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Velina Kazandzhieva[1]

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ENHANCING THE COMPETITIVENESS OF DESTINATION BULGARIA THROUGH DIGITAL TRANSFORMATION IN TOURISM

The relevance of this paper is determined by the dynamic competitive environment of the international tourist markets and the necessity for seeking possibilities for increasing the competitive advantages of Bulgaria as a destination. One of these possibilities is through a digital change of the tourist sector in our country. The research goal in the article is to make an analysis and assessment of the competitiveness of destination Bulgaria, together with defining directions for enlarging it through digital transformation in tourism. In analysing and synthesising for the goals of assessing the competitive positions of Bulgaria as a tourist destination, there are applied the approaches of induction, deduction and glocalisation. The publication is based on the methodology of determining the Travel and tourism competitiveness index of the World Economic Forum. Particular suggestions and recommendations are made for the digital transformation of the tourist sector in Bulgaria on a macro- and micro level. Guiding and stimulating the processes of digital transformation in the various sectors of the national economy, incl. those in tourism, have to be carried out by the state, its governmental authorities and responsible institutions, the respective enterprises and organisations.

JEL: Z32; O33

Introduction

Modern tourism is a phenomenon with strongly explicit socio-economic nature. Moreover, even in the COVID-19 pandemic conditions, tourism keeps on being a phenomenon with a significant role and essential importance for the social development and global economy. Despite the unprecedented crisis and the threat of businesses gone bankrupt, tourism needs to adjust, with a fast rate at that, to turbulent and contradictory conditions. This is the only way for it to withstand the challenges, to offer safe and secure travels and vacations with high quality of the tourist experience. Actually, closing boundaries in the first half of 2020 and pausing trips, including tourist ones, lead to the loss of tens of millions of jobs, followed by a collapse in road transport servicing nearly 60% of tourism flows. Apart from it, tourism water travels stopped as well, which caused anchoring cruise ships for a long period of time

[1] *Assoc. Prof. Velina Kazandzhieva, PhD, Economics and Organisation of Tourism Department, University of Economics – Varna, e-mail: velina_kaz@ue-varna.bg.*

(Rakadzhiyska, 2020). As a consequence, the considerable shrinking of tourist activities resulted into a big limitation of the business of numerous suppliers of basic and additional goods and services for the tourist companies such as: foods, drinks and equipment; cosmetics and souvenirs; entertainment and attractions.

As one of the world's largest economic sectors, in 2019 the travel and tourism industry support 1 in 10 jobs worldwide (WTTC, 2020). Moreover, the sector generates 10.3% of global GDP and experienced 3.5% growth, outpacing the world economic growth of 2.5% for the 9th consecutive year with 1,462 million international tourist arrivals (UNWTO, 2020). In the last five years, 1 in 5 new jobs was created by the sector, making tourism industry the most effective tool for national economies to generate employment (WTTC, 2019). Thus, the total impact of tourism in 2019 (direct, indirect, induced effects) accounted for: USD 8.9 trillion contributions to the world's GDP; 330 million jobs; USD 1.7 trillion visitor exports (nearly 7% of total exports, over 28% of global services exports); USD 948 billion capital investment, 4.3% of total investment.

The economic indicators for tourism in the last decade, before the current pandemic, define it as a major category of international trade in services. As a worldwide export industry, tourism ranks third after chemicals and fuels, before automotive products and food. Nowadays the travel and tourism industry is the top export category in many developing countries. Tourism represents 40% of services exports, for emerging economies, well above the 30% world average. Total export revenues from international tourism grew faster than merchandise exports (UNWTO, 2019, p. 8). Besides, the sector is a crucial component of export diversification for emerging and advanced economies.

A characteristic feature of the global tourist market today is the clearly expressed competition between particular destinations in their aspiration to attract even more visitors and increase their market share and revenues from tourism all the time. Countries compete intensely not only in respect to the volume of tourist flows, but also with respect to the national economic prosperity and welfare of local people. Besides, globalisation and liberalisation of international trade sharpen competition on various levels even more: branch, national, regional and world. That is why, national competitiveness is a relevant issue of research and its scientific interpretation in the aspect of macroeconomics aims at searching for strategic possibilities for development and enhancement.

The circumstances and facts presented above determine the significance and importance of the chosen topic. The ground for its ***relevance*** lies in the dynamic competitive environment of the international tourist markets and the need of searching for opportunities to increase the competitive advantages of Bulgaria as a destination. That is why the ***subject*** of this paper is improving the competitiveness of tourism through digital transformation. The ***object*** of research is the tourist competitiveness of our country and the ways of enhancing it through digitalisation in the tourist sector. ***The scientific-and-research objective*** of the paper is: to analyse and evaluate the competitiveness of destination Bulgaria and make suggestions for enhancing it through digital transformation in tourism. To achieve the formulated goal the following ***research tasks*** have been completed:

- defining the competitiveness of a tourist place and determining the essence of digital transformation;

- survey and assessment of the tourist competitiveness of Bulgaria in terms of key indicators, incl. those that concern the “ICT readiness” criterion *the implementation of which determines the opportunities for digital transformation in tourism*;
- systematisation of suggestions and recommendations on macro and micro levels for a digital transformation of the tourist sector in our country.

To complete the set goal and the above-mentioned research tasks, the following ***methods of research*** have been used:

- a scientific *literature* review for defining basic concepts concerning the subject of research in the paper;
- analysis and synthesis for assessing the competitive positions of destination Bulgaria through the methodology for determining the travel and tourism competitiveness index (TTCI), incl. a comparative characteristic with rival destinations;
- glocal approach in assessing information and data for the condition and dynamics of global tourism and the local level and the peculiarities of the tourist sector in Bulgaria;
- the approach of induction and deduction for analysing results in terms of separate indicators of the competitiveness index, tendencies and conclusions about relevant circumstances and factors which determine the level of development of Bulgarian tourism.

Literature Review

Competitiveness is a concept of multi-aspect and complex nature which is well discussed in the context of tourist destinations. Researchers often cite the definition of Ritchie and Crouch (2003, p. 2), which says that a really competitive destinations are able to “increase tourism expenditure, to increasingly attract visitors, while providing them with satisfying, memorable experiences, and to do so in a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations.” Dwyer and Kim (2003, p. 372) add that the main goal of the competitiveness of a destination is “to maintain and increase the real income of its citizens, usually reflected in the standard of living of the country.”

The plentiful definitions of competitiveness are based on its structure and elements; most often they focus on users’ satisfaction, the quality of tourist services, the economic and social benefits, sustainable development and others. It is accepted that destinations with a high degree of competitiveness attract larger tourist flow and visitors make bigger expenses in tourist sites (Webster, Ivanov, 2014). In most cases, these facts cause the respective increase of GDP and stimulate economic growth in the destinations, which, in turn, has an impact also on the improved economic welfare of the local population. The key advantages of tourism as a socio-economic phenomenon pointed out above determine the necessity for directing, allocating and investing considerable public resources for increasing the tourist flow to destinations through stimulation and enhancement of their competitiveness.

Broadly accepted by researches is the definition of competitiveness in tourism of the Organization for Economic Co-operation and Development (OECD), which says that: "tourism competitiveness of a destination is about the ability of the place to optimise its attractiveness for residents and non-residents, to deliver quality, innovative and attractive (e.g. providing good value for money) tourism services to consumers and to gain market shares on the domestic and global market places, while ensuring that the available resources supporting tourism are used efficiently and in a sustainable way" (Dupeyras and MacCallum, 2013, p. 7). In compliance with the objectives and tasks of this publication, we accept the cited definition as a ground for ensuing analyses and assessments. For surveying the competitiveness of a destination, OECD defines a set of 11 key indicators classified in four basic categories for (Dupeyras and MacCallum, 2013, p. 17):

- measuring tourism performance and impacts – tourism direct gross domestic product, inbound tourism revenues per visitor by source market, overnights in all types of accommodation, exports of tourism services;
- monitoring the ability of a destination to deliver quality and competitive tourism services – labour productivity in tourism services, purchasing power parity and tourism prices, country entry visa requirements;
- monitoring the attractiveness of a destination – natural resources and biodiversity, cultural and creative resources, visitor satisfaction;
- describing policy responses and economic opportunities – national tourism action plan.

The World Travel and Tourism Council (WTTC) and the World Economic Forum (WEF) periodically publish reports on the competitiveness of destinations which are made on the ground of the presented methodological framework. The results in the reports are especially important for determining the guidelines for the development of tourism because they point out the advantages and disadvantages of the sector on national and regional levels.

Unlike the publications on tourist competitiveness, research works in the field of digital transformation are rarely spread. Most papers concern the digitalisation of information and focus mainly on technological innovations rather than the caused changes on a national and organisational level (Henriette, Mondher and Boughzala, 2015). Also, there are a limited number of researches on implemented projects for digital transformation and a more accurate way of determining the manner of managing the changes in a digital environment, identifying and guiding costs in these processes.

According to Stolterman and Fors (2014), digital transformation refers to all aspects of society and the ensuing changes as a consequence of the application of digital technologies for its development. Bounfour (2016, p. 20) defines digital transformation as "a new development in the use of digital artefacts, systems and symbols within and around organisations". For Tolboom (2016, p. 3) it is a set of the changes caused by digital technologies in various aspects of human life. Because of a missing universal definition of digital transformation, in this publication, we accept that it is an integral and complex process which contributes to increasing the level of digitalisation of organisations, sectors and national economies in compliance with the relevant technological tendencies and innovations.

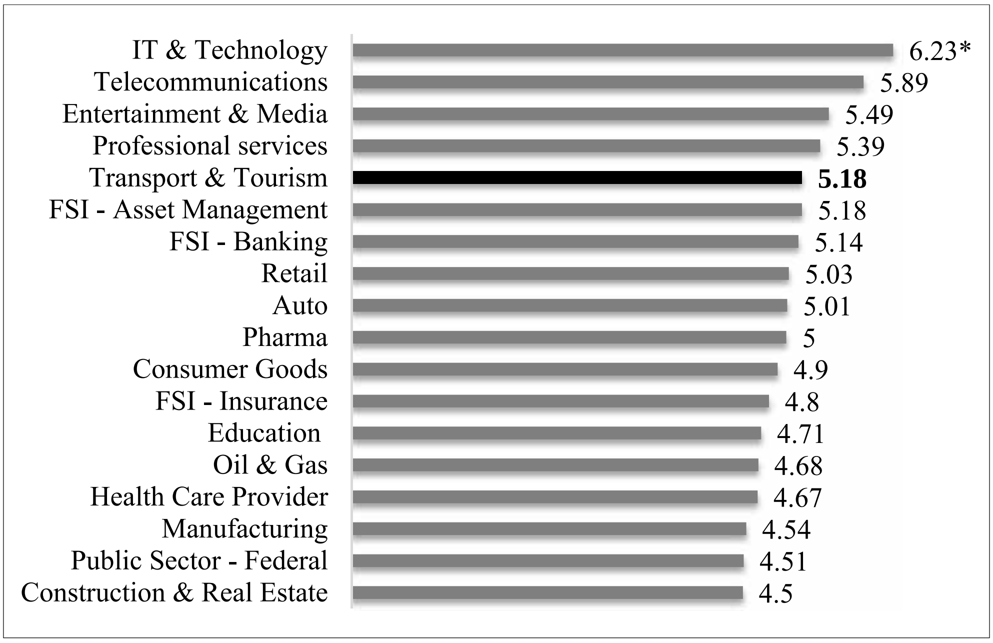
By large, the consequences of digital transformation can be grouped in macro- and micro-level (Bounfour, 2016). In the first aspect, there are analysed the effects and impacts of Internet and modern ICT on the economic growth on a national level. From a macro *perspective,* digital transformation is a process of expanding the application of Internet and technological achievements in particular sectors of the national economy of a country. The process has a different contribution to the performance and development of economic branches and has a specific impact on the overall condition of a national economy. In the micro aspect, digital transformation is analysed and assessed on the organisational (corporate) level. In this case, it is defined as the use of modern technologies for radical improvement of organisations' activities, i.e. the level of their digital maturity is evaluated. Irrespective of the aspects for assessing digital transformation, its influence is significant and leading, that is why it is defined as a peculiar industrial revolution (Degryse, 2016; Tihinen, Iivari, Ailisto et al., 2016).

As an integral process, digital transformation encompasses many economic sectors in a large number of countries. A global survey of MIT Sloan Management Review and Deloitte's shows, that as a result of this global process the sectors have different degrees of maturity (Kane, Palmer, Philips et al., 2015). Tourism, together with transport, is among the leading industries worldwide by the criteria "digital maturity" and ranks fifth, i.e. a little above the average degree of digital maturity (Figure 1). Also, according to the survey, tourism is among the leading industries in using digital technologies for maintaining better relations with clients and professional communication among employees in tourist companies. The results of the global research present that digital qualities "strategy to transform" and "manager encourages use" are the qualities, where the travel and tourism industry is among the five most digitally matured sectors. Nevertheless, other digital qualities like "clear strategy", "skills provided" and "leaders have skills", rank tourism at lower positions. These three digital qualities are areas that can be significantly transformed in order to improve the overall digitisation of the travel and tourism. This would contribute to enhancing the competitiveness of the entire tourism sector.

Digital transformation is not a new phenomenon for the sector of tourism. The global electronic tourist system formed currently results from four consecutive periods of digitalisation of travel and tourism: the GDSs period (1960-1995), the Internet period (1995-2000), the SoLoMo period (2000-2012) and the hybrid one (from 2013 onwards). On a national level, digital transformation has considerable potential for generating and stimulating economic growth, thus increasing the national competitiveness. Destinations with a developed digital economy, incl. the field of tourism and travel accumulate 20% more economic benefits compared to those with digitalisation in an initial stage (Sabbagh, Friedrich, Darwiche et al., 2012, p. 121). Through digitalisation, there can be achieved greater transparency and effectiveness in the activity of central and local authorities in managing and regulating tourism on various levels.

Figure 1

Digital maturity by industries



* Note: Average value from the answers for a particular sector. The respondents have ranked each sector on a 10-point scale, 1 being the lowest degree of digital maturity and 10 – the highest.

Source: Created by the author, based on Kane, Palmer, Philips et al., 2015.

Data and Methods

For assessing the competitiveness of Bulgaria as a destination, the travel and tourism competitiveness index (TTCI) is used. Its methodology is based on the "Competitiveness monitor" developed by the World Travel and Tourism Council (WTTC). Since 2007 the World Economic Forum (WEF), by a parallel with the Global competitiveness index, has been publishing a biannual TTCI Report. For the goals of this publication, we have tracked and analysed the changes in the results for 2015, 2017 and 2019. In its essence, TTCI is a synthetic indicator designed for measuring a set of critical factors and policies that allow for tracking the sustainable development of the sector of travel and tourism. The growing consumption of services and products in the sector contributes significantly to the long-term expansion and enhancement of the competitiveness of each country. Since competitiveness has relative nature, in studying and assessing it in respect to destination Bulgaria a comparative analysis as a basic method of research has been used.

The methodology for determining TTCI includes 4 sub-indexes comprising 14 pillars and 90 individual indicators (quantitative and qualitative) altogether for each country (Table 1). The indicators are calculated on the basis of primary data from the survey (executive opinion survey conducted by the WEF) and from other public sources, the so-called non-survey (secondary) data: World development indicators database; Global health observatory data repository; UNESCO institute for statistics and World heritage list; ILOSTAT database; World telecommunication indicators; Tourism satellite account research; UNWTO database; Country brand ranking; Environmental performance index; SRS analyser and IRF world road statistics; World database on protected areas. The survey data ranges in value, using a 7-point scale (1 worst – 7 best).

Table 1

The travel and tourism competitiveness index framework

Subindexes	Pillars	Individual Indicators
I. Enabling environment (25% weight)	*1. Business environment* (5% weight)	1.1 Property rights; 1.2 Impact of rules on FDI; 1.3 Efficiency of legal framework in settling disputes; 1.4 Efficiency of legal framework in challenging regulations; 1.5 Time required to deal with construction permits; 1.6 Cost to deal with construction permits; 1.7 Extent of market dominance; 1.8 Time required to start a business; 1.9 Cost to start a business; 1.10 Extent and effect of taxation on incentives to work; 1.11 Extent and effect of taxation on incentives to invest; 1.12 Total tax rate.
	2. Safety and security (5% weight)	2.1 Business costs of crime and violence; 2.2 Reliability of police services; 2.3 Business costs of terrorism; 2.4 Index of terrorism incidence; 2.5 Homicide rate.
	3. Health and hygiene (5% weight)	3.1 Physician density; 3.2 Access to improved sanitation; 3.3 Access to improved drinking water; 3.4 Hospital beds 3.5 HIV prevalence; 3.6 Malaria incidence.
	4. Human resources and labour market (5% weight)	Qualification of the labour force: 4.1 Primary education enrolment rate; 4.2 Secondary education enrolment rate; 4.3 Extent of staff training; 4.4 Treatment of customers. Labour market: 4.5 Hiring and firing practices; 4.6 Ease of finding skilled employees; 4.7 Ease of hiring foreign labour; 4.8 Pay and productivity; 4.9 Female labour force participation
	5. ICT readiness (5% weight)	5.1 ICT use for B2B transactions; 5.2 Internet use for B2C transactions; 5.3 Individuals using the Internet; 5.4 Broadband internet subscribers; 5.5 Mobile telephone subscriptions 5.6 Mobile broadband subscriptions; 5.7 Mobile network coverage; 5.8 Quality of electricity supply.
II. Travel and tourism policy and enabling conditions (25% weight)	*6. Prioritisation of travel and tourism* (6.25% weight)	6.1 Government prioritisation of the T&T industry; 6.2 T&T government expenditure; 6.3 Effectiveness of marketing to attract tourists; 6.4 Comprehensiveness of annual T&T data; 6.5 Timeliness of providing monthly/ quarterly T&T data; 6.6 Country Brand Strategy rating
	7. International openness (6.25% weight)	7.1 Visa requirements; 7.2 Openness of bilateral Air Service Agreements; 7.3 Number of regional trade agreements in force.
	8. Price competitiveness (6.25% weight)	8.1 Ticket taxes and airport charges; 8.2 Hotel price index; 8.3 Purchasing power parity; 8.4 Fuel price levels.
	9. Environmental sustainability	9.1 Stringency of environmental regulations; 9.2 Enforcement of environmental regulations; 9.3

Subindexes	Pillars	Individual Indicators
	(6.25% weight)	Sustainability of travel and tourism industry development; 9.4 Particulate matter (2.5) concentration; 9.5 Number of environmental treaty ratifications; 9.6 Baseline water stress; 9.7 Threatened species; 9.8 Forest cover change; 9.9 Waste water treatment; 9.10 Coastal shelf fishing pressure.
III. Infrastructure (25% weight)	*10. Air transport infrastructure* (8.33% weight)	10.1 Quality of air transport infrastructure; 10.2 Available seat km, domestic; 10.3 Available seat km, international; 10.4 Aircraft departures; 10.5 Airport density; 10.6 Number of operating airlines.
	11. Ground and port infrastructure (8.33% weight)	11.1 Quality of roads; 11.2 Quality of railroad infrastructure; 11.3 Quality of port infrastructure; 11.4 Quality of ground transport network; 11.5 Railroad density; 11.6 Road density; 11.7 Paved road density.
	12. Tourist service infrastructure (8.33% weight)	12.1 Hotel rooms; 12.2 Extension of business trips recommended; 12.3 Presence of major car rental companies; 12.4 ATMs.
IV. Natural and cultural resources (25% weight)	*13. Natural resources* (12.5% weight)	13.1 Number of World Heritage natural sites; 13.2 Total known species; 13.3 Total protected areas; 13.4 Natural tourism digital demand; 13.5 Quality of the natural environment.
	14. Cultural resources and business travel (12.5% weight)	14.1 Number of World Heritage cultural sites; 14.2 Number of oral and intangible cultural heritage expressions; 14.3 Number of sports stadiums; 14.4 Number of international association meetings; 14.5 Cultural and entertainment tourism digital demand.

Source: Created by the author.

The travel and tourism competitiveness index (TTCI) is calculated as an average (arithmetic mean) of the 4 sub-indexes and their pillars. Each pillar is an unweighted average of the individual component variables. The fourth pillar “Human resources and labour market” is the unweighted average of its two sub-pillars: “Qualification of the labour force” and “Labour market”. As the sub-indexes are more directly linked to tourism, the number of pillars per sub-index decreases, but pillar weights increase (e.g. pillar 12 “Tourist service infrastructure”). The non-survey data are normalised to the 7-point scale too. Each secondary indicator is converted to the scale with a standard formula. There are some indicators for which the higher value presents a worse result (e.g. “cost of starting a business”, “fuel price levels”, “tax rate”, “hotel price index”, “purchasing power parity”). In this case, a normalisation formula is used to convert the data to the 7-point scale and reverses it so that 1 corresponds to the worst and 7 to the best result (Table 2).

The methodology of TTCI is not accepted completely unconditionally by experts in tourism. It is criticised mainly in respect to: the possibilities for enlarging the primary sources of information outside the survey carried out by WEF; the theoretical grounds of some variables; the lack of reporting the size of the territory of separate countries (Vanhove, 2018). Irrespective of the notes mentioned above, for the goals of this publication the TTCI methodology is accepted to be representative enough, comprehensive and well-grounded in order to be used for assessing the competitiveness of Bulgaria as a destination. The separate variables are analysed for the time period 2015 – 2019. In addition, results have been analysed concerning eight individual indicators constructing the fifth pillar "ICT readiness "in the first sub-index ("Enabling environment"). Besides, a comparative analysis has been made of the positions of destination Bulgaria according to the particular indicators in the pillar in respect to Greece, Turkey, Croatia, Austria and Slovenia. These countries are defined as competitive in the field of tourism, the criteria for selecting them being: offering similar tourist products; similarity in respect to price placement; geographic proximity to markets that generate tourists; available resources similar in type (even though different in volume); attracting similar tourist flow; expert opinion and assessment, reported in the Updated national strategy for sustainable development of tourism in Bulgaria (2014-2030).

Table 2

Formulas to calculate TTCI

STANDARD FORMULA (indicators of stimulating impact)	NORMALISATION FORMULA (indicators of reducing impact)
$6\text{x}\left(\frac{country\ score - lowest\ score\ of\ the\ sample}{highest\ score - lowest\ score\ of\ the\ sample}\right) + 1$	$-6\ \text{x}\left(\frac{country\ score - lowest\ score\ of\ the\ sample}{highest\ score - lowest\ score\ of\ the\ sample}\right) + 7$

Source: Created by the author, based on the Methodology of the TTCI 2019.

Applying the WEF methodology for estimating TTCI makes easier the process of monitoring separate criteria, the analysis of changes in their condition and the way of determining possible guidelines for improvement. In this way, the indicative presentation of the tourist industry of each country supports the identification of the favourable and unfavourable aspects of competitiveness not only of the tourist sector, but of the respective national economy as well.

Results and Discussions

The tourist industry in Bulgaria has a significant impact on the economy of the country which is confirmed by the values of key indicators in respect to the volumes of the tourist flow, the revenues from tourism and the contribution of the sector in terms of GDP and employment, according to data from the TTCI Report of WEF for 2019 (Table 3). Yet, in reality, for a decade (2009-2019) the number of international tourist arrivals has increased by nearly 55% (5783783 in 2009, Ministry of Tourism), while the overall contribution of travel and tourism to GDP is about 13% and the direct effect – 3.1%. Despite the significant rise of international tourists in Bulgaria, the market share of the destination is only 1.3% for the international tourist visits made and 0.8% for the generated revenues. To make a comparison, the rival countries have market shares according to the respective indicators as follows: Turkey – 6.4% and 4.4%; Greece – 4.7% and 3.3%; Austria – 3.4% and 4%; Croatia – 2.3% and 2.1%; Slovenia – 0.6% and 0.6% (UNWTO, Highlights, 2019, p. 18). Data show that with the exception of Slovenia, the country loses competitive positions as a destination. Therefore, the considerable increase of tourist visits for a single decade does not have the respective positive effects and impacts on the condition of the tourist sector and the national economy.

Table 3

Travel and tourism industry of Bulgaria (2019 edition)

KEY INDICATORS	VALUE
International tourist arrivals	8,883,000
International tourism inbound receipts	USD 4,045.0 million
Average receipts per arrival	USD 413.5
Travel and tourism industry GDP	USD 2,026.9 million
Travel and tourism industry share of GDP %	3.1
Travel and tourism industry employment % of total	93,000 jobs 2.9

Source: Created by the author. Data from the TTCI Report, 2019 (WEF).

In conditions of the world tourist industry growing faster than the global economy (until the start of 2020), the tourist business in Bulgaria is not taking enough advantage for development from the favourable environment. This reflects even more also on the level of competitiveness of the destination. The values of TTCI for 2019 show that our country ranks 45th (out of 140 countries) with the result of 4.2 (out of 7 maximum). In comparison with the leaders Spain, France, Germany and Japan with the result of 5.4 (for each country), one can evaluate the position of Bulgaria in respect to the competitiveness of the tourist sector as a good one. Irrespective of this fact, though, tracking the results of TTCI in 2015 shows stagnation, a lack of a significant positive change and development, no matter the rise (four positions up) in the general ranking (Table 4). Actually, this means that in the course of the four-year period (2015-2019) there have been made no significant improvements in the sphere of economy and the separate indicators, directly and indirectly tied with travel and tourism, as a juxtaposition with the large increase of the tourist flow to our country in the last decade.

Table 4

TTCI performance for Bulgaria

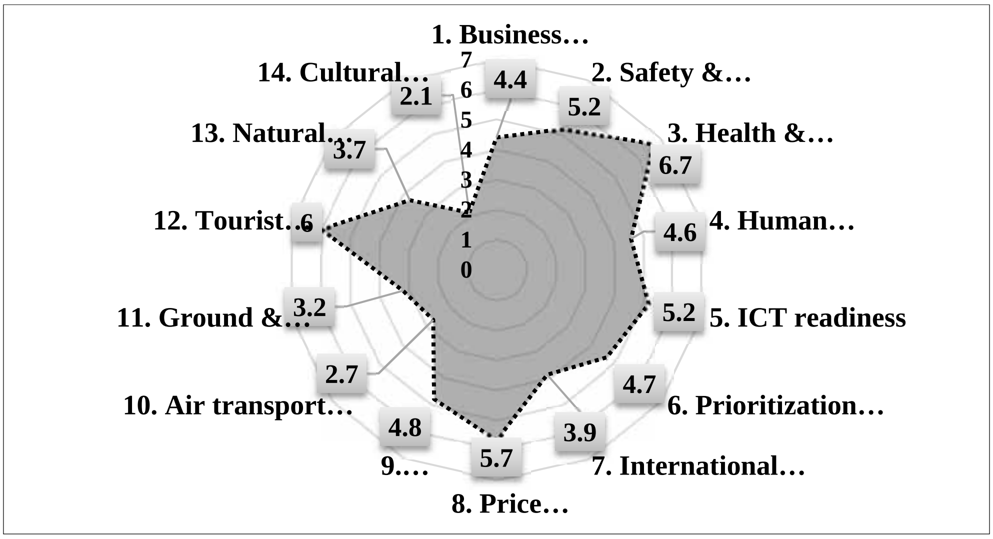
TRAVEL AND TOURISM COMPETITIVENESS EDITION	2019	2017	2015
Rank	45 (out of 140)	45 (out of 136)	49 (out of 141)
Overall Score 1–7 (best)	4.2	4.1	4.2

Source: Created by the author. Data from the TTCI Report, 2019 (WEF).

The results in the separate sub-indexes and pillars show higher values and respectively better competitiveness according to the following five criteria: “health and hygiene” (6.7); ‘tourist service infrastructure” (6); “price competitiveness” (5.7); “ICT readiness” (5.2); “safety and security” (5.2). The lowest result, hence too limited competitiveness, is marked in the criteria “cultural resources and business travel” (2.1), “air transport infrastructure” (2.7) and “ground and port infrastructure” (3.2). The values in these criteria are even lower than the average worldwide (Figure 2).

Figure 2

2019 TTCI – Bulgaria



Source: Created by the author.

The comparison with the average EU values in the separate criteria presented in Table 5, shows that destination Bulgaria has lower results in eight pillars of TTCI (1, 2, 4, 5, 6, 10, 11 и 14), and in the remaining six ones the results are better (3, 7, 8, 9, 12 and 13). In the monitored period of time a growing level of competitiveness, without any doubts, is reported only in three criteria: "price competitiveness "(+0.6), "prioritisation of travel and tourism "(+0.5) and "ICT readiness "(+0.4). Therefore, in most indicators for destination Bulgaria, there are possibilities and a necessity for a significant perfection in the field of tourism. Increasing the values of the sub-indexes, pillars and indicators for the tourist competitiveness has a potential for enhancing the national competitive positions, incl. those in the field of economy and social development.

In order to achieve greater objectivity in assessing the competitiveness of Bulgaria as a destination, there have been analysed more important particularities of the tourist sector in the surveyed period. For Bulgarian tourism last year (2019) is characterised as very contradictory, dynamic and turbulent. The rates of development slowed down and this was felt mostly because of the stagnation on the tourist sector in our country, together with the signs of saturation in tourist demand. At the same time, against the background of the dramatic failure of the British tour operator Thomas Cook and the ensuing bankruptcy of its Bulgarian contracting party, tourism somehow managed to keep its stability. As a whole, the falls in key parameters (number of tourists, nights, tourist visits, revenues) in 2019 were minimal. However, the negative effects are still deepening because the low indicators concern the leading markets for destination Bulgaria – British, German and Russian. The possibilities for making up for the losses are minimal, at that.

Table 5

Competitiveness of destination Bulgaria by TTCI sub-indexes and pillars

Sub-Indexes & Pillars	Global Average 2019	EU Avg 2019	Bulgaria Ranking 2019 – Value (out of 140)	Bulgaria Ranking 2017 – Value (out of 136)	Bulgaria Ranking 2015 – Value (out of 141)
I. Enabling environment	**4.8**	**5.4**	**55 – 5.2**	**47 – 5.2**	**46 – 5.1**
1. Business environment	4.5	4.7	66 – 4.4	61 – 4.5	85 – 4.2
2. Safety & security	5.3	5.8	93 – 5.2	89 – 5.1	78 – 5.2
3. Health & hygiene	5.1	6.2	5 – 6.7	10 – 6.6	5 – 6.7
4. HR & labour market	4.5	5	68 – 4.6	54 – 4.7	48 – 4.7
5. ICT readiness	4.6	5.4	53 – 5.2	48 – 5.0	47 – 4.8
II. Travel & tourism policy	**4.4**	**4.6**	**27 – 4.8**	**19 – 4.6**	**22 – 4.4**
6. Prioritisation of travel & tourism	4.6	4.9	67 – 4.7	92 – 4.3	95 – 4.2
7. International openness	3.3	3.7	49 – 3.9	48 – 3.9	45 – 3.9
8. Price competitiveness	5.3	5.1	44 – 5.7	37 – 5.3	35 – 5.1
9. Environmental sustainability	4.3	4.7	19 – 4.8	11 – 5.0	27 – 4.6
III. Infrastructure	**3.5**	**4.2**	**53 – 4.0**	**53 – 3.8**	**52 – 3.9**
10. Air transport infrastructure	3.1	3.6	73 – 2.7	80 – 2.4	79 – 2.4
11. Ground & port infrastructure	3.5	4.1	76 – 3.2	73 – 3.1	79 – 3.2
12. Tourist service infrastructure	4	4.9	12 – 6.0	14 – 5.8	13 – 6.1
IV. Natural & cultural resources	**2.7**	**2.9**	**44 – 2.9**	**45 – 3.0**	**48 – 2.7**
13. Natural resources	3.1	3.1	40 – 3.7	41 – 3.8	48 – 3.4
14. Cultural resources & business travel	2.2	2.6	48 – 2.1	52 – 2.1	54 – 1.9

Source: Created by the author.

A brief analysis of the condition of Bulgarian tourism in the last couple of years according to data from the Ministry of Tourism shows that there still existed an upward tendency of development based on the inertia gathered from the high rates and good performance in the preceding couple of years. 2016 is defined as the best one for the sector, with generated record high levels in the basic parameters: 16.2% rise in the number of foreign tourists and 15.4% increase in revenues as compared to 2015 (Ministry of tourism, 2016). The following 2017 is remembered with the growth in international travels due to increased activity of low-cost airlines, thus leading to nearly 8% more tourist visits in 2017. Apart from that, cheaper flights to destination Bulgaria brought the fact that cultural tourism in an environment of attractive cultural-and-historic potential outran the traditional sea recreational tourism. The alternative forms of tourist travels are also on the rise. However, at the background of this data, the indicators about Bulgarian tourism in 2019 are rather modest and their values are too low: only 0.4% growth in tourist visits and hardly 0.02% more revenues from incoming tourism compared to 2018 (Ministry of Tourism, 2019). Moreover, the judgment that the tourist season in 2019 for destination Bulgaria was exceptionally difficult and contradictory has also been confirmed by a comparison with the neighbouring rival countries (Greece and Turkey). While they are marking upward development in tourism with 6-8%, our country is lagging behind with about 10% (Marinova, 2019).

Even though for Bulgarian tourism 2019 was a time of stagnation and no considerable growth in key indicators, the sector remained relatively stable. Unfortunately, the favourable conditions from the previous years were missed, they were not used and reconfirmed by the tourist industry. Besides, the policies implemented in the sector do not support and encourage the upward tendencies. The past year proved another interesting phenomenon about destination Bulgaria. The structure of tourist markets of importance for Bulgaria changed as a consequence of the tendency for the prevailing regional reallocation of tourist visits (Rakadziyska, 2018). There is a weak presence on behalf of leading European and non-European emitting markets like France, Italy, USA, Canada and China. Worse are the positions of Russia, Poland and the Czech Republic. The Romanian market is the leading one, followed by Greece, while Ukraine and Hungary mark growth, with 24% and 29% respectively (Ministry of Tourism, 2019). The German and British tourists rank third and seventh according to the number of tourist visits in 2019.

The stagnation on the Bulgarian tourist sector, its low competitiveness and the changed structure of the markets that were leading for the destination presuppose the objective necessity for reconsidering the national and international tourist policy. It needs to be bound with an expansion of the tourist sector in the internal and international tourist market, which is actually impossible without digital transformation in conditions of measures for social distance and isolation. Currently, the block-chain technologies, artificial intelligence, IoT (Internet of things), all platforms for hotel bookings and shared travels have been developing intensely, additionally stimulated by the activity of low-cost airlines and the cheap flights they offer. On the other hand, tourists need tourist services provided by various online channels – Internet, email, mobile applications, social media and others. These needs and attitudes are reflected in the structure and features of an even more digitalised tourist industry. Therefore, all participants in the tourist system who wish to efficiently take advantage of the opportunities in the sector and overcome the present complex challenges have to get ready and adjust to active interaction and business in a digital environment.

Undoubtedly, the process of digital transformation is defined by the level of “ICT Readiness” – a basic pillar with weight 5% in the first sub-index “Enabling environment” assessed according to eight individual indicators in the index for tourist competitiveness. The efforts for enhancing the values of each one of them have a positive influence on the competitive positions of Bulgaria as a tourist destination, as well as on its economy. According to the TTCI Report for 2019 our country has the result of 5.2 in the particular pillar which ranks it 53rd out of 140 countries (Table 6). This is a very good assessment and it is the result of a reported upward development since 2015. However, it is not enough and falls under the average for EU.

Table 6

Position of destination Bulgaria –"ICT Readiness" pillar and indicators

Ict Readiness Pillar & Indicators (Sub-Index I. Enabling Environment)	Global Average 2019	EU Avg 2019	Bulgaria Ranking 2019 – Value (out of 140)	Bulgaria Ranking 2017 – Value (out of 136)	Bulgaria Ranking 2015 – Value (out of 141)
ICT readiness	**4.6**	**5.4**	**53 – 5.2**	**48 – 5.0**	**47 – 4.8**
1. ICT use for B2B transactions	4.7	5	63 – 4.8	51 – 4.9	54 – 5.1
2. Internet use for B2C transactions	4.6	5.1	39 – 5.1	40 – 5.0	59 – 4.7
3. Individuals using the internet % pop.	57.6	77	70 – 63.4	67 – 56.7	62 – 53.1
4. Broadband internet subscribers/100 pop.	15.1	27.4	41 – 25.4	41 – 22.7	39 – 19.3
5. Mobile telephone subscriptions/100 pop.	114.5	123.9	67 – 120.4	47 – 129.3	29 – 145.2
6. Mobile broadband subscriptions/100 pop.	70	84.8	34 – 91.6	29 – 81.3	33 – 58.1
7. Mobile network coverage % pop.	95.8	993	31 – 100.0	30 – 100.0	34 – 100.0
8. Quality of electricity supply	4.8	5.7	85 – 4.7	78 – 4.6	85 – 4.2

Source: Created by the author.

Bulgaria has competitive positions in respect to "mobile network coverage" (100.0) and "mobile broadband subscriptions" (91.6), the performance in these indicators being above the average for EU (respectively 993 and 84.8). There is a considerable improvement in the performance in the second criteria – "internet use for B2C transactions" (5.1). Compared to 2015, in it, Bulgaria steps up with twenty positions in the ranking for 2019 (39) and equals the average EU level. There is no change in the position (85) in the last indicator ("quality of electricity supply") – its value for last year is lower than the average EU level with 1.0. The downward tendency is reported in the indicator "ICT use for B2B transactions", the result (4.8) being below the average EU level (5) – thus Bulgaria loses nine positions in the ranking for the surveyed period.

The comparative characteristic of the Bulgarian position with respect to pillar" ICT Readiness" and the performance of our country's direct rivals in the field of sea and mountain tourism are presented in Table 7. By all means, the countries with definitely better positions and higher values of the index for competitiveness in the pillar mentioned are Austria (6.1) and Slovenia (5.5), ranking 16th and 12th, respectively. Greece is ahead in the ranking (51), however, with the same value of the index (5.2) as Bulgaria, followed immediately by Croatia. Actually, the three countries have close positions in the ranking of competitiveness according to the "ICT Readiness" pillar and the same value of the index (5.2). In reality, this means that Bulgaria does not have a clearly expressed competitive advantage in the assessed criteria in comparison with Greece and Croatia. Our country has an outstanding competitive edge only in respect to Turkey, which is far behind with 18 positions in the ranking and its result is 4.6.

The comparison of Bulgaria's competitiveness in the" ICT Readiness" criterion with the particular rival destinations shows that there is a necessity for systemic, purposeful and long-term actions for the digital transformation of the tourist sector in our country. This transformation needs to upgrade and enhance the achieved degree of competitiveness aimed at making it outstand more clearly. The sector of travel and tourism in Bulgaria has the objective necessity for essential and large-scale digital changes which will stimulate and speed up the implementation of a strategy for catch-up development and coming closer to the leading rival destinations.

Table 7

Comparative competitive position of destination Bulgaria – "ICT Readiness" pillar and indicators

Ict Readiness Pillar	Bulgaria	Greece	Turkey	Croatia	Slovenia	Austria
Ranking 2019 (out of 140)	53	51	71	54	42	16
Value (1–7 best)	5.2	5.2	4.6	5.2	5.5	6.1
Indicators Ranking – Value						
1. ICT use for B2B transactions	63 – 4.8	94 – 4.3	72 – 4.7	77 – 4.6	37 – 5.1	15 – 5.7
2. Internet use for B2C transactions	39 – 5.1	94 – 4.2	59 – 4.7	83 – 4.4	55 – 4.8	31 – 5.4
3. Individuals using the internet % pop.	70 – 63.4	58 – 69.9	66 – 64.7	63 – 67.1	40 – 78.9	21 – 87.9
4. Broadband internet subscribers /100 pop.	41 – 25.4	18 – 33.9	59 – 14.8	38 – 26.2	30 – 28.9	31 – 14.8
5. Mobile telephone subscriptions /100 pop.	67 – 120.4	75 – 115.9	103 – 96.4	96 – 103.0	73 – 117.5	7 – 28.7
6. Mobile broadband subscriptions /100 pop.	34 – 91.6	79 – 63.4	64 – 70.5	55 – 79.7	65 – 70.0	39 – 170.8
7. Mobile network coverage % pop.	31 – 100.0	37 – 99.9	46 – 99.8	1 – 100.0	47 – 99.8	70 – 88.1
8. Quality of electricity supply	85 – 4.7	50 – 5.5	89 – 4.6	40 – 5.9	20 – 6.4	13 – 99.0

Source: Created by the author.

Suggestions and Recommendations

The above presented level of competitiveness of tourism in Bulgaria can be enhanced through respective efforts and actions not only in the scope of the" ICT Readiness" pillar, but in the remaining components of TTCI as well. By large, the essence of a similar process includes successful application of relevant technological tendencies whose implementation in the tourist enterprises increases the level of their digitalisation, hence the level of their competitiveness, too. In addition, in the process there has to be monitoring of the achieved results, their effects and impacts on the condition of the national tourist industry and tourists' behaviour. More important relevant technological tendencies include active and regular use of: mobile technology, wireless networks and wearables; smart-phones, social media and websites; automated services, self-service technology, artificial intelligence and robotics (Kazandzhieva, Filipova, 2018; Ivanov, Webster, 2019; Borisov, 2019).

Guiding and stimulating the processes of digital transformation in the various sectors of the national economy need to be carried out by the state, its governmental bodies and responsible institutions. On the macro (national) level the general strategic tracks for digitalisation that will enhance the competitiveness of destination Bulgaria and will improve the development not only of tourism but also of the whole economy, are:

- expanding the scope of 5G optical networks. They are of exceptional importance because they provide gigabyte speeds and connectivity in transmitting data. They are necessary to develop the Internet of things (IoT), they allow for high-quality connectivity of businesses and users, they service systems, based on artificial intellect through analysing and managing big data in a real-time;
- making easier access to innovations and guaranteeing financing, especially for SME, incl. tourist ones, of startups and public organisations;
- technological renovation in the field of education and training. Providing reliable and anticipatory information and data on the tendencies and perspectives on the labour market in respect to the need for specific digital skills, acquiring new skills for professions of the future (Manyika, 2017; Pompa, 2015; Atanasova, 2018);
- encouraging investment for enhancing qualification and requalification, especially in the field of digital skills in compliance with the fast and accelerated development of ICT. The scope of such activities can be expanded through partnerships with the private sector;
- digitalisation of sectors like transport, environment, finance, culture, territorial management and others. For transport, the automated and connected mobility is of particular importance. In respect to environment, a vital role is played by technologies that balance the power system through implementing renewable sources and intelligent networks for managing traffic and consumption of power, sustainable development and others. Digitalisation of movable and immovable cultural heritage allows for creating virtual museums and digital libraries. The policy of cultural digitalisation stimulates presentation of the rich Bulgarian cultural heritage, creation of content and new online services, incl. ones for entertainment, education and tourism. Virtual tours in digitalised Bulgarian cultural-and-historic sites are a component of the portal for Europeana – the most massive digital repository of collections (Stoyanov, Yordanova, Somova et al., 2011). In territorial development, synergic effects are achieved – applying innovative technologies and digitalisation contribute to creating smart cities where traditional networks and services are more effective for the benefit of local citizens, visitors and business (Popova, Malcheva, 2020). Investment is oriented to improving and developing digital and safe transport connectivity, healthcare and social services, education and

professional training, culture, sport and tourism, circular economy and power efficiency, measures for improving the quality of the external environment and others;

- enlarging free open data published by various national and regional administrations and agencies. This data is accessed through transparency in the work of administration and provide opportunities for effective civil monitoring and control on the activity of administrative organs.
- More important recommendations to governmental and institutional authorities for enhancing the competitiveness of Bulgaria through digital transformation in travel and tourism concern the implementation of a set of important activities and actions for:
- comprehensive support and stimulation through making and applying a long-term program for digitalisation of tourism in Bulgaria. In it there need to be defined the vision and objectives, the priorities and measures in the policies for the digital transformation of the Bulgarian tourist sector until 2020. The initiative for writing the program should be on behalf of the Ministry of tourism and it has to be complied with a National strategic document "Digital transformation of Bulgaria for the period 2020-2030 "(Ministry of Transport, Information Technology and Communications, 2020);
- introducing electronic government in the sector of tourism by building the necessary infrastructure, connecting the tourist registers, preparing electronic passports of the places for accommodation and dining, of the tourist sites and sightseeing and others. It is purposeful to have operational matching of automated exchange of information, data and electronic documents and development of the system for electronic identification in compliance with the national and international legislation;
- assistance and support on behalf of the Ministry of tourism for Bulgarian tourist business, especially SME, so that they can benefit from European financing for projects concerning digitalisation (for ex. in the "Innovation and competitiveness" programme);
- stimulating and maintaining, incl. financially, the establishment of interactive tourist platforms about Bulgaria and the tourist regions. Such projects based on virtual reality in real-time (3D) are actually online travel guides with recommendations for itineraries, entertainment, rest, eating places and others, i.e. the whole set of tourist services needed by the visitor in order to gain memorable and unique experience;
- enhancing transparency in the activity and work of the state tourist administration through introducing block-chain technology. It is suitable for tracking public expenses and investment in tourism, guaranteeing fair and transparent spending of funds when defending governmental subsidies and investment from fraud and deception. Besides, applying block-chain technology is a chance to stimulate tourist visits;
- tapping in the potential of digital transformation for enhancing the competitiveness of Bulgarian tourism. This can be achieved through: automation and adding extra value to the sector; digitalisation of tourist advertising and presenting the country and the regions with tourist potential; intensifying the supply and efficiency of electronic public services for tourist enterprises and visitors (foreign and local); development of innovative tourist models and others;

- providing museums, tourist places and attractions with equipment and suitable and perspective technologies. They allow for free and interactive interplay with the visitors (in various languages), have the potential to create a memorable experience and tourist experience according to individual interest, needs and wish.
- Digital transformation is a complex and comprehensive phenomenon which can enhance the competitiveness of destination Bulgaria, provided that it is implemented successfully and consistently on sector and micro (organisational) level. In this respect, leading strategic trends for digitalisation of tourism in Bulgaria encompass a set of integrated and mutually dependent activities and initiatives of enterprises and business for:
- increasing the degree of introducing digital technologies in specific tourist activities and enhancing the competitiveness of tourist companies. To do this, there is a need for a high extent of technological integration and stimulation of increasing the share of e-commerce of tourist services and products;
- increasing the intensity of digitalisation of the tourist enterprises and encouraging the application of artificial intelligence and other perspective technologies in the public and private sectors. The trend concerns broadening the use of software components of information systems in tourist companies for electronic management of the documentation flow, managing the supply chain and that of company resources, geographic information systems, business intelligence software and others;
- carrying out joint surveys between the academic community, tourist business and representatives of the IT sector on assessing the role and significance of technological innovations for developing e-tourism (Kazandzhieva, Santana, 2019), the effects of implementing innovative business models and consumers' attitudes;
- increasing investments and enlarging the application of modern information and internet technologies in tourist enterprises. The latter are necessary in order to allow for making easy purchases in real time and implement comprehensive booking systems with multiple possibilities and functions;
- improving the foreign-language versions of the sites of tourist companies and better quality of the information about the services and products on offer. Appropriate is also the integration of a large number of communication channels in user-friendly, comfortable and speedy booking and servicing processes in the electronic environment;
- supporting active profiles of tourist companies and destinations on social media because of their strong influence on tourists' choice. They are able even more to digitalise their own emotions (positive and negative) by creating and using their own content (prosumers = producers + consumers);
- differentiating clients, online supply of personalised services and easy individual service before, during and after staying at tourist places. Providing combined offers in compliance with the requirements and needs of the bleisure (business + leisure) segment;
- complex use of the advantages of ICT and Internet for stimulating e-tourism, guaranteeing security in online transactions with services and products for travel and

tourism. Providing consumers with possibilities to control the booking process and the way of using the personal information they have provided and shared with the tourist companies;

- designing and implementing online thematic and specialised tourist offers (for Bulgarian and foreign tourists) which provide possibilities for an authentic unique experience, interaction with local population and others. In addition, the design of 3D virtual tours with sites and experience in Bulgaria stimulates tourist consumption;
- designing and implementing mobile applications in line with the tendencies and prognoses for enlarging the share of m-tourism. Providing comfortable, fast, locally based services and individualised offers for visitors. Tourist companies can apply successfully the strengthened relation with the user via mobile technologies by providing him with better experience aimed at increasing the revenues from the available capacity and services on offer. Thus, through innovative mobile decisions, one can manage and create a personal relationship with the tourist during the whole stay in the hotel or the destination (through chatbot, for ex.). Successfully implemented mobile technologies enable travellers through activating innovations useful for them: individual hotel check-in or registration for a transport service, mobile key for a hotel room, virtual *concierge,* electronic ticket and others. Mobile applications allow for improving visitors' experience through offering tourist services according to their own preferences and location, as well as through activating mobile analysis of their tourist record. There are more possibilities for mobile payment with lower operating costs and use of "green" (paperless) technologies and others;
- expanding the scope of smart offers for increasing both tourists' satisfaction and the loyalty index of guests at tourist destinations. Provision of personalised and location-based promotions to visitors, analysis of the type of consumption, client profile, the period and place of consumption and others. Appropriate are also incentives based on tourists' preferences concerning their loyalty and history of visits, finding new possibilities for online promotions and lucrative tourist offers.

Carrying out successfully the activities and initiatives for digital transformation on macro and micro level combined with the relevant technological achievements and innovations lead to: simplified, speedy and more efficient tourist service; information and data provided in a better way; higher quality of tourist services, incl. a higher level of comfort and amenities before, during and after the stay in the destination. This is the way to increase tourists' satisfaction which is an important prerequisite for successful sustainable development of tourist companies. Due to the digital transformation, they are able to provide various offers through online tourist service 24/7. Besides, advertising destinations, bookings, ways of payment, negotiation and communication with clients are done fast and easy, with optimised costs and efforts. Apart from that, in tourist companies accountability, data analysis and documentation flow are improved and simplified in real-time, relations with clients are stimulated as well.

In addition, the digital transformation of tourism stimulates the creation and maintenance of business relations between various regions, cultures and sectors. Yet, in many parts of Bulgaria, especially in the less populated and rural areas, the access to suitable technologies is difficult or completely missing. Similar imbalance in the possible ways of access to digital services, incl. those for travel and tourism, is a prerequisite for digital inequality which is also reflected in the economic and social status of particular regions. Therefore, overcoming digital differences is an important condition for achieving a high degree of integrity, cohesion and efficient participation in the digital economy of Bulgaria in a modern information society. Neglecting lagging behind and the issues concerning digitalisation, discredits and restricts the benefits from digital transformation in the tourist sector, it also lowers its competitiveness. There is a necessity for specialised surveys for designing national and regional strategies for digitalisation of tourism which will take into consideration the broad framework of applying ICT in this respect.

Conclusion

In conditions of the digital transformation of tourism, the role of tourist enterprises is changing; in some cases, this takes place rapidly. Those who ignore the new opportunities created by the impacts of ICT and the Internet and do not adjust are exposed to considerable risk and difficulties. The challenges concern a choice of suitable technologies for digitalisation of tourism provided to clients in such a way that risks and issues of using them unreasonably are avoided. The efforts need to be made mainly in investments in technological optimisation for the benefit of users and business, for automation and digitalisation of company processes in order to ensure individualised and smooth service.

The integrated implementation of actions and initiatives of the strategic guidelines on particular levels need to be guided by an objective understanding of the advantages, shortcomings and effects of the digital changes of Bulgarian tourism. Combining them with the rates of expanding shared economy is not an ordinary change, it is an obligatory process of complex transformation instead, one that our tourism should go through in order to be efficient and competitive. More and more, the scope and dynamics of digital changes in the tourism sector are significant indicators for defining destinations as digital winners or digital losers. The study of the competitiveness of Bulgaria as a destination showed that the country has relatively good chances and potential to be part of the group of the winning countries. The sustainable increase of the competitiveness of our tourist sector can be achieved under the condition that the advantages and favourable possibilities for its digitalisation are adequately and timely used by all stakeholders – public and private sectors, residents and tourists, as well as partner destinations.

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