Management of the Tourist Region - Identification of the determinants of Innovation

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Abstract: The objective of this paper is to identify the entities responsible for creating the environment of an innovative tourism region and to identify the activities that create it. The expert method was used in the paper. Pilot studies were conducted in November 2017, basic studies were conducted in May and June 2018, as well as in June 2019. The research tool was a questionnaire. The CAWI technique was used. The results were subject to statistical calculations. The empirical results show that four categories of factors determine the innovative potential of the tourism region, these are: knowledge, services market, policy, as well as the management system and civil society. The most important factors are the policy and management, as well as scientific institutions. The task Policy and Management include: availability of non-repayable funds in the tourism sector and the management system, as well as creating the image and brand of the tourist reception area. The basic activities of scientific institutions include the availability of scientific and technical knowledge and researching tourists' expectations. Originality/value of the research: The added value of the research results is the hierarchization of entities operating in the tourist region due to their importance in the innovation process of the tourist region. It was identified that science and technology parks should play a leading role in the process of the development of innovation in a tourist region. Their most important tasks were identified as: availability of scientific and technical knowledge, and researching tourists' expectations. Scientific activities should be supported by a highly developed information system, primarily in the area of tracking the innovation market and the availability of information on the latest innovations. Research has shown that non-repayable financial programmes play an important role in the innovation process of the tourist regions in Poland. From the scientific point of view, the research contributes to the further in-depth analysis of the innovativeness of a tourism region and the creation of the theoretical concept of the tourism region innovation model. From a practical point of view, the results of the research can help to develop programmes and strategies aimed at increasing the innovative potential of the tourism region.

Key-Words: tourism region, innovations, tourism region innovativeness.

1 Introduction

In today's economy, innovation is increasingly becoming a factor determining the competitive advantage of regions and countries [1;2], including tourism regions [3,4,5]. It directly affects the innovation of entities [6]. The awareness of regional authorities towards the need to create conditions conducive to innovation is becoming growingly common. This is evidenced by international, national and regional strategies and programmes supporting the creation of an innovative environment. The performed analysis of the literature from the field of tourism industry innovation allows us to state that innovation research focuses primarily on the study of tourism enterprises. The research is aimed at identifying categories of innovations being implemented, types of implemented innovations [7]

and innovative tourist products [8,9]. Researchers are trying to identify innovation systems used in the process of innovation implementation [10], factors of innovative activity influencing the undertaking of innovative actions by tourism enterprises [9], including the impact of the use of ICT technology [11], communication, and management [12], cooperation [13,14,15], networking [16,17] as well as the impact of being a member of a tourism cluster [18,19,20]. This research contributes to a better understanding of the unique characteristics associated with innovation in tourism services. It provides empirical evidence for taking measures to support innovation in tourism enterprises. Despite the growing interest in empirical research on innovation, few researchers claim that innovation is necessary not only to maintain the competitiveness of

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companies but also of tourist destinations and regions [21,22,23,24,25]. Limited empirical knowledge of the innovation process and its determinants in the tourism sector is a major obstacle to the development of appropriate strategies and policies to facilitate the creation of an innovative environment in which tourism businesses could operate effectively. This issue is of key significance to ensuring long-term growth and competitiveness of tourism regions. The aim of the article is to identify entities responsible for creating the environment of an innovative tourism region and to identify the activities creating them.

The study fills the research gap. The added value of the research results is the hierarchization of entities operating in the tourist region due to their importance in the innovation process of the tourist region. It was identified that science and technology parks should play a leading role in the process of the development of innovation in a tourist region. Their most important tasks were identified as: availability of scientific and technical knowledge and researching tourists' expectations. Scientific activities should be supported by a highly developed information system, primarily in the area of tracking the innovation market, availability of information on the latest innovations. Research has shown that non-repayable financial programmes play an important role in the innovation process of the tourist regions in Poland. From the scientific point of view, research contributes to the further in-depth analysis of the innovativeness of the tourism region and the construction of the theoretical concept of the tourism region innovation model.

In particular, research into regional innovation is important for peripheral tourism regions in order to accelerate the catching-up of economic backlog [26,27,23].

The theoretical part of the study was aimed at reviewing literature on innovation, in particular innovation factors depending on the management system of the tourism region. The empirical part describes the methodology of the study, including the selection of a research sample, the date of the study, whereas in the subsequent part the author discusses the results of the study and formulates final conclusions.

2 Theoretical Background

The concept of region's innovation should be treated as an innovative environment in which the industry functions. The sources of innovation should be found in the environment in which it operates, not in the enterprise itself, since accumulated knowledge in the local environment is always the basis for progress [28].

An environment can be called innovative when it has relationships with its surrounding and uses local skills that are or will be specific for a given environment, resulting in a competitive advantage. This will allow for an effective use of knowledge and information to generate new production processes and products. The model of an innovative environment emphasises the impact between economic entities, which is based on seeking common solutions and mutual learning. Cooperation takes place in a designated geographical area and constitutes a kind of network [28]. Sundbo et al. [29], Hall and Williams [10] and Williams [21] claim that apart from different research approaches to innovation, one of the least recognised is the analysis of innovation from the point of view of a tourism region. The importance of the undertaken research is also confirmed by the fact that innovation is necessary to maintain a competitive position of the tourism region [10, 22, 23], it determines the competitiveness of a tourism region [30] and is also necessary for catching up from the perspective of less developed regions that have tourist goods on which tourism can develop [26,2,23]. The region's high competitive position and highly innovative environment are of particular benefit to small- and medium-sized enterprises, which, due to scant financial resources, have limited possibilities to implement innovations. The analysis of literature shows that no attempts have been made to identify the entities responsible for the creation of an innovative environment in the tourist region.

As research shows, achieving competitive advantage is influenced by the local environment in which enterprises operate and depends on four groups of factors: the services market, highly specialised knowledge, public institutions [31], and civil society [32]. The services market is composed of businesses, competition, consumers and business partners [33]. The environment of highly specialised external knowledge is made up of scientific and research institutions, also known as technology and knowledge transfer institutions and institutions supporting the flow of scientific and technical information. The first group of entities includes the academic environment, science and research institutions, science and technology parks, technology incubators, technology transfer centres, and an education system [34,35,36]. Institutions supporting information flow are comprised of consulting firms, training institutions [37], as well as study visits [38,39] and publications such as trade journals, specialised websites, publications.

Research and observations of the market and its changes [40,41] as well as customer surveys [42] are considered to be a frequent source of knowledge.

Civil society factors include employees, venture capital, social institution sector, culture and media. These factors are determinants of high importance of the functioning of entities in clusters [43,19] and trade networks [16,17] as well as the activities of enterprises in other social organisations.

High importance in the process of innovation ~~of the tourism region~~ is attributed to institutional factors, i.e. local and central governments. The tasks of the institutional system and its role in supporting innovation ~~of the tourism region~~ involve implementing an appropriate innovation policy [15] by means of building flexible institutional support systems, including the development of appropriate innovation strategies [44,36,35], preparing a programme for the development of ICT infrastructure and supporting tourism enterprises in adapting and implementing new ICT [38,45] developing financial support programmes [46,36].

Innovative strategies should not only be limited to the tourism value chain, but also should support the building of cooperation between tourism companies, knowledge and information transfer institutions, and social organisations as well as other entities operating in the region [38,44,36,35].

Numerous studies point to the high impact of cooperation in the field of innovation in the tourism region between all stakeholder groups (e.g. 16,13,14,18,43,20]. As a demand-driven industry, cooperation with customers allows companies to identify changing consumer preferences and trends on emerging markets, leading to new ideas and innovation-oriented opportunities as well as creating new tourism products or improving the existing ones [35]. Other positive impacts of cooperation on the region's innovation include a free flow of knowledge and experience, as well as the minimisation of barriers such as insufficient financial, personnel, or infrastructure resources when implementing innovative activities [47,48,35].

The analysis of the literature on innovation research indicates that some research concerns the factors of innovation in enterprises [i.a 23, 29, 36, 42], while the hotel industry is studied in most [i.a 4, 25, 37, 40, 44]. There are extensive studies in the literature on the impact of individual factors influencing the innovativeness of enterprises, including the impact of cooperation and belonging to clusters on the innovativeness of enterprises [13, 14, 16, 17, 18, 19, 20, 43, 47], the importance of tasks carried out as part of cooperation [35], and the positive effects resulting from cooperation and belonging to clusters [35 , 47,

48]. Quite extensive research concerns the importance of networks [41, 16, 20] in the activities of innovative enterprises. A small number of publications analyse the impact of the institutional system and its role in supporting business innovation. Individual studies indicate that local governments should build flexible systems of institutional support, including innovation strategies [44,36,35], financial support programmes [46, 36], and diverse forms of cooperation [38,44,36,35]. The analysis of the literature allowed for the diagnosis of the research gap. No research has been undertaken on the innovativeness of the tourist region. The tourism region management system does not have clearly defined guidelines for supporting the innovation of the tourist region. Leaders in creating innovation in the tourist region should be appointed and activities should be prioritized due to their importance in the process of developing innovation in the tourist region.

The following research hypotheses were formulated:

H1: Local governments are the innovation leaders in the tourist region.

H2: The most important activity creating innovation of a tourist region is the cooperation between all stakeholders operating in the tourist region.

3 Methodology

The research was based on the expert method. It is a method more often used in the qualitative research of tourism [48, 49]. The expert method was based on Poper's "methodical foresight diamond" model [48]. Poper's model covers four dimensions: facts, creativity, expertise, and interaction [48]. The multidimensionality of the research allows for solving the problematic situation in the conditions of insufficient information. There are ongoing efforts to develop new solutions aimed at obtaining results in the area of economic, social or political changes [50]. The expert method is based on the use of codified knowledge (theoretical and experience) of the experts participating in it, but also allows for the use of tacit knowledge, i.e. intuition and imagination. In this study, the dimension of:

— facts: the set of methods allowing to understand the current state of the research area was carried out with the use of the literature analysis method,

— creativity, a set of methods using thinking and creative invention was carried out with the use of the grouping method,

— expert knowledge, a set of methods using the skills and knowledge of experts, was obtained with the use of the expert panel method,

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— interaction, a set of methods consisting in building new knowledge, vision for development, innovative forms of solutions, were implemented with the use of the inductive-deductive method.

The aim of the first stage of the research was to identify organizational structures that have a significant impact on the development of tourism in the region and the factors influencing the innovativeness of tourism entities (literature analysis). The identified organizational structures have been identified as belonging to one of the four groups: tourism entities, tourism management entities in the tourism region, technology and science transfer institutions, and knowledge and information transfer institutions. Each of the groups was assigned instruments - factors influencing the innovativeness of tourist entities (grouping method). The second stage of research (expert research) included the following activities:

— Assessment identified organizational structures operating in the region in terms of their impact on the innovation of the tourist region,

— assessment of the identified factors in terms of their impact on the innovation of the tourist region.

The pilot study was conducted in November 2017. Basic research was carried out in May and June 2018, and in June 2019. The research tool was a questionnaire. The research was carried out with the use of the CAWI technique.

It involved the participation of 12 experts representing theoretical knowledge as well as practical knowledge and experience. Experts were selected using the triangulation principle [50]. The principle of triangulation allowed for the assessment of the phenomenon from various points of view. Such concept makes it possible to capture the multidimensionality of the phenomenon [51]. The selection of experts was based on three differentiating criteria: generational group, scientific experience, contact with the practical sphere defined by an expert according to the point scale scoring from 1 to 5, where 5 is the maximum value. Eventually, the study involved 7 experts from the scientific community and 4 experts from the region management environment. Table 1 illustrates the structure differentiating experts.

Table 1. *Sampling criteria*

No.	Differentiating criterion	Number of experts	Number of experts return

1	Baby Boomers (born before 1965) Generation X (born between 1965 and 1981) Generation Y or digital natives (born after 1981)	5 3 4	4 4 3
2	Professor Doctor of science Master's degree, BA	2 6 4	3 5 3
3	from 1.0 to 2.0 from 2.1 to 3.0 from 3.1 to 5.0	4 4 4	2 2 7

Source: own study. 1: Generational group; 2: Academic title; 3: Practical knowledge

Experts have performed the assessment with the use of the point method on 5-point scale, where 1 means low impact, and 5 represents a very significant impact. The research was conducted from May to June 2018, and in June 2019.

The results of the expert evaluation were used in the third stage of the research to:

— determine the innovation leaders of the tourist region,

— determine the factors directly creating the region's innovativeness,

— determine the factors indirectly creating the region's innovativeness.

The results of the assessment were ranked according to the formula:

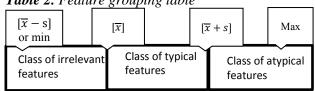$$M_{ri} = \frac{\sum z_{ij\ i=1\dots n}}{z_{ijmax}} * 100$$

where:

M_{ri} – measure of the importance of the feature in the creation of tourism region's innovativeness

z_{ij} – value of the assessment of the significance of the studied feature j in creating the innovativeness of a tourist region ascribed by an i expert

$z_{ij\ max}$ – maximum value of the assessment that each of the i experts could ascribe for the studied feature.

The obtained results were grouped into the following classes: insignificant feature class, typical feature class, atypical feature class, in accordance with the method (Table 2).

Table 2. *Feature grouping table*

$[\overline{x} - s]$ or min	$[\overline{x}]$	$[\overline{x} + s]$	Max
Class of irrelevant features	Class of typical features	Class of atypical features	

Source: own study.

The insignificant feature class is contained in the range between the minimum feature value and the mean minus standard deviation (min or $[\overline{x} - s]$. A typical feature class is included in the range of values

between the $[\overline{x}]$ mean and the mean plus standard deviation $[\overline{x} + s]$. An atypical feature class is within the range of values above the mean plus standard deviation $[\overline{x} + s]$ and maximum values [max].

4 Research results

The assessment of organizational structures in the tourist region and their importance in creating innovation in the tourist region is presented in Table 3. The table divides the entities according to the results calculated with the use of the formula (Mri). The entities were grouped into classes with typical and atypical features, in accordance with the calculations presented in Table 3. Entities with atypical features are the ones that play the greatest role in creating innovation in a tourist region, the so-called innovation leaders. Entities with typical features were classified as entities supporting the innovation processes of the tourist region. Table 4 presents a detailed calculation of the results.

Table 3. Assessment of organizational structures in a tourist region and their importance in creating innovation in a tourist region

Category		Activity leader	Complementary activity
knowledge	scientific	science and technology parks	Technology transfer centres Technological incubators Higher education institutions
	information flow		Consulting companies Industry media Training companies Information centres (publishers)
management		Regional Financing Institutions	Local government (tourism department) Regional government (department for tourism) Poviat self-government (tourism department)
market services		Theme parks Catering enterprises	Hotels Recreational facilities Other accommodation facilities Travel agencies
civil society		Tourist clusters	Education system Non-governmental organizations Government organizations

Source: own study.

The leader title in creating innovation in the group of technology and knowledge transfer institutions is held by science and technology parks, (72.73 of points available). Experts assigned these

entities the highest number of points among all the leaders identified in other groups. This is evidenced by the average of the results obtained. Moreover, the relatively low standard deviation (3.27) in this category proves the high level of concurrence between the experts' answers (Table 4). The greatest impact on the development of innovation in the regions among information transfer institutions is brought about by the training and consulting industry companies as well as trade media (magazines, TV programmes, websites and other sources), however, according to experts, they are not leaders and function as supporters of the innovation process in the region. Very low standard deviation (0,58) A low standard deviation (1.64) proves the high level of concurrence between the experts' answers (Table 5).

In the group of tourism management entities, experts believe that the leader in creating innovation are regional financing institutions (67.27 of points available). However, taking into account the value of the standard deviation (4.50), it should be noted that the experts in this category differed significantly in their answers. The activity of regional governments (department in charge of tourism) and the state forests is categorised in the class of typical institutions.

The leaders of market services maximally affecting the innovation process of the tourism region are a group of amusement parks and catering facilities that received 63.64 of obtainable points. In the category of factors pertaining to the civil society, tourism clusters are considered the leader within innovation processes (63.64 of points available).

Table 4. Innovation leaders of the tourism region

	Market services	Policy and Management	Knowledge		Civil society
			Scientific institutions	Disseminating institutions	
innovation leaders of the tourism region	amusement parks, catering facilities	regional financing institutions	science and technology parks,	-	tourism clusters
standard deviations	3.98	4.50	3.27	0.58	3,70
mean	30.88	30,71	35.2	31.5	29,5
mean plus standard deviation	34.85	35.21	31.93	32.08	33,20
max value	35	37	40	32	35
points [%]	63.64	67.27	72.73	-	63.64

Source: own study.

The results of the percentage points obtained by individual entities in each of the analysed categories indicate that the most important role in creating innovation in a tourist region is played by science and technology parks (72,73). This result indicates that the hypothesis No. 1 was not confirmed.

The limit values for distinguishing dominant activities that support the innovativeness of the tourist region for each category of factors are presented in Table 5. The detailed list of dominant and complementary activities directly affecting tourism region's innovation is presented in Table 6.

Table 5. Limit values for distinguishing dominant activities that support the innovativeness of the tourist region for each category of factors

| | Market services | Management | Policy | Knowledge | | Civil society |
				scientific institutions	disseminating institutions	
standard deviation	1,64	2,00	2,93	3,39	2,19	3,67
mean	34,13	35,00	33,71	33,33	34.56	34,22
mean plus standard deviation	35,77	37,00	36,64	36,72	37.06	37,89
max value	36	37	40	38	38	39
points available in the assessment	65.45	67.27	72,73	69,09	69.09	70.91

Source: own study.

Innovation in the tourism region is influenced by the activities of tourism enterprises. According to experts, tourism entities should direct their activities towards creating a tourist offer for which there are no substitutes. An equally important factor is their activity in clusters. According to experts, these factors received 65.45 of points. A low standard deviation (1.64) proves a high level of concurrence between the experts' answers (Table 5).

In order to create favourable conditions for the innovation of the tourism region, the tourism management system should carry out tasks related to:
— creating conditions for cooperation between science, academia, the sphere of business and the management system,

— creating the image and brand of the tourist reception area, with regard to the execution of tourism policy.

In the category of political activities, experts considered the most important action of the authorities to be the enabling the operators in the region to have access to non-repayable financial resources in the tourism sector (67.27 of the points available).

A low standard deviation (2.0) proves a high level of concurrence between the experts' answers (Table 5). The factor considered the most important among the most important activities in the area of scientific research and the flow of knowledge that support innovation processes was: access to scientific and technological knowledge, researching tourists' expectations. However, the high value of standard deviation (3.39) indicates a large discrepancy between the experts' assessments.

The supportive factors are the following:
— gaining knowledge about the market and the environment,
— research and development potential,
— participation of enterprises in research and development projects,
— diffusion of knowledge and learning as a result of supporting science,
— technology parks and availability of knowledge on inventions.

Studies have shown that the most important source of knowledge about innovation is tracking the market and the availability of information on the latest innovations. According to experts, the following supportive factors are equally important: courses, trainings, studies, conferences, cooperation with scientific institutions and study visits, as well as the activity of training and industry institutions.

In case of activities in the social field that support innovative processes, the following ones were considered to be the most important:
— openness to cooperation, innovative attitude (openness to novelties, creativity, change-oriented lifestyle),
— quality of human capital (knowledge and experience of tourism owners and managers),

which, according to experts, obtained 70.91 of points available. However, the high value of the standard deviation (3.67) indicates a large discrepancy between the experts' assessments.

Table 6. Summary of activities directly affecting tourism region's innovation

Category	Dominant activity	Complementary activity
knowledge — scientific	availability of scientific and technical knowledge, researching tourists' expectations,	gaining knowledge about the market and the environment, accumulation of scientific and technical knowledge in the region, research and development potential, participation of enterprises in scientific and research projects,
knowledge — information flow	tracking the innovation market, availability of information on the latest innovations,	conferences, study visits, availability of knowledge about inventions, information about tourists' expectations, cooperation with scientific institutions, activities of training, trade and educational institutions activities of Business Environment Institutions,
management	creating conditions for cooperation between science, academia, businesses and the management system, creating the image and brand of the tourist reception area	promotion of innovative products and technologies in the area of tourism, territorial marketing, broadband networks, Internet access technical infrastructure and access to demand markets
market services	type of offer for which there are no substitutes, activities of tourism entities in clusters,	quality of the offer, services functioning on the market in a region of tourist attractiveness diversified range of tourist products market position ownership of financial capital by economic entities
policy	availability of non-repayable funds in the tourism sector	stable state tourism policy stable and transparent legal and fiscal environment local and regional government policy
civil society	quality of human capital (knowledge and experience of tourism owners and managers), openness to cooperation, innovative attitude (openness to novelty, creativity, change-oriented lifestyle)	affiliation to partner networks cooperation of organisations openness to association recognising common challenges willingness for cooperation based on trust

Source: own study based on research results.

The results of the study of the percentage points obtained by individual entities in each of the analysed categories indicate that the most important measure influencing the innovativeness of a tourist region is the availability of non-repayable funds for the development of tourism (72,73). This result indicates that the hypothesis No. 2 was not confirmed.

5 Discussion

The research has confirmed that the innovation of a tourism region depends on four groups of factors, i.e. knowledge, market entities, civil society and policy and management systems. The results are in line with the studies by Etzkowitz and Leydesdorff [31], and Carayannis and Campbell [32].

Among market entities, the innovation of the tourism region is directly influenced by amusement parks and catering facilities. Experts concluded that the innovativeness of the tourism region is mainly affected by the activities of market entities aimed at creating a tourist offer for which there are no substitutes. The quality of the offer, the quality of services, functioning on the market in a region attractive for tourists, creating a diversified offer of tourist products, and the position of the entity on the tourist market were considered as supportive towards these processes.

The results of research of, among others, Volberd et al. [34], Liu and Cheng [35] and Mahr [36] have also confirmed that the innovation of the tourism region is determined by specialised knowledge institutions. According to experts, in the group of these entities the most important ones are science and technology parks. The most important activities assigned to this group include research of customer (tourist) expectations and the availability of scientific and technical knowledge. Tang [40], Ottum and Moore [41], Schaarschmidt and Kilian [42] also recognised these activities as an important source of knowledge for the innovation processes of the tourism region. The following activities were perceived as supporting activities: gaining knowledge about the market and environment, accumulation of scientific and technical knowledge in the region, research and development potential, participation of enterprises in scientific and research projects. Research in the field of disseminating information about the latest scientific and technical achievements and innovations, changes taking place and upcoming trends in tourism has shown that among a number of institutions pursuing these objectives, such as: information centres (publishers), education system, consulting companies, training companies or trade media (magazines, TV programmes, Internet portals and others) shows that there is no single dominant institution. The content of the information is of paramount significance in this field. The most important information that affects the innovativeness

of a tourism region is the information on the tracking of the innovation market and the availability of information about the latest innovations. On the other hand, such activities as: availability of knowledge about inventions, information about tourists' expectations and information and experience gained as a result of cooperation with scientific institutions, training, industry and educational institutions, as well as the activity of Business Environment Institutions, participation in conferences or study visits are considered as complementary. The results of research conducted by Nieves et al. [37], as well as Liu and Cheng [35], Ottenbachergo et al. [4], Tanga [40], Ottum and Moore [41] and Schaarschmidt and Kilian [42] indicate a number of the above-mentioned activities as external sources of knowledge influencing the innovativeness of entities in the region.

An important factor building the innovative potential of the tourism region is civil society. The most important activity influencing the innovativeness of the tourism region is the activity of tourist clusters. The activity of tourism clusters and the fact that companies belong to cluster structures are also indicated by the studies by Borkowska - Niszczota [19] and Sahakyan et al. [43]. Still, the innovative potential of the tourism region is directly influenced by the quality of human capital (knowledge and experience of tourism owners and managers), openness to cooperation, innovative attitude (openness to novelty, creativity, change-oriented lifestyle). These factors support such activities and attitudes of civil society as: membership in partnership networks, cooperation of organizations, openness to association, perception of common challenges, readiness for cooperation based on trust. These results are consistent with the results obtained by Carlsen et al. [16], Bramwell and Broom [13], Wang and Fesenmaier [14], Borkowska - Niszczota [19], Novelli, Schmitz and Spencer [20], D'Angella and Go [47], Haugland, Ness, Grønseth and Aarstad [48], Liu and Cheng [35]. An equally important element in the structure of the innovative potential of the tourism region is the management sector. According to experts, regional funding institutions have the greatest impact on the innovation of the tourism region. It is claimed that their task is to formulate regional development financing programmes, including those financing tourism, which have an impact on high availability of non-returnable financial resources. Similar results were obtained by Lewandowska and Stopa [46], Panfiluk [9, 53, 54], Mahr [36], Liu and Cheng [35]. The management system implements the objectives of tourism innovation policies, which is in line with the

results of Rodríguez, Williams and Hall [54], Ottenbacher and Gnoth [44], Mahr [36], Liu and Cheng [35]. Moreover, the task of management institutions is to build flexible support systems by creating conditions for cooperation between science, academia, businesses and management system, creating an image and a brand of a tourist reception area. A complementary task is to create development infrastructure, including ICT infrastructure (broadband networks). The impact of the ICT infrastructure on the innovative potential of the tourism region is also indicated by the studies of Liu and Cheng [35] and Mistilis and Gretzel [45]. The added value of the research results is the hierarchization of entities operating in the tourist region due to their importance in the innovation process of the tourist region. It was identified that science and technology parks should play a leading role in the process of developing innovation in the tourist region. Their most important tasks were deemed to be: availability of scientific and technical knowledge and researching tourists' expectations. Scientific activities should be supported by a widely developed information system, primarily in the area of tracking the innovation market, availability of information on the latest innovations. The respondents proved that a significant role in the innovation process of the tourist region in Poland is attributed to non-repayable financial programmes. From the scientific point of view, the research contributes to the further in-depth analysis of the innovativeness of the tourism region and the construction of the theoretical concept of the tourism region innovation model. From a practical point of view, the research results can help in the creation of strategies and programmes for the development of innovation in the tourist region.

6 Conclusions

The research conducted in the field of identification of entities creating innovative potential of the tourism region and activities affecting it has led to the identification of four categories of factors. Within the framework of particular categories of factors, the author identified institutions that are most important for innovation processes in the tourism region and determined measures that directly shape and support this process. The basic categories of factors creating the innovative potential of the region include knowledge, market services, policy and management as well as civil society. The creation of knowledge used in tourism services is primarily the responsibility of science and technology parks. The basic activities influencing the innovative potential are the availability of scientific and technical

knowledge and the awareness of tourists' expectations. The tasks in this respect are conducted by a number of information institutions disseminating knowledge and innovations as well as new market trends. The basic activities of these institutions include tracking the innovation market and disseminating information about the latest innovations. A significant group of factors is the social environment of the tourism region and its activity. The most important measures increasing the innovative potential of the region include such attitudes of civil society as openness to cooperation and innovative attitude (openness to novelties, creativity, change-oriented lifestyle). The innovative potential of the tourism region is also built by entities of the services market, in particular those activities that affect the creation of offers for which there are no substitutes.

The most important factors in the field of policy and management are considered to be the activity of regional financial institutions and measures supporting the availability of regional market entities to non-repayable financial resources. Equally important activities of the management system are creating cooperation conditions for all sectors of stakeholders operating in the industry and creating the image and brand of the tourism area.

In conclusion, it should be stated that the conducted research deepens the theoretical and empirical knowledge in the existing literature. It allows for developing a theoretical conceptual framework for tourism region's innovation. This research identifies four major forces responsible for the innovation potential of the tourism region, but without positioning these forces in relation to each other. In order to confirm the results of the research, it is necessary to verify them with regard to entities in practice, i.e. research on entrepreneurs, especially those characterised by high innovation.

From a practical point of view, the results of the research can help to develop programmes and strategies aimed at increasing the innovative potential of the tourism region.

In the further research process on the issues of innovation in the tourist region, research should be expanded to include tourist entities with a high innovation index. The results will enable the verification of expert studies. This is due to the fact that in some cases there is a large discrepancy in the experts' assessment, which is indicated by the standard deviation.

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