# INNOVATIONS AND TOURISM REGIONS: ARE INNOVATIONS PERCEIVED AS A PROBLEM IN REGIONAL DEVELOPMENT IN EUROPEAN TOURISM?

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**Abstract:** *This article examines innovative aspects of the development of tourism regions in Europe. The article aims to determine the intensity of the perception of innovation in the tourism region as a problem in its development. The ambition of the article is to assess the problems in the development of tourism regions in Europe in the field of innovation as a possible starting point for optimizing changes in local and regional tourism policy. The research analyses the positions of 95 regional tourism experts from 17 European countries. The database was based on a databank of 150 representatives of academia and 275 representatives of regional tourism organizations. To analyse the properties of categorical data and the relationships between them, we used Gamma, Kendall's Tau-b, Somers' D C/R, Spearman correlation coefficient, Phi Coefficient, Contingency Coefficient, Cramer's V and the decision tree algorithm. The maturity of the innovation environment of tourism regions and their level of development influence the perception of innovations as a problem in their development. Southern European tourism regions perceive innovation as a problem in their development most intensively. Tourism regions with stronger innovation activity have a well-established quality management system and a comprehensive and systematically addressed supply of seasonal and off-season products. Tourism regions ranked in the emerging innovator group perceive the specified problems in the implementation of innovations more intensively. This reflects the lack of coordination of the product portfolio, both in terms of range and quality, in countries where the innovation environment is poorly developed. A key recommendation to mitigate the perception of innovations as a problem in the development of Europe's tourism regions is to focus attention on the implementation of regional policy instruments that stimulate the participation of tourism in the synergy effects of the existing innovation environment of the economy.*

**Keywords:** innovation; innovation environment; perception of innovations; regional development; tourism region.

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**1. Introduction.** Tourism consumption is linked to the existence of a location's potential and the ability of local tourism actors to exploit the components of that potential and create an offer that meets the needs for travel, leisure, knowledge and experience. This fact defines the essence of the regional or local character of tourism development. The development of a tourism region is thus linked to the use of primary resources. However, sustainability is the dominant priority in the development of today's economies. The focus of development ambitions is on innovation and building smart platforms in tourism regions that offer solutions for economic, social and environmental sustainability. The implementation of innovations leads to the improvement of the tourism product, increasing its competitiveness and economic effects for the service provider, the destination and the tourism industry (Weiermair, 2006, Radjenovic et al., 2020; Vasanicova et al., 2021). The course and impacts of the COVID-19 pandemic on tourism have further reinforced the importance of innovations (Nunes & Cooke, 2021; Elkhwesky et al., 2022; Dias et al., 2022).

The development of innovations and an innovative business ecosystem is supported by the Strategy on Innovation, Investment and Digital Transformation (UNWTO, 2018). The implementation of its tools affects the development of tourism destinations and regions, the elimination of seasonality, higher utility value for the client, the creation of new jobs and the sustainable use of the natural and cultural environment (UNWTO, 2022). The issue of tourism regional development is a very intricate and complex topic. Within it, the identification of current problems is important for setting the right strategic or conceptual regional policy instruments as well as the optimal allocation of public financial resources. Therefore, it is important to address the assessment of the current problems of regional tourism development, which could lead to a weakening of the effectiveness of the beneficial socioeconomic impacts on the region or country.

The purpose of the article is based on the finding that the diversity of the regional innovation network can foster innovation. The diversity of actors, relationships and activities causes different innovation performance, different problems and different barriers in the field of innovation in tourism regions (Brandao et al., 2018; Najda-Janoszka & Kopera, 2014). An important starting point of the article is also a study on the impact of the regional innovation system on the competitiveness of tourism regions (Romao & Nijkamp, 2019).

The article aims to determine the intensity of perception of innovation in the tourism region as a problem in its development depending on the innovation environment of the region, its level of development and geographical location. The ambition of the article is to assess the problems in the development of tourism regions in Europe in the field of innovation as a possible starting point for optimizing changes in local and regional tourism policy.

**2. Literature Review.**

*2.1 Tourism region as a space for innovative regional product creation.* A tourism region can be defined as a territorial unit that has a primary offer, spatial accessibility and a secondary offer that allows the primary offer to be used in the creation of a tourism product. The existence of these three elements of the tourism region is complemented by the authors with the aspect of relationships and links in the territory, which allow for achieving tourism effects (Michalkova, 2011; Gucik, 2007; Perovic et al., 2021). A methodology for identifying a tourism region based on the underlying landscape tourism resources is offered by Smith (1987). Piperoglou (1967) also sought to identify the tourism region through the physical, aesthetic and cultural resources of tourism.

From a management perspective, a tourism region is an organizational platform that exploits the primary potential of the territory to create a tourism product within the interrelationships of relevant actors. Regional products play a key role in the development of the tourism region, with an emphasis on the uniqueness and authenticity of the product as an important attribute of the identification of the tourism region (Hashimoto & Telfer, 2006; Rachao et al., 2019; Michael, 2002; Correia & Brito, 2016; Giaoutzi & Nijkamp, 2006). The uniqueness of the offer is an important factor in the region's visitor numbers and development. Giaoutzi & Nijkamp (2006) highlight the crucial impact of the quality of the tourism product on the local and regional economy. Thus, product personalization, supported by innovations aimed at increasing product quality, is important for delivering utility value to the consumer. However, narrow product specialization can lead to problems with product portfolio sustainability or difficulties in promoting innovative products.

In this context, we present the view of Croes et al. (2021), who state that tourism specialization has a short-term impact on economic growth and a negative and indirect link to human development. Additionally, the specialization of a tourism region to the main season can lead to sustainability problems in all three pillars (economic, social, and environmental). Several studies can be found in the literature that address the creation of tourism products designed for the off-season to balance seasonal fluctuations and stabilize tourism revenues in a destination (Latorre et al., 2021; Kaleychev, 2022). The aforementioned contexts have become the starting point for our research interest in the following areas of development of European tourism regions:

concentration on key products in the region, quality-enhancing product innovations and quality management system in the region, and supply of off-season products in tourism.

*2.2 Innovation as a source of sustainable growth of tourism region.* Theory offers a wide range of definitions of innovation in the context of its application to tourism. This is related to the increasing intensity of efforts to explain their importance for the development of businesses, destinations and the tourism industry (Hjalager, 2002). OECD (2005) views innovation as the introduction of a new or significantly improved product or process, a new marketing method or a new organizational method into a company's practice, work organization or external relations. According to Chang & Chen (2004), it is the process of applying new forms of knowledge

In contrast to invention, innovations have implementation and commercialization stages (Hjalager, 2010). Innovation is considered a catalyst for regional development, and tourism clusters provide a suitable implementation platform for innovation potential, which is a complex of resources in qualitative and quantitative terms and whose effective use leads to innovative performance (Fundeanu, 2015; Novelli et al, 2006; Jackson & Murphy, 2006). Innovations have been identified as sources of efficiency in business and competitiveness of a tourism region (Teixeira & Ferreira, 2019). A study by Romao & Neuts (2017) confirms the impacts of innovation and the smart tourism approach on the sustainable development of regions in Europe. Many studies are devoted to the role of innovation in tourism to ensure the sustainable development of regions (Troian et al., 2023). The development of smart destinations offering digitalization of processes, personalization of offerings and greening of production and consumption of tourism services is conditioned by innovation activity in the destination (Tuzunkan, 2017; Sun, 2021; Roieva et al., 2023; Verbivska et al., 2023). Therefore, process innovations (with an emphasis on the use of digital technologies, artificial intelligence and sustainable technologies) and their availability in tourism regions of Europe have become part of our research interest.

*2.3 Innovation potential supported by cooperation in the tourism region and a cross-sectoral approach.* The functional management of collaboration in the tourism region is crucial for creating a complex product offering and generating subsequent positive economic impacts on the region's development (Costa & Lima, 2018). In the current dynamic environment, the quality and complexity of the offer in a tourism region are contingent on the existing innovation potential and the ability of regional tourism players to translate it into the implementation of innovations.

Author Kozak (2014) recognizes the role of stakeholder collaboration and appropriately sets development goals as important factors in the creation of a comprehensive and innovative product in a tourism destination. The idea of a close link between the collaborative dynamics of relevant actors of innovation networks, including universities, and regional innovation is confirmed in the study by Brandao et al. (2018). Collaboration is a tool for knowledge transfer that determines innovation activity. Research conducted in the Western Cape tourism region environment has recognized that despite the predominant use of internal sources of innovation in tourism enterprises, knowledge transfer within regional innovation networks or systems clearly influences innovation novelty, competitiveness and regional development (Booyens & Rogerson, 2017). Tourism services are by their nature knowledge-intensive, so it is reasonable to assume that their innovation potential relies on innovations produced by other sectors, especially the ICT sector. However, several forms of tourism have a service-based product that is knowledge-intensive and characterized by strong sophistication. Examples include medical tourism as well as spa tourism, where the core of the product is a medical service. On the other hand, there is the consumer of tourism services, who demands a personalized service, with production of this quality being conditioned by the use of digital technologies, artificial intelligence and, in certain situations, robots.

The cross-sectoral approach in the innovation activities of the tourism region is confirmed by a study from the setting of the Autonomous Province of Bolzano-Bozen in Italy (Kofler et al., 2018). The reason for applying a cross-sectoral approach to innovation in tourism is not only due to the nature of low knowledge intensity production but also the small and medium size of accommodation and hospitality enterprises. Tourism enterprises are territorially interlinked. This is related to location-based consumption. Therefore, strong regional linkages are a logical feature of successful tourism destinations. Together with their interconnectedness to regional innovation authorities (universities, schools, research organizations, destination management entities, middle and high-tech sector businesses, etc.), they form a platform of innovation potential for sustainable regional development in tourism.

Efforts to mobilize innovation activities in tourism regions lead to the application of an open innovation system, which offers the possibility of sharing innovation resources and ideas (Hoarau, 2016) and stimulating beneficial effects from innovations in the region. The benefits of open innovation in a tourism region operating

during the COVID-19 pandemic have been confirmed by Pillmayer et al. (2021). They identified them mainly in the acquisition of external knowledge on a broader scale and in the acquisition of a simple tool for generating new ideas. Two other areas of interest in our research were innovation potential in the tourism region and the approach to product trends in tourism, given the above background.

*2.4 The impact of innovations on tourism performance.* The tourism industry and its performance are directly dependent on the innovation environment that is formed within the respective national or regional economy. An economy's expenditure on research and development has a positive impact on labour productivity in the relevant services. The innovation environment of the economy, as expressed in the evaluation criteria of the Summary Innovation Index (European Commission, 2022), is a factor influencing the competitiveness of tourism, which is expressed in the Travel and Tourism Competitiveness Index (from 2021 referred to as the Travel and Tourism Development Index). The position of a country and region in the European Innovation Scoreboard as well as the Regional Innovation Scoreboard has a demonstrable relationship with economic performance in tourism and the economic efficiency achieved (Kubickova & Benesova, 2022). The results of several studies very clearly confirm the positive impacts of innovations on tourism performance (Rubera & Kirca, 2012; Nepierala & Szutowski, 2019; Lin, 2013). On the other hand, the literature also presents results that report a nonsignificant relationship between innovations and tourism performance (McGee et al., 1995; Guisado-Gonzalez et al.,2013). The above findings have become the initial impetus for investigating the innovation aspects of the development of tourism regions in Europe. Therefore, are innovations and their implementation perceived as problems in the development of tourism regions in Europe?

**3. Methodology and research methods.** To gain a deeper understanding of the research problem of the status of innovations in the development of tourism regions, we set two hypotheses and one research question:

$H_1$: The maturity of the innovation environment of the economy influences the intensity of the perception of innovations as a problem in the development of the tourism region.

$H_2$: There is a relationship between the level of development of tourism regions and the perception of innovations as a problem in the development of the tourism region.

$RQ_1$: How does the geographical location of a tourism region influence the perception of the impact of innovations on its development?

*3.1 Data.* The investigation of innovations in regional tourism development was part of research on the environment of tourism regions in Europe carried out between 2000 and 2022, which aimed to identify problems in the development of tourism regions in several relevant areas (management, cooperation, financing, public funding, employment, promotion, business environment). The database was based on a databank of regional tourism experts from Europe, namely, representatives of academia and representatives of regional tourism organizations. A total of 150 experts from abroad from the university environment and 275 experts from practice were contacted. The resulting database contained 95 responses from experts, 57 from Eastern Europe, 5 from Northern Europe, 29 from Southern Europe and 4 from Western Europe.

The experts identified the intensity of problems´ perception within the identified aspects of the region's tourism development and innovations:

- Excessive concentration of several key products/locations in the region.
- Insufficient innovation potential in the tourism region.
- Insufficient quality-enhancing product innovations.
- Insufficient or delayed approach to product trends in tourism.
- Insufficient process innovations.
- Insufficient supply of off-season products in tourism.
- Absent or insufficient quality management system in the region.

To reflect the maturity of the innovation environment of the economy, we used the Summary Innovation Index scores (SII) (European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, 2021) to validate $H_1$. The SII identifies the innovation performance of European countries, being the summative result of the assessment of several subindices. To validate $H_2$ and answer $RQ_1$, we used the distinction of relevant tourism regions in our answer database into developed ones (39 expert answers) and less developed ones (14 expert answers) and into the regions of Eastern Europe (57 experts from 5 countries), Northern Europe (5 experts from 2 countries), Southern Europe (29 experts from 7 countries), and Western Europe (4 experts from 3 countries).

*3.2 Variables and measurement.* In the empirical survey, a seven-item questionnaire was used as the research instrument:

- Excessive concentration of several key products/locations in region ($X_1$);
- Insufficient innovation potential in the tourism region ($X_2$);
- Insufficient quality-enhancing product innovations ($X_3$); Insufficient or delayed approach to product trends in tourism ($X_4$);
- Insufficient process innovations ($X_5$);
- Insufficient supply of off-season products in tourism ($X_6$);
- Absent or insufficient quality management system in region ($X_7$).

Each item was rated on a 5-point Likert scale (0 – not a problem; 1 – mild problem; 2 – moderate problem; 3 – significant problem; 4 – very significant problem). Exploratory and confirmatory factor analyses were used to test the construct validity of the research instrument consisting of those seven items. SAS Enterprise Guide 5.1 and SAS Viya 3.5 programs were used. The assumptions for the use of exploratory analysis were confirmed by the Spearman correlation coefficient values between pairs of variables (almost all were statistically significant at the 0.01 level of significance) and the Kaiser, Meyer, and Olkin Measure of Sampling Adequacy (Kaiser, 1970) values (Overall MSA = 0.9377).

We used principal component analysis (PCA) with varimax rotation to estimate the parameters of the factor model. The resulting two factors were identified using a scree plot and Kaiser's rule (Kaiser, 1970; Kaiser & Rice, 1974). The proportion of variability explained by these two factors was 94.87%. The first factor, saturated by the second, third, fourth, and fifth items, explained 92.27% of the variability; the second factor, explaining 2.41% of the variability, was saturated by the first, sixth, and seventh items. The first main factor was most strongly related to X2 (St. Scor. Coeff. = 2.0654) and X3 (St. Scor. Coeff. = 0.5867), the second factor to X1 (St. Scor. Coeff. = 2.1023) and X6 (St. Scor. Coeff. = -0.3262). In addition to exploratory factor analysis, we used confirmatory factor analysis. We tested a two-factor model. The relationship of each variable to the main factors was identified using a path diagram. The testing results are presented in Table 1. The given statistics were used to test how the model fits the data.

**Table 1.** Fitting models to data

| Method | $\chi^2$ value; d.f.; $p$ value | $\chi^2$/d.f. | SRMR | CFI |
|---|---|---|---|---|
| result | 31.55; 13; 0.0028 | 2.42 | 0.0525 | 0.94 |

Sources: developed by the authors.

The fit between the empirical covariance matrix and the hypothesized model matrix was verified by the chi-square test. For a good model fit, the χ2/df ratio should be as small as possible. As there exist no absolute standards, a ratio between 2 and 3 is indicative of a "good" or "acceptable" data-model fit, respectively (Schermelleh-Engel et al., 2003). The difference between the covariance matrix of the model and the empirical covariance matrix was quantified using the standardized root mean square residual (SRMR). This is the square root of the difference between the residuals of the empirical covariance matrix and the theoretical covariance matrix (Hu & Bentler, 1999). The desired value should be less than 0.5, and values less than or equal to 0.08 are also acceptable (Hu & Bentler, 1999). Next, the comparative fit index (CFI) was used to examine the difference between the data and the hypothesis model, taking into account the sample size. A value greater than or equal to 0.95 is considered a good result, a value between 0.92 and 0.94 is considered a fair result, and a value between 0.90 and 0.91 is considered an acceptable result (Hu & Bentler, 1999). The obtained values of the statistics correspond to the stated requirements. The reliability of the entire research instrument and its subscales was verified using Cronbach's alpha coefficient (Morera & Stokes, 2016). Its internal consistency was high (standardized α = 0.8743). We also verified changes in the alpha value when removing individual items.

We used a range of analytical tools to verify the formulated hypotheses and answer the research question: basic descriptive statistics for categorical data, measures of the strength and direction of dependence between ordinal variables (Gamma, Kendall's Tau-b, Somers' D C|R, Spearman correlation coefficient) and between nominal variables (Phi Coefficient, Contingency Coefficient, Cramer's V), and measures of dependence between cardinal variables (Pearson correlation coefficient).

The average of each item exceeds value 2 (moderate problem), and the average values of items $X_5$ and $X_6$ are closest to value 3 (significant problem). The variability of scores expressed through the magnitude of normalized Shannon entropy (Lotfi & Fallahnejad, 2010) was lowest for these two items. In contrast, the highest variability was for items $X_1$ and $X_4$ (Table 2). The total scores of each region's rating (sum of the scores on all seven items) ranged from interval 2 (France region) to 27 (Macedonia region), and the mean value of

the total score (calculated for all regions) was 16.57. When broken down by world region, the Southern European (MK, ME, RS) regions had the highest mean score (18.69). Western European (UK, FR) regions had the lowest mean score (15.00).

**Table 2.** Basic descriptive statistics for individual measurement items

| Problems in the development of tourism regions | Average | Entropy |
|---|---|---|
| Excessive concentration on several key products/location in region ($X_1$) | 2.19 | 0.9396 |
| Insufficient innovation potential in the tourism region ($X_2$) | 2.13 | 0.9094 |
| Insufficient quality-enhancing product innovations ($X_3$) | 2.28 | 0.9024 |
| Insufficient or delayed approach to product trends in tourism ($X_4$) | 2.34 | 0.9282 |
| Insufficient process innovations ($X_5$) | 2.56 | 0.8872 |
| Insufficient supply of off-season products in tourism ($X_6$) | 2.57 | 0.8770 |
| Absent or insufficient quality management system in region ($X_7$) | 2.51 | 0.9121 |

Sources: developed by the authors.

**4. Results**. Verification of $H_1$: The maturity of the innovation environment of the economy influences the intensity of the perception of innovations as a problem in the development of the tourism region. When broken down by world region, the Western European regions scored the highest average value of the Summary Innovation Index – SII (126.3), and in the group of Southern European regions, whose average score was the highest, the SII took the lowest average value (72.7). The relationship between the average country assessment score (the summated result of the measurement of the research instrument used on the country regions) and the SII value was verified by Pearson's correlation coefficient values. Its value (r = -0.367) calculated for all countries analysed confirms that as the innovation performance of a country increases, the overall assessment score will decrease (Table 3).

**Table 3.** Average scores, SII and the relationship between them broken down by world region

| World region | Score | | | | SII | | Pearson Correlation Coefficient |
|---|---|---|---|---|---|---|---|
| | Mean | Std Dev | Minimum | Maximum | Mean | Std Dev | |
| Eastern Europe | 15.6667 | 5.1281 | 4 | 25 | 72.7545 | 11.2573 | -0.32738 |
| Northern Europe | 15.8000 | 6.8702 | 9 | 25 | 74.7676 | 41.6749 | x |
| Southern Europe | 18.6897 | 6.2741 | 3 | 27 | 72.6956 | 14.0049 | -0.22430 |
| Western Europe | 15.0000 | 9.3095 | 2 | 24 | 126.3045 | 6.9709 | x |
| Total | 16.5684 | 5.8467 | 2 | 27 | 75.0972 | 18.0575 | -0.36698 |

Sources: developed by the authors.

This means that the more advanced the innovation environment in a given region is, the lower the intensity of the perception of innovation as a problem in its development. We then tested the relationship separately in the Eastern European group (UA, PL, SK, HU, CZ) (r = -0.327) and in the Southern European group (MK, ME, RS, PT, ES, EL, HR) (r = -0.224). Weaker dependence was found in the Southern Europe group, with only two country regions (LV, SE) measured in Northern Europe and three country regions (UK, DE, FR) measured in Western Europe, limiting the ability to conduct a similar analysis (Fig. 1)

Based on the SII scores, the countries are divided into four groups: innovation leader (SE), strong innovator (FR, UK, DE), moderate innovator (EL, PT, ES, CZ) and emerging innovator (HR, HU, LV, ME, MK, PL, UA, RS, SK) (European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, 2021). In the following, we analysed the scores on the individual items of our research instrument depending on the category in which each region was classified according to the country's innovation performance (SII_categ). One region came from the Innovation leader group, and four regions had the Strong innovator assignment; therefore, these two categories were merged (SII_categ = 1). There were thirteen regions in the moderate innovator category (SII_categ = 2), and seventy-seven belonged to the emerging innovator group (SII_categ = 3). We measured the strength of the relationship between the assignment of regions to one of these four categories and the item scores (0-not a problem; 1-mild problem; 2-moderate problem; 3-significant problem; 4-very significant problem) using measures of dependence for ordinal data (Agresti, 1990).
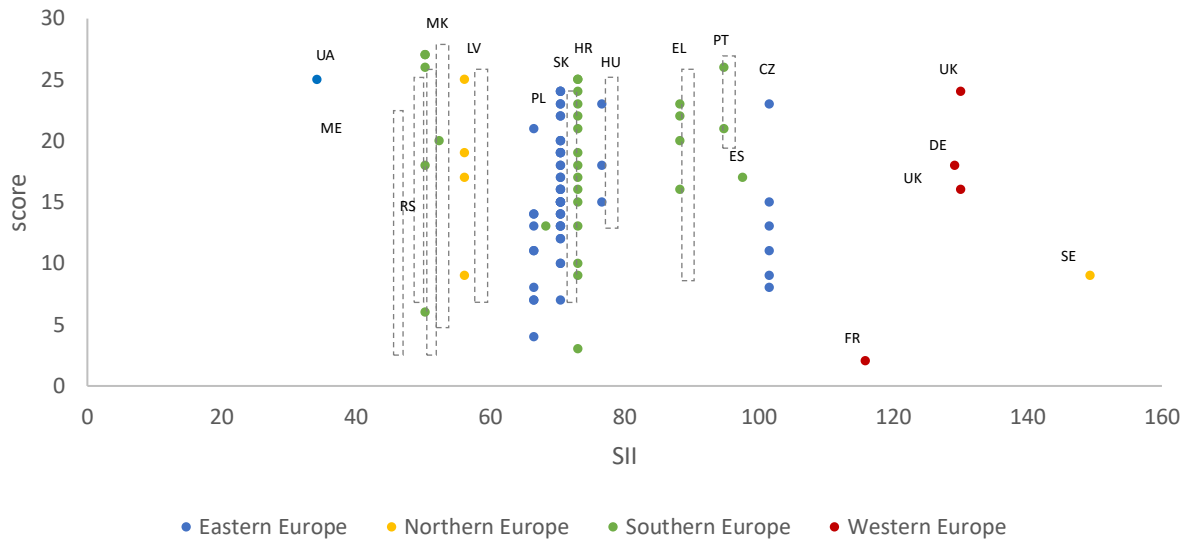
**Figure 1.** Relationship between a country's SII and the region's average score
Sources: developed by the authors.

Dependency was the highest between SII_categ and $X_6$ (Gamma = 0.2176, Kendall's Tau-b = 0.1077, Somers' D $X_6$| SII_categ = 0.1640) and between SII_categ and $X_7$ (Gamma = 0.2083, Kendall's Tau-b = 0.1038, Somers' D $X_6$| SII_categ = 0.1592). If a region belonged to the Innovation leader and Strong innovator groups, the problem of $X_6$ and $X_7$ was perceived less intensely than in the regions belonging to the Emerging innovator category. Confirming the validity of $H_1$, the test results imply that the more advanced the innovation environment is, the lower the intensity of the perception of innovation as a problem in the development of the tourism region. The effectiveness of the quality of the innovation environment in reducing the perception of innovation as a problem factor in its development was found mainly in items $X_6$ and $X_7$. In the tourism regions operating in countries with quality innovation environments and innovation performance, innovations are not perceived as a significant problem. Tourism activities in the region are innovatively adaptable and can participate synergistically in the effects of the quality innovation environment of the economy in which they operate.

Verification of $H_2$ There is a relationship between the level of development of tourism regions and the perception of innovations as a problem in the development of the tourism region. We tested the validity of hypothesis $H_2$ at two levels:

1. We classified the regions according to the level of regional development (development of the region) into groups: developed regions and less developed regions.

2. The regions were divided by world regions into four groups: Eastern Europe, Northern Europe, Southern Europe and Western Europe.

The chi-square test of independence was used to test the relationship between the items of the research instrument and the classification of the regions. The intensity of dependence was quantified by the contingency coefficient and Cramer's V (Agresti, 1990). A significantly relevant relationship was found in the relationship $X_2$ vs level of development of the region (chi-square $p$ value = 0.0098; contingency coefficient = 0.307; Cramer's V = 0.3745) and in the relationship $X_7$ vs level of development of the region (chi-square $p$ value = 0.0567; contingency coefficient = 0.2969; Cramer's V = 0.3109) (Tables 5 and 7).

**Table 4.** Distribution of regions according to absent or insufficient quality management system in the region and level of development of the region

| Level of development | Absent or insufficient quality management system in region | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| Developed (Row Pct) | 4.29 | 25.71 | 24.29 | 25.71 | 20.00 |
| Less developed (Row Pct) | 0.00 | 8.00 | 12.00 | 48.00 | 32.00 |

Sources: developed by the authors.

In 30 percent of the developed regions, "absent or insufficient quality management system in region" was not considered a problem or only a mild problem, and 45.7 percent perceived it as a significant or very significant problem. Eight percent of less developed regions did not have a problem or had a mild problem, and 80 percent considered it a significant or very significant problem (Table 4).

**Table 5.** Results of the dependence test between absent or insufficient quality management system in region and level of development of the region

| Statistics | DF | Value | p value |
|---|---|---|---|
| Chi-Square | 4 | 9.1805 | 0.0567 |
| Likelihood Ratio Chi-Square | 4 | 10.99 | 0.0346 |
| Phi Coefficient | | 0.3109 | x |
| Contingency Coefficient | | 0.2969 | x |
| Cramer's V | | 0.3109 | x |

Sources: developed by the authors.

**Table 6.** Distribution of regions according to insufficient innovation potential in the tourism region and level of development of the region

| Level of development | Insufficient innovation potential in the tourism region | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| Developed (Row Pct) | 8.57 | 28.57 | 34.29 | 18.57 | 10.00 |
| Less developed (Row Pct) | 0.00 | 4.00 | 36.00 | 48.00 | 12.00 |

Sources: developed by the authors.

"Insufficient innovation potential in the tourism region" was not a problem or a mild problem in more than 37% and a significant or very significant problem in 28.6% in developed regions. Four percent of less developed regions have no problem or only a mild problem; in 60%, it is considered a significant or very significant problem (Table 6).

**Table 7.** Results of the dependence test between insufficient innovation potential in the tourism region and the level of development of the region

| Statistics | DF | Value | p value |
|---|---|---|---|
| Chi-Square | 4 | 13.3220 | 0.0098 |
| Likelihood Ratio Chi-Square | 4 | 15.9553 | 0.0031 |
| Phi Coefficient | | 0.3745 | x |
| Contingency Coefficient | | 0.3507 | x |
| Cramer's V | | 0.3745 | x |

Sources: developed by the authors.

The dependency was stronger (Cramer's V = 0.3745) when this problem was assessed. Since a significantly relevant relationship was found only in the relationship $X_2$ vs level of development of the region and in the relationship $X_7$ vs level of development of the region, we cannot accept the established H$_2$. The level of development of a tourism region does not affect the perception of innovation as a problem for its development. Despite this assessment, we can say that insufficient innovation potential and absent or insufficient quality management systems are demonstrably more serious problems for the development of less developed tourism regions.

Answer to RQ$_1$ How does the geographical location of a tourism region influence the perception of the impact of innovations on its development?

The table of average scores for each item in the Eastern Europe, Northern Europe, Southern Europe and Western Europe categories suggests that there is a relationship between a region's membership in one of these clusters and the measurement on each subscale of the research instrument (Table 8). The average scores were the highest for the regions belonging to Southern Europe on all items except $X_6$.

We also used a decision tree (Berry & Linoff, 2004) to assess which of the regions' characteristics affect the average score of the research instrument consisting of items $X_1$, $X_2$... $X_7$. The criterion for the selection of branching variables was the reduction of variability; we allowed a maximum of three branches and a depth of 3. The variable Level of development of the region (Development) was used at the first level and World region at the second level.

**Table 8.** Average score broken down by world region

| | World region | | | |
|---|---|---|---|---|
| | **Eastern Europe** | **Northern Europe** | **Southern Europe** | **Western Europe** |
| $X_1$ | 2.000 | 2.400 | 2.517 | 2.250 |
| $X_2$ | 2.018 | 1.600 | 2.483 | 1.750 |
| $X_3$ | 2.193 | 1.800 | 2.586 | 2.000 |
| $X_4$ | 2.193 | 2.00 | 2.69 | 2.250 |
| $X_5$ | 2.421 | 2.600 | 2.897 | 2.000 |
| $X_6$ | 2.386 | 3.00 | 2.862 | 2.500 |
| $X_7$ | 2.456 | 2.400 | 2.655 | 2.250 |

Sources: developed by the authors.

Using these variables, five relatively homogeneous groups of regions were created. The less developed regions of Southern Europe (20.50) (Node Id: 8) and Eastern Europe (17.93) (Node Id: 7) had significantly higher than the average value of the total score, and of the developed regions, it was Southern Europe (17.74) (Node Id: 13). Developed regions belonging to Eastern Europe and Western Europe (Node Id: 12) had the lowest mean score (14.87) (Fig. 2).
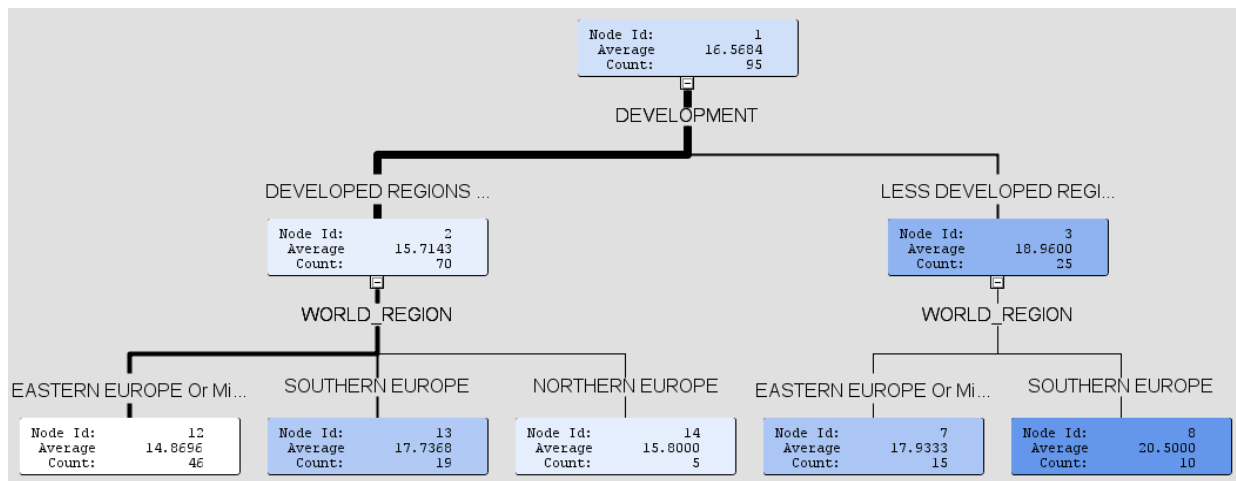


**Figure 2.** Regression tree model with dependent variable average score
Sources: developed by the authors.

The model was built using SEMMA methodology with SAS Enterprise Miner 12.1 software. Based on the analysis conducted, we can say that the location of the tourism region in Southern Europe is a factor that influences the perception of innovation as a problem in its development. This was significantly confirmed in the group of less developed regions. Additionally, in the group of developed regions, the perception of innovation as a development problem in Southern Europe is most pronounced. In contrast, the developed tourism regions of Eastern and Western Europe perceive innovation as a development problem least strongly.

**5. Conclusions.** The promotion of innovation in a tourism region directly affects the competitiveness of the offer (Weiermair, 2006). Therefore, the identification and assessment of problems in the development of tourism regions in the introduction of innovations in business processes is an important tool for optimization processes leading to an increase in the quality and complexity of the offer and the competitiveness of the regions. In this paper, we have considered the intensity of perception of innovations in tourism regions as a problem depending on the maturity of the innovation environment, the development of regions and the geographical location of the tourism region. The findings of this study clearly show that the maturity of the innovation environment determines the intensity of the perception of innovations as a problem in the development of tourism regions. The results of the survey reflect a lower intensity of perception of innovation as a problem in its implementation and use in the case of a more advanced innovation environment in a tourism region.

By classifying individual tourism regions into cumulative groups of Eastern Europe, Northern Europe, Southern Europe, and Western Europe, we can also verify the claim that the higher the innovation performance

of countries in a given group, the lower the intensity of perceived problems in the introduction of innovations. Stronger dependence was confirmed in the Eastern Europe group, and weaker dependence was confirmed in the Southern Europe group. The result suggests a lower ability of Southern European tourism regions to achieve synergies from the available innovation environment of the economy. By ranking the regions according to innovation performance as measured by the Summary Innovation Index into Innovation leader, Strong innovator, Moderate innovator and Emerging innovator groups, we found that tourism regions belonging to the Innovation leader and Strong innovator groups perceive innovation activity as less problematic. The least problematic areas were identified by measuring the insufficient supply of off-season products in tourism and absent or insufficient quality management systems in region subscales. This indicates that tourism regions with stronger innovation activity have a well-established quality management system and a comprehensive and systematically addressed supply of seasonal and off-season products. In contrast, tourism regions ranked in the emerging innovator group perceive the specified problems in the introduction of innovations more intensively. This reflects the lack of coordination of the product portfolio, both in terms of range and quality, in countries where the innovation environment is poorly developed.

The explanation for this result is that tourism regions located in an economy with a mature innovation environment are able to adapt innovations and achieve synergies from a cross-sectoral approach (Brandao et al., 2018; Booyens & Rogerson, 2017). The collaboration of actors in the tourism region together with the maturity of the region's management are the basis of its prosperity (Michalkova et al., 2023). The existing innovation environment and, consequently, the innovation potential in the tourism region are the initial determinants of the intensity of innovation activity in terms of the adoption of product and process innovations (Romao & Neuts, 2017; Kofler et al., 2018; Rubera & Kirca, 2012; Nepierala & Szutowski, 2019; Lin, 2013). Enterprises in innovation-performing regions can benefit from digital and sustainable regional infrastructure, the existence of connectivity in the region, knowledge transfer, easier access to information flows, and the development of deeper collaboration in the respective tourism region (Tuzunkan, 2017; Sun, 2021; Novelli et al., 2006).

In the following research, we examined the relationship between the level of development of a tourism region and the perceived problems in adapting innovations. The testing revealed only two significant problems, namely, insufficient innovation potential in the tourism region and an absent or insufficient quality management system in the region, which were significant for less developed tourism regions and conversely unimportant for developed regions. This underlines the importance of using a collaborative and cross-sectoral approach in exploiting the innovation environment of the tourism region and in establishing a quality management system as initial aspects in introducing innovation in tourism regions.

We tested the influence of the geographical location of a tourism region on the perception of the impact of innovations on its development through the lens of geographical affiliation with Eastern Europe, Northern Europe, Southern Europe, Western Europe and developed and less developed regions. The less developed Southern Europe and Eastern Europe regions showed the highest values compared to the average value, while for developed tourism regions, it was also the Southern Europe region with borderline values. The least problematic uptake of innovations was perceived by the developed regions in Eastern Europe and Western Europe. Thus, it is clear that developed regions do not show significant signs of barriers to the adoption and use of innovations. We note that regions' degree of development is supported by their innovativeness (Romao & Neuts, 2017). The result of the above analysis conducted on the basis of the geographical affiliation of tourism regions confirms our findings that Southern Europe´s tourism regions have a limited capacity to achieve synergies from the innovations offered by the environment of their economy.

To strengthen the innovativeness of tourism regions and eliminate the perception of innovations as a problem in their development, it is necessary to focus on the creation of regional policy instruments that stimulate the functionality of open innovation and a cross-sectoral approach in the use of the innovation environment. Open innovation has the capacity to stimulate innovation resource sharing and knowledge transfer effects. Destination management organizations can initiate the application of open innovation systems. In the sharing economy, entrepreneurs, the public sector, research and educational institutions and consumers are all part of the open innovation system in tourism. The implementation of these tools should result in the exploitation of the innovation potential of the region's economy for the creation of a competitive regional tourism product with a positive impact on the sustainable development of the regional economy.

The aim of the article was to address the issue of innovations in the context of the development of tourism regions in Europe. The methodological apparatus used allowed us to achieve results in the identification of the impact of the maturity of the innovation environment of the economy on the perception of innovations as a problem in the development of tourism regions. The research study relied on the statements of the positions

of experts from the environment of tourism regions of Europe towards the identified aspects of tourism region development and innovations, based on a wide theoretical portfolio of relevant sources. The results were considered in relation to the maturity of the innovation environment in which the tourism regions operate, their level of development and their geographical location. The results confirm that the innovation performance of tourism regions is positively influenced by a mature innovation environment. Regions located in strong innovator countries show better innovation adaptation results; synergistically, in these regions, there is a suitable innovation potential and a well-established quality management system. Countries and tourism regions belonging to emerging innovators, on the other hand, perceive several problems in adopting innovations with greater intensity, especially in the area of the complexity of product offerings and quality management systems in the region.

Absent or insufficient quality management systems are a significant problem for tourism regions of Europe; in greater intensity, this problem is perceived in less developed regions. Insufficient innovation potential in the tourism region is a significant or very significant problem for more than a quarter of the developed tourism regions; in the group of less developed regions, this result is close to two thirds. Geographically, Southern European tourism regions perceive innovation as a problem in their development most intensively. This result was confirmed in both the developed and the less developed regions, with the less developed regions showing the strongest trend.

A key recommendation to mitigate the perception of innovations as a problem in the development of Europe's tourism regions is to focus attention on the implementation of regional policy instruments that stimulate the participation of tourism in the synergy effects of the existing innovation environment of the economy. These include close and effective cooperation between actors in the region, the implementation of an open innovation system and a cross-sectoral approach to the use of innovation potential. The innovation potential of tourism regions can be expected to be strengthened, as well as a more consistent quality management system in the region and the creation of a comprehensive and competitive portfolio of tourism products in the region.

The presented research has limitations. It was implemented in a limited number of European tourism regions from 17 European countries. The research evaluated the attitudes of 95 experts. The structure of the sample was not balanced in terms of geographical location. The research was carried out at a time when tourism was affected by a pandemic, so the conditions for the existence of tourism were radically different than in the normal period. However, innovation is a tool for mitigating the impact of crises as well as for a sustainable restart of tourism in the region. It would therefore be useful in the future to assess the perception of innovation in tourism regions over time. It would also be useful to extend the follow-up to other influences that determine the innovativeness of tourism regions. For example, on employment and its structure, on the degree of specialization of the region in tourism as well as on the degree of internationalization of the region.

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## References

Agresti, A. (1990). *Categorical Data Analysis*. John Wiley and Sons.

Berry, M. J. A., & Linoff, G. S. (2004). *Data mining Techniques. For Marketing, Sales, and Customer Relationship management* (2nd ed.). Wiley Publishing, Inc.

Booyens, I., & Rogerson, C. M. (2017). Networking and learning for tourism innovation: evidence from the Western Cape. *Tourism Geographies*, *19*(3), 340-361. [CrossRef]

Brandao, F., Costa, C., & Buhalis, D. (2018). Tourism innovation networks: a regional approach. *European Journal of Tourism Research*, *18*(1), 33-56. [Google Scholar] [CrossRef]

Chang, Y. Ch., & Chen, M. H. (2004). Comparing approaches to systems of innovation: the knowledge perspective. *Technology in Society, 26*, 17-37. [Google Scholar] [CrossRef]

Correia, R., & Brito, C. (2016). Wine tourism and regional development. *Wine and tourism: a strategic segment for sustainable economic development*, 27-39. [Google Scholar] [CrossRef]

Costa, T., & Lima, M. J. (2018). Cooperation in tourism and regional development. *Tourism and Management Studies*, *14*(4), 50-62. [Google Scholar]

Croes, R., Ridderstaat, J., Bąk, M., & Zientara, P. (2021). Tourism specialization, economic growth, human development and transition economies: The case of Poland. *Tourism Management*, *82*, 104181. [Google Scholar] [CrossRef]

Dias, A. L., Cunha, I., Pereira, L., Costa, R. L., & Gonçalves, R. (2022). Revisiting small-and medium-sized enterprises' innovation and resilience during COVID-19: the tourism sector. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(1), 11. [Google Scholar] [CrossRef]

Elkhwesky, Z., El Manzani, Y., & Elbayoumi Salem, I. (2022). Driving hospitality and tourism to foster sustainable innovation: A systematic review of COVID-19-related studies and practical implications in the digital era. *Tourism and Hospitality Research*. [Google Scholar] [CrossRef]

European Commission. (2022). European Innovation Scoreboard 2021. Luxembourg: Publications Office of the European Union. [Link]

Fundeanu, D. D. (2015). Innovative Regional Cluster, Model of Tourism Development. *Procedia Economics and Finance, 23*, 744-749. [Google Scholar] [CrossRef]

Giaoutzi, M., & Nijkamp, P. (Eds.). (2006). *Tourism and regional development: New pathways*. Ashgate Publishing, Ltd. [Google Scholar]

Gucik, M. (2007). *Manažment regionalneho cestovného ruchu*. Banska Bystrica: Slovak-Swiss Tourism. [Link]

Guisado-Gonzalez, M., Guisado-Tato, M., & Sandoval-Pérez, A. (2013). Determinants of innovation performance in Spanish hospitality companies: analysis of the coexistence of innovation strategies. *The Service Industries Journal*, *33*(6), 580-593. [Google Scholar] [CrossRef]

Hashimoto, A., & Telfer, D. J. (2006). Selling Canadian culinary tourism: Branding the global and the regional product. *Tourism Geographies*, *8*(1), 31-55. [Google Scholar] [CrossRef]

Hjalager, A. M. (2010). A review of innovation research in tourism. *Tourism management*, *31*(1), 1-12. [Google Scholar] [CrossRef]

Hjalager, A. M. (2002). Repairing Innovation Defectiveness in Tourism. *Tourism Management, 23,* 465-474. [Google Scholar] [CrossRef]

Hoarau, H. (2016). Open innovation in the tourism experience sector: The role of practice based knowledge explored. *Open Tourism: open innovation, crowdsourcing and cocreation challenging the tourism industry*, 137-152. [Google Scholar] [CrossRef]

European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEsю (2021). *European innovation scoreboard 2021*, Publications Office of the European Union [CrossRef]

Lotfi, F. H., & Fallahnejad, R. (2010). Imprecise Shannon's entropy and multi attribute decision making. *Entropy*, *12*(1), 53-62. [Google Scholar] [CrossRef]

Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling, 6*(1), 1–55. [Google Scholar] [CrossRef]

Jackson, J., & Murphy, P. (2006). Clusters in regional tourism An Australian case. *Annals of Tourism Research, 33*(4*)*, 1018-1035. [Google Scholar] [CrossRef]

Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika, 35*(4), 401–415. [Google Scholar] [CrossRef]

Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement, 34*(1), 111–117. [Google Scholar] [CrossRef]

Kaleychev, S. (2022). Theoretical Foundations of Marketing Research in Tourist Destinations. *Athens Journal of Tourism*, 9 (2), 115-128. [Google Scholar] [CrossRef]

Kofler, I., Marcher, A., Volgger, M., & Pechlaner, H. (2018). The special characteristics of tourism innovation networks: The case of the Regional Innovation System in South Tyrol. *Journal of hospitality and tourism management*, *37*, 68-75. [Google Scholar] [CrossRef]

Kozak, M. W. (2014). Innovation, tourism and destination development: Dolnośląskie case study. *European Planning Studies*, *22*(8), 1604-1624. [Google Scholar] [CrossRef]

Kubickova, V., & Benešova, D. (2022). The Innovation in Services and Service Economy. Praha. Wolters Kluwer. ISBN 978-80-7676-379-1. [Link]

Latorre, J., de Frutos, P., de-Magistris, T., & Martinez-Peña, F. (2021). Segmenting tourists by their motivation for an innovative tourism product: Mycotourism. *Journal of Ecotourism*, *20*(4), 311-340. [Google Scholar] [CrossRef]

Lin, L. (2013). The impact of service innovation on firm performance. *The Service Industries Journal*, 33 (15-16), 1599-1632. [Google Scholar] [CrossRef]

Roieva, O., Oneshko, S., Sulima, N., Saienko, V., & Makurin, A. (2023). Identification of digitalization as a direction of innovative development of modern enterprise. *Financial and credit activity-problems of theory and practice*, 1(48), 312-325. [Google Scholar]

McGee, J. E., Dowling, M. J., & Megginson, W. L. (1995). Cooperative strategy and new venture performance: the role of business strategy and management experience. *Strategic Management Journal*, 16 (7), 565-580. [Google Scholar] [CrossRef]

Michael, E. (2002). Antiques and tourism in Australia. *Tourism management*, *23*(2), 117-125. [Google Scholar] [CrossRef]

Michalkova, A. (2011). Strategické vnímanie regionalnych sietí v cestovnom ruchu so zohľadnením ich rozporuplných efektov. *Ekonomický casopis/Journal of Economics*, *59*(3), 310-324. ISSN 0013-3035. [Google Scholar]

Michalkova, A., Krošlakova, M. N., Cvirik, M., & Martínez, J. M. G. (2023). Analysis of management on the development of regional tourism in Europe. *International Entrepreneurship and Management Journal*, 1-22. [Google Scholar] [CrossRef]

Morera, O. F., & Stokes, S. M. (2016). Coefficient α as a measure of test score reliability: Review of 3 popular misconceptions. *American journal of public health*, *106*(3), 458-461. [Google Scholar] [CrossRef]

Najda-Janoszka, M., & Kopera, S. (2014). Exploring barriers to innovation in tourism industry–the case of southern region of Poland. *Procedia-Social and Behavioral Sciences*, *110*, 190-201. [Google Scholar] [CrossRef]

Napierała, T., & Szutowski, D. (2019). The impact of localized innovations on the stock returns of tourism companies. *International Journal of Tourism Research*, *21*(1), 108-121. [Google Scholar] [CrossRef]

Novelli, M., Schmitz, B., & Spencer, T. (2006). Networks, clusters and innovation in tourism: A UK experience. *Tourism management*, *27*(6), 1141-1152. [Google Scholar] [CrossRef]

Nunes, S., & Cooke, P. (2021). New global tourism innovation in a postcoronavirus era. *European Planning Studies*, *29*(1), 1-19. [Google Scholar] [CrossRef]

OECD. (2005). Oslo manual: Guidelines for collecting and interpreting innovation data. OECD publishing. [Link]

Pillmayer, M., Scherle, N., & Volchek, K. (2021). Destination Management in Times of Crisis-Potentials of Open Innovation Approach in the Context of COVID-19?. In *Information and Communication Technologies in Tourism 2021: Proceedings of the ENTER 2021 eTourism Conference, January 19–22, 2021* (pp. 517-529). Springer International Publishing. [Google Scholar] [CrossRef]

Perovic, J., Raicevic, M., & Delibasic, M. (2021). Foreign Direct Investment, Tourism, Economic Growth and Trade: Panel Vector Auto Regression (Var) Model. *Transformations in Business & Economics*, 20(1), 140-153. [Google Scholar]

Piperoglou, J. (1967). Identification and definition of regions in Greek tourist planning. *Papers of The Regional Science Association, 18*, 169-176. [Google Scholar] [CrossRef]

Rachao, S., Breda, Z., Fernandes, C., & Joukes, V. (2019). Food tourism and regional development: A systematic literature review. *European Journal of Tourism Research*, *21*(1), 33-49. [Google Scholar] [CrossRef]

Radjenovic, M., Draskovic, M., & Pupavac, J. (2020). Analysis of The Southeastern European Countries' Cultural and Creative Tourism Competitiveness. *Transformations in Business & Economics*, 19(2), 259-270. [Google Scholar]

Romao, J., & Neuts, B. (2017). Territorial capital, smart tourism specialization and sustainable regional development: Experiences from Europe. *Habitat International*, *68*, 64-74. [Google Scholar] [CrossRef]

Romao, J., & Nijkamp, P. (2019). Impacts of innovation, productivity and specialization on tourism competitiveness–a spatial econometric analysis on European regions. *Current Issues in Tourism*, *22*(10), 1150-1169. [Google Scholar] [CrossRef]

Rubera, G., & Kirca, A.H. (2012). Firm innovativeness and its performance outcomes: a meta-analytic review and theoretical integration. *Journal of Marketing*, 76 (3), 130-147. [Google Scholar] [CrossRef]

Schermelleh-Engel, K., Moosbrugger, H., & Muller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of psychological research online*, 8(2), 23-74. [Google Scholar]

Smith, S. L. (1987). Regional analysis of tourism resources. *Annals of tourism research*, 14(2), 254-273. [Google Scholar] [CrossRef]

Sun, Y., Duru, O. A., Razzaq, A., & Dinca, M. S. (2021). The asymmetric effect eco-innovation and tourism towards carbon neutrality target in Turkey. *Journal of Environmental Management*, 299, 113653. [Google Scholar] [CrossRef]

Teixeira, S. J., & Ferreira, J. J. (2019). Entrepreneurial artisan products as regional tourism competitiveness. *International Journal of Entrepreneurial Behavior & Research*, 25(4), 652-673. [Google Scholar] [CrossRef]

Troian, M., Prokopenko, O., Järvis, M., Saichuk, V., Komarnitskyi, I., & Glybovets, V. (2023). International Marine Tourism: Trends and Prospects for Sustainable Development. *Pomorstvo*, 37(1), 23-31.[Google Scholar] [CrossRef]

Tuzunkan, D. (2017). The relationship between innovation and tourism: The case of smart tourism. *International Journal of Applied Engineering Research*, 12(23), 13861-13867. [Google Scholar]

UNWTO (2018). Strategy on Innovation, Investment and Digital Transformation. [Link]

UNWTO (2022). Innovation, Education and Investments. The results 2018 – 2021. [Link]

Vasanicova, P., Jencova, S., Gavurova, B., Bacik, R. (2021). Cultural and Natural Resources as Determinants of Travel and Tourism Competitiveness. *Transformations in Business & Economics*, 20(3), 300-316. [Google Scholar]

Verbivska, L., Zhuk, O., Ievsieieva, O., Kuchmiiova, T., & Saienko, V. (2023). The role of e-commerce in stimulating innovative business development in the conditions of European integration. *Financial and credit activity-problems of theory and practice*, 3(50), 330-340. [Google Scholar] [CrossRef]

Weiermair, K. (2006). Product improvement or innovation: what is the key to success in tourism? *OECD: Innovation and Growth in Tourism*, 53-70. [Link]

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**Інновації та туристичні регіони: чи розглядають інновації як детермінанту розвитку в європейського туризму в регіонах?**

У статті проаналізовано інноваційні аспекти розвитку туристичних регіонів у Європі. Основною метою статті є визначення ступеня сприйняття інновацій у туристичних регіонах як детермінанти їх розвитку. Авторами оцінено проблему розвитку туристичних регіонів у Європі у сфері інновацій, як можливого вихідного пункту для оптимізації змін у політиці місцевого та регіонального туризму. Вихідну базу дослідження сформовано на основі опитування 95 експертів у галузі регіонального туризму з 17 країн Європи. Для аналізу властивостей категоріальних даних та їх взаємозв'язків використано статистичні методи, такі як Gamma, Kendall's Tau-b, Somers' D C|R, коефіцієнт кореляції Спірмена, Коефіцієнт Фі, Коефіцієнт Контингентності, Коефіцієнт Крамера, а також алгоритм дерева рішень. Рівень інноваційного середовища у туристичних регіонах та їхня ступінь розвитку впливають на сприйняття інновацій. Регіони Південної Європи сприймають інновації як найбільш ефективний інструмент, що формує передумови їх розвитку. Туристичні регіони з вищим рівнем інноваційної активності мають встановлену систему управління якістю, а також комплексний і систематичний підхід до постачання продуктів як у сезонний, так і позасезонний періоди. Регіони, що віднесені до групи "Емерджентних інноваторів", виявляють більш інтенсивне сприйняття проблем у впровадженні інновацій. Це відображає недостатню координацію портфеля замовлень як за обсягом, так і за якістю, в країнах, де інноваційне середовище слабо розвинене. Головною рекомендацією для зменшення сприйняття інновацій як проблеми у розвитку туристичних регіонів Європи є акцент на впровадженні інструментів регіональної політики, які стимулюють участь туризму в синергетичних ефектах існуючого інноваційного середовища економіки.

**Ключові слова:** інновації; інноваційне середовище; сприйняття інновацій; регіональний розвиток; туристичний регіон.