tourism competitiveness model of the country.

For better understanding, according to (Timothy, 2011), UNESCO differs cultural heritage sites into four groups – monuments (archaeological structures, works of sculpture and painting, architectural works, inscriptions and cave dwellings), buildings, sites (human works or a combination of human works and natural processes including areas and archaeological sites), and cultural landscapes and manifestations of the interactions between humans and nature.

2 Data and Methodology

2.1 Data

Our dataset consist of values of TTCI and its fourteenth pillar – CR & BT among 37 European countries from the period 2015-2017. We obtained this dataset from Travel & Tourism Competitiveness Report that is published by World Economic Forum since 2008 (Crotti & Misrahi, 2015; Crotti & Misrahi, 2017). Although TTCI scores are also known for older periods, we are focusing only on the two, because the TTCI calculation methodology has changed over time and for the period 2015-2017 methodology has been the same. Within mentioned CR & BT pillar, we take into account only one from five subpillars (Number of World Heritage Cultural Sites, Oral and Intangible Cultural Expressions, Large Sports

Stadiums, International Association Meetings, and Cultural and Entertainment Tourism Digital Demand) that made up this pillar, namely No. of WHCS. In our analysis, we do not use index scores of the countries but their ranking within a selected European region. The real scores and ranking of overall index, mentioned pillar and subpillar for selected European countries among all countries analyzed by World Economic Forum are in Table 1.

Tab. 1: World ranking of selected European countries within TTCI, CR & BT pillar and No. of WHCS subpillar

Country	Code	TTCI World				CR & BT World				No. of WHCS World			
		2015		2017		2015		2017		2015		2017	
Spain	ES	1	[5.31]	1	[5.43]	1	[6.69]	2	[6.85]	2	[40]	2	[41]
France	FR	2	[5.24]	2	[5.32]	2	[6.56]	3	[6.75]	4	[36]	3	[39]
Germany	DE	3	[5.22]	3	[5.28]	5	[6.00]	6	[6.28]	3	[36]	4	[38]
Unit. Kingdom	GB	5	[5.12]	5	[5.20]	7	[5.90]	7	[5.96]	8	[24]	8	[26]
Switzerland	CH	6	[4.99]	10	[4.94]	28	[2.93]	35	[2.87]	8	[26]	9	[22]
Italy	IT	8	[4.98]	8	[4.99]	3	[6.51]	5	[6.46]	1	[46]	1	[47]
Austria	AT	12	[4.82]	12	[4.86]	30	[2.92]	29	[3.06]	9	[21]	9	[22]
Netherlands	NL	14	[4.67]	17	[4.64]	19	[3.51]	21	[3.36]	9	[21]	9	[22]
Portugal	PT	15	[4.64]	14	[4.74]	17	[3.71]	18	[3.89]	12	[14]	14	[14]
Iceland	IS	18	[4.54]	25	[4.50]	77	[1.53]	90	[1.47]	92	[1]	97	[1]
Ireland	IE	19	[4.53]	23	[4.53]	31	[2.82]	33	[2.91]	71	[2]	75	[2]
Norway	NO	20	[4.52]	18	[4.64]	45	[2.22]	47	[2.22]	34	[6]	30	[7]
Belgium	BE	21	[4.51]	21	[4.54]	18	[3.67]	17	[4.09]	19	[11]	18	[12]
Finland	FI	22	[4.47]	33	[4.40]	48	[2.13]	54	[2.09]	34	[6]	36	[6]
Sweden	SE	23	[4.45]	20	[4.55]	29	[2.93]	32	[2.97]	14	[14]	15	[14]
Luxembourg	LU	26	[4.38]	28	[4.49]	66	[1.62]	68	[1.74]	92	[1]	97	[1]
Denmark	DK	27	[4.38]	31	[4.43]	46	[2.18]	43	[2.28]	58	[3]	47	[5]
Greece	GR	31	[4.36]	24	[4.51]	32	[2.82]	27	[3.08]	10	[16]	10	[17]
Croatia	HR	33	[4.30]	32	[4.42]	36	[2.67]	39	[2.77]	34	[6]	30	[7]
Cyprus	CY	36	[4.25]	52	[4.02]	56	[1.88]	64	[1.78]	58	[3]	61	[3]
Czech Republic	CZ	37	[4.22]	39	[4.22]	42	[2.30]	42	[2.41]	16	[12]	18	[12]
Estonia	EE	38	[4.22]	37	[4.23]	73	[1.55]	78	[1.59]	71	[2]	75	[2]
Slovenia	SI	39	[4.17]	41	[4.18]	95	[1.40]	92	[1.46]	71	[2]	75	[2]
Malta	MT	40	[4.16]	36	[4.25]	90	[1.44]	88	[1.49]	58	[3]	61	[3]
Hungary	HU	41	[4.14]	49	[4.06]	44	[2.22]	45	[2.27]	30	[7]	30	[7]
Russia	RU	45	[4.08]	43	[4.15]	21	[3.32]	25	[3.23]	10	[16]	11	[16]
Poland	PL	47	[4.08]	46	[4.11]	35	[2.77]	36	[2.84]	15	[13]	16	[13]
Bulgaria	BG	49	[4.05]	45	[4.14]	54	[1.96]	52	[2.12]	30	[7]	30	[7]
Latvia	LV	53	[4.01]	54	[3.97]	106	[1.33]	98	[1.41]	71	[2]	75	[2]
Lithuania	LT	59	[3.88]	56	[3.91]	80	[1.50]	87	[1.50]	51	[4]	55	[4]
Slovak Republic	SK	61	[3.84]	59	[3.90]	94	[1.42]	84	[1.53]	45	[5]	47	[5]
Romania	RO	66	[3.78]	68	[3.78]	49	[2.07]	46	[2.27]	34	[6]	36	[6]
Montenegro	ME	67	[3.75]	72	[3.68]	134	[1.09]	132	[1.11]	92	[1]	75	[2]
Macedonia	MK	82	[3.50]	89	[3.49]	110	[1.30]	105	[1.35]	120	[1]	120	[1]
Serbia	RS	95	[3.34]	95	[3.38]	67	[1.61]	71	[1.65]	51	[4]	47	[5]
Albania	AL	106	[3.22]	98	[3.35]	127	[1.14]	131	[1.14]	71	[2]	75	[2]
Moldova	MD	111	[3.16]	117	[3.09]	135	[1.08]	129	[1.16]	92	[1]	97	[1]

Source: own processing according to data from Crotti and Misrahi (2015), Crotti and Misrahi (2017)

With the aim to find out, how strong is the relationship between each pair of selected pillars among analyzed European countries, we use converted ranking values only for these

countries (see Table 2). Some countries have the same number of world heritage cultural sites. Therefore, they can be ranked the same.

Tab. 2: European ranking of selected European countries within TTCI, CR & BT pillar and No. of WHCS subpillar

Country	TTCI Europe		CR & BT Europe		No. of WHCS Europe	
	2015	2017	2015	2017	2015	2017
ES	1	1	1	1	2	2
FR	2	2	2	2	4	3
DE	3	3	4	4	3	4
GB	4	4	5	5	5	5
CH	5	6	10	14	1	1
IT	6	5	3	3	5	6
AT	7	7	12	11	6	6
NL	8	9	8	8	8	9
PT	9	8	6	7	6	6
IS	10	15	28	31	14	13
IE	11	13	13	13	9	10
NO	12	10	19	21	12	12
BE	13	12	7	6	18	18
FI	14	19	21	23	7	7
SE	15	11	11	12	19	19
LU	16	16	25	25	19	19
DK	17	17	20	18	17	15
GR	18	14	14	10	14	13
HR	19	18	16	16	14	14
CY	20	28	24	24	17	17
CZ	21	22	17	17	18	18
EE	22	21	27	27	11	12
SI	23	23	32	32	18	18
MT	24	20	30	30	7	8
HU	25	27	18	19	13	13
RU	26	24	9	9	10	11
PL	27	26	15	15	13	13
BG	28	25	23	22	17	17
LV	29	29	33	33	18	18
LT	30	30	29	29	16	16
SK	31	31	31	28	15	15
RO	32	32	22	20	14	14
ME	33	33	36	37	19	19
MK	34	34	34	34	20	20
RS	35	35	26	26	16	15
AL	36	36	35	36	18	18
MD	37	37	37	35	19	19

Source: own calculation using data from Crotti and Misrahi (2015), Crotti and Misrahi (2017)

2.2 Methodology

As we want to measure the strength of association between two sets of ranked data, we use Spearman rank correlation coefficient (Spearman, 1904) that is computed by the formula

$$r_s = 1 - \frac{6\sum_{i=1}^{n} d^2}{n(n^2-1)}, \qquad (1)$$

where d is the difference between ranks for the paired observations and n is the number of paired observations. The significance of rank correlation is tested using test statistics in the form of

$$t = \frac{r_s}{\sqrt{(1-r_s^2)/(n-2)}}. \qquad (2)$$

In addition, we model the position of analyzed countries within each pair of considered indicators.

3   Results

First, we present results of computed correlation coefficients, using which we measured how the country's position within given subindicator influence its position within the superior indicator of travel and tourism competitiveness. We calculated relationships among European countries and also among European Union countries. Table 3 shows results of our analysis. We can see that there exist strong relationship between ranking within CR & BT pillar and ranking within overall TTCI (approx. $r_s = 0.846$ – EU, 0.815 – Europe). Moreover, there exist stronger relationship between ranking within No. of WHCS subpillar and ranking within CR & BT pillar (approx. $r_s = 0.875$ – EU, 0.9 – Europe). Weaker, but always statistically significant, is relationship between ranking within No. of WHCS subpillar and ranking within overall TTCI (approx. $r_s = 0.668$ – EU, 0.687 Europe).

**Tab. 3: Spearman rank correlation between ranking of considered indicators in the given periods**

European Union			Europe	
	CR & BT - 2015	**CR & BT - 2017**	**CR & BT - 2015**	**CR & BT - 2017**
TTCI-2015	0.8484***		0.8160***	
TTCI-2017		0.8429***		0.8141***
	No. of WHCS - 2015	**No. of WHCS - 2017**	**No. of WHCS - 2015**	**No. of WHCS - 2017**
TTCI-2015	0.6350***		0.6511***	
TTCI-2017		0.7005***		0.7224***
	No. of WHCS - 2015	**No. of WHCS - 2017**	**No. of WHCS - 2015**	**No. of WHCS - 2017**
CR & BT - 2015	0.8609***		0.8931***	
CR & BT - 2017		0.8896***		0.9079***

Source: own processing in R

Note: Subscripts ***, **, *, denote significance at the 1%, 5%, and 10% significance levels, respectively.

Subsequently, we model the position of analyzed European countries within each pair of considered indicators in Figure 1. This figure confirms that the strongest relationship has been proven between ranking within No. of WHCS subpillar and CR & BT pillar in 2017 (bottom right) ($r_s = 0.9079$). Besides that, we can see, the most coincident positions within given pair of indicators have countries that are in front of the ranking, mainly Spain, France, Germany, United Kingdom, Switzerland, Italy, Austria, Netherlands, and Portugal.

Fig. 1: Position of analyzed European countries within each pair of considered indicators
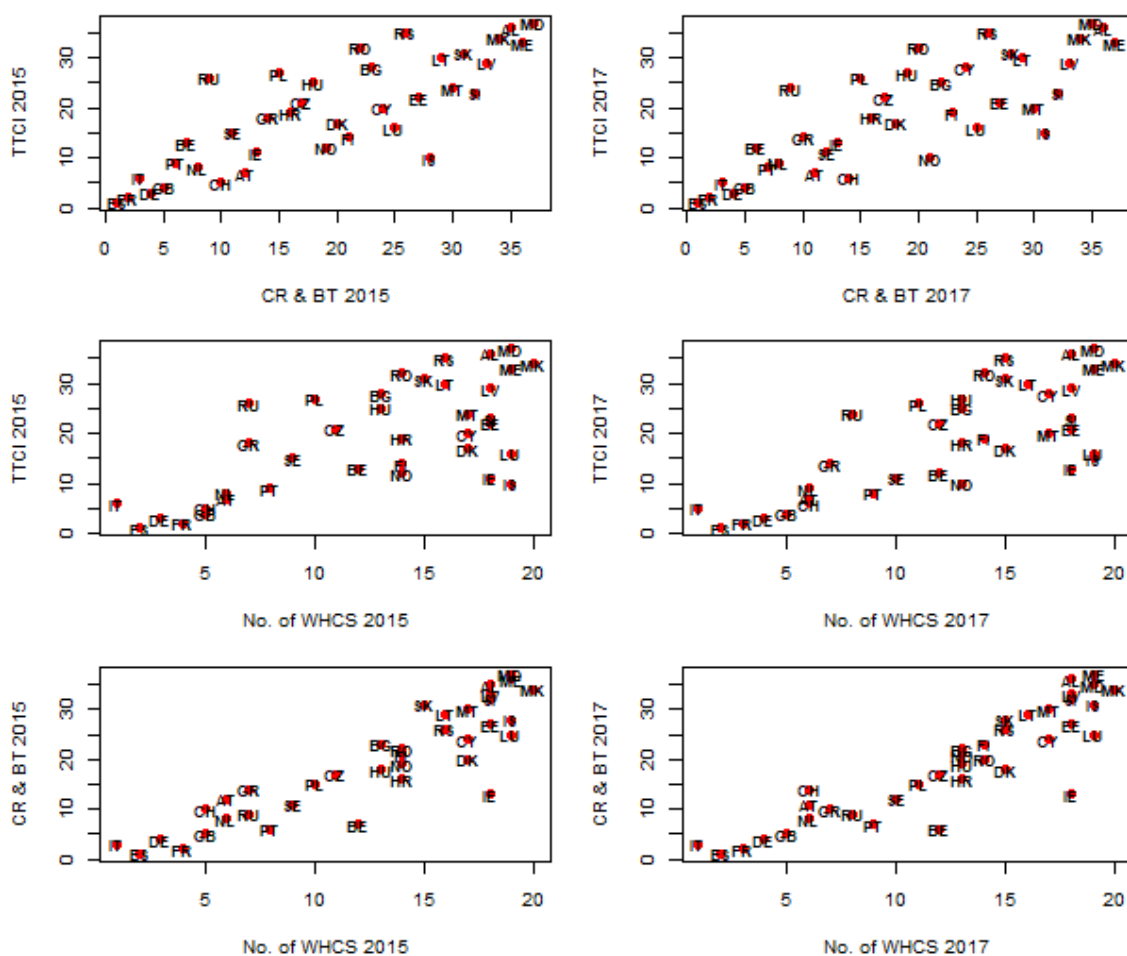
Source: own processing in R

The results have shown that the country's position in terms of travel and tourism competitiveness is largely influenced by indicators related to culture. It is necessary to note that CR & BT pillar is composed not only of No. of WHCS subpillar, but also of further subpillars, namely Oral and Intangible Cultural Expressions, Large Sports Stadiums,

International Association Meetings, and Cultural and Entertainment Tourism Digital Demand. Nevertheless, impact of indicator described Number of World Heritage Cultural Sites on Cultural Resources and Business Travel is considerable.

According to the aim of this paper, we can summarize that the impact of Cultural Resources and Business Travel pillar on TTCI and at the same time the impact of Number of World Heritage Cultural Sites subpillar on TTCI among selected European countries has been proven.

Conclusion

People have always travelled for various reasons. In this article, we focused specifically on cultural motives, while one of them can be visiting various cultural sites. Consequently, a country with cultural sites has a remarkable competitive advantage. Competitiveness is a new challenge for the tourism sector (Alberti & Giusti, 2012). Therefore, managing tourism competitiveness has become a major focus of policymakers and strategic management researches.

As mentioned, one of the appropriate indicators of tourism competitiveness is the Travel and Tourism Competitiveness Index. This index consists of various indicators, while some of them are indicators connected with the cultural aspects of a country. Unique cultural attractions have a significant role in tourism competitiveness. Our analysis has shown that there is a relationship between tourism and cultural resources, respectively cultural heritage. As we have demonstrated in this paper, how closely the overall TTCI is linked to the No. of WHCS pillar, we consider the proper management of this area to be important. Designation of a destination as a World Heritage is a powerful marketing tool pulling tourists in the country. Despite the all positives, the sustainability criterion should not be forgotten. An increase in competitiveness and at the same time an increase in the number of tourists have also "the negative concomitants" (Stefko, Jencova, & Litavcova, 2013, p. 286) and can damage the current state of the World Heritage sites. It means, extreme tourism flows can threaten the main objective of UNESCO World Heritage Program that is heritage preservation. In particular, we consider its protection, safeguard, and maintenance for future generations to be a priority.

It is important to note, our research has several limitations. We are aware of the fact that tourism competitiveness is not only influenced by the area of culture. Other indicators

included in the overall TTCI calculation influence it too. In this paper, we point out, in particular, that the influence of cultural aspects is remarkably quite significant.

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References

Alberti, F. G., & Giusti, J. D. (2012). Cultural heritage, tourism and regional competitiveness: The Motor Valley cluster. *City, culture and society*, 3(4), 261-273.

Algieri, B., Aquino, A., & Succurro, M. (2018). International competitive advantages in tourism: an eclectic view. *Tourism management perspectives*, 25, 41-52.

Canale, R. R., De Simone, E., Di Maio, A., & Parenti, B. (2019). UNESCO World Heritage sites and tourism attractiveness: The case of Italian provinces. *Land Use Policy*, 85, 114-120.

Correia, A., Kozak, M., & Ferradeira, J. (2013). From tourist motivations to tourist satisfaction. *International Journal of Culture, Tourism and Hospitality Research*, 7(4), 411-424.

Crotti, R., & Misrahi, T. (2015). *The Travel & Tourism Competitiveness Report 2015: T&T as a Resilient Contribution to National Development.* Geneva: World Economic Forum.

Crotti, R., & Misrahi, T. (2017). *The Travel & Tourism Competitiveness Report 2017. Paving the Way for a More Sustainable and Inclusive Future*. World Economic Forum: Geneva.

Kalina, J., Vašaničová, P., & Litavcová, E. (2019). Regression Quantiles under Heteroscedasticity and Multicollinearity: Analysis of Travel and Tourism Competitiveness. *Ekonomický časopis* (*Journal of Economics*), 67(1), 69-85.

Kim, H., Oh, C. O., Lee, S., & Lee, S. (2018). Assessing the economic values of World Heritage Sites and the effects of perceived authenticity on their values. *International Journal of Tourism Research*, 20(1), 126-136.

Kiseľáková, D., Šofranková, B., Čabinová, V., & Onuferová, E. (2018). Competitiveness and sustainable growth analysis of the EU countries with the use of Global Indexes' methodology. *Entrepreneurship and Sustainability Issues*, 5(3), 581-599.

Richards, G. (2018). Cultural tourism: A review of recent research and trends. *Journal of Hospitality and Tourism Management*, 36, 12-21.

Santa-Cruz, F. G., & López-Guzmán, T. (2017). Culture, tourism and World heritage sites. *Tourism Management Perspectives*, 24, 111-116.

Spearman, C. (1904). The proof and measurement of association between two things. *American journal of Psychology*, 15(1), 72-101.

Stefko, R., Jencova, S., & Litavcova, E. (2013). Selected aspects of marketing pilgrimage sites. *Polish Journal of Management Studies*, 8, 280-287.

Timothy, D. J. (2011). *Cultural heritage and tourism: An introduction*. Bristol: Channel View Publications.

Vašaničová, P., Litavcová, E., Jenčová, S., & Košíková, M. (2017). Dependencies between Travel and Tourism Competitiveness Subindexes: The Robust Quantile Regression Approach. In T. Loster, & T. Pavelka (Eds.), *The 11th International Days Of Statistics And Economics: Conference Proceedings* (pp. 1729-1739). Slaný: MELANDRIUM.

Vašaničová, P., Litavcová, E., & Jenčová, S. (2018). Evaluation of Health and Hygiene Subindex of Travel and Tourism Competitiveness Index within V4 Countries. In *5th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2018* (pp. 283-290). Sofia: Alexander Malinov.

Yang, Y., Xue, L., & Jones, T. E. (2019). Tourism-enhancing effect of World Heritage Sites: Panacea or placebo? A meta-analysis. *Annals of Tourism Research*, 75, 29-41.

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