EXPLORING RESEARCH METHODS FOR TOURISM RESILIENCE

Iuliana Tudose-Pop^{1*}

¹University Alexandru Ioan Cuza of Iasi, Iasi, Romania, ipop2008@gmail.com

Abstract

This paper examines various research methods used in the study of resilience in tourism across European Union (EU) Member States. To this end, several relevant literature articles were reviewed. In the theoretical research process, particular attention was paid to the research methods employed by researchers to analyze resilience in tourism, the indicators used, and the results obtained. The article aims to present a concise overview of the most commonly used research methods for analyzing tourism resilience in EU Member States, focusing on two major crises that severely impacted these economies: the financial and economic crisis (2008–2010) and the crisis triggered by the COVID-19 pandemic (2020–2022). The research proposes a set of indicators, constructible from Eurostat data, for future analyses using multiple linear regression techniques and offers a modest methodological proposal for further studies to explore the role of key factors contributing to tourism resilience within EU countries.

Keywords: resilience, research methods, tourism, European Union, risk

JEL Classification: L83, Q54, Z30, Z32

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1. Introduction

The 21st century is characterized by a globalized world that is undergoing several rapid and profound changes, often accompanied by multiple threats. Tourism is a particularly important economic sector in the EU (Popescu et al., 2022). In this context, resilience emerges as a concept that can establish a link between emergencies, competitiveness, technologies, intelligence and long-term sustainability. The tourism industry is characterized by uncertainty as it is highly vulnerable to risk. In recent decades, uncertainty has increased significantly due to various crises (economic and financial crisis, COVID-19 pandemic) that have affected the global travel and tourism industry worldwide (Pappas, Michopoulou and Farmaki, 2023). The numerous global shocks that the world economy has faced have demonstrated the importance of the tourism sector and the shift towards more resilient, sustainable and inclusive tourism models (OECD, 2022), with the COVID-19 pandemic crisis confirming this direction.

International tourism has contributed to the growth of tourism receipts in at least two other ways, as suggested by the export-led growth hypothesis: Increasing efficiency through increased competition between businesses and other international destinations and enabling economies of scale in local businesses. Thus, competitiveness in tourism is a key factor that helps the tourism sector to become stronger and make a significant contribution to the economy (Popescu et al., 2022).

The recovery of the tourism industry after the COVID-19 pandemic, both nationally and globally, has been analyzed in terms of several factors, including tourism's contribution to the economy and tourism demand. A first major wake-up call in terms of security was the attacks of September 11, 2001, which prompted destinations to take security measures for better crisis management in destinations where tourism is an important industry. As a result of the increase in crisis situations, the number of contingency plans developed and implemented by the relevant authorities in the destinations and tourism planners has also increased (Gunlu and Aktas, 2006).

The financial and economic crisis of 2008-2010 hit many sectors of the global economy hard, including tourism. Demand in the hotel and restaurant industry fell sharply as people's incomes were affected by

^{*} Corresponding author

Authors' ORCID:

Iuliana Tudose-Pop

the crisis, leading to a decline in tourism revenues (Sariişik et al., 2011). Balaguer and Cantavella-Jordá (2002) emphasize the role of tourism for long-term economic growth in the case of Spain and point out the importance of the multiplier effect. Pascariu and Ibănescu (2018) analyze how the multiplier effect generated by tourism in European economies stimulates economic growth.

The worldwide standstill of tourism at the beginning of the COVID-19 pandemic has significantly restricted the mobility of the population on a global level and has also had an impact on the natural environment, tourism consumption, but also on the behavior of tourists. The impact of the COVID-19 pandemic on tourism has strengthened the belief that resilience in tourism is becoming an urgent need and opens up new avenues of research (Yang, Zhang and Rickly, 2021). Current measures targeting resilience in tourism are generally guided by the concepts of crisis management and sustainability, and the measurement of resilience focuses on recovery. The COVID-19 pandemic crisis has also highlighted the endogenous weaknesses of tourism, not just the exogenous shocks to which tourism has proven vulnerable.

The main objective of this study is to systematically explain the main methodologies used in the analysis of resilience, with a particular focus on the tourism sector in the Member States of the European Union. This study examines the sector's adaptive capacity to two profound exogenous shocks: the global financial and economic crisis of 2008-2010 and the unprecedented disruptions triggered by the COVID-19 pandemic in 2020. By synthesizing a methodological framework, the study aims to contribute to the theoretical and empirical understanding of resilience in tourism, a sector that is crucial to the socio-economic landscape of the European Union.

The study proposes a structured analytical framework that includes a carefully selected set of indicators suitable for research. These indicators have been selected to reflect the key economic, social and operational dimensions of resilience in the tourism industry. This framework is offered as a modest foundation for future research and encourages further exploration and refinement by academics and practitioners. The study is intended to provide a practical starting point for analyzing resilience in the hope of supporting incremental advances in policy and practice that will enhance the tourism sector's ability to address future challenges.

2. Literature review

This research looked at how tourism resilience has been studied through research methods and what the results of this research have been, in order to find the best directions for future development and to face the multiple challenges from risk factors. Thus, the research methods used by researchers in analyzing resilience in tourism, the indicators used in this research and the results obtained were analyzed. The literature review was conducted by studying articles identified in international databases such as WOS, Scopus, Emerald and others. Keywords related to tourism, risks and resilience research methods were used to identify these materials. Thus, both quantitative and qualitative research methods were highlighted. Most quantitative methods use statistical software in order to conduct the research, as they allow a deeper analysis of the phenomenon. However, in many researches, mixed methods are also used in order to achieve a complete picture in understanding the analyzed phenomenon.

2.1 Quantitative approaches to resilience analysis in tourism

The quantitative approach analyzes either the speed with which some indicators return to pre-disruption levels or indices that capture regional characteristics designed to support resilience to crises (Drăgan, 2015). Yingjie, Shanshan and Xiaoyue (2024) use panel data from 2009-2022 to create a resilience assessment system for four large sites in the capital city of Henan Province in China. The assessment of resilience is carried out along four research directions: economic resilience, social resilience, cultural resilience and ecological resilience. Thus, the entropy-weighted TOPSIS method and an obstacle degree model are used to measure the degree of resilience of the analyzed sites, and factors acting as obstacles are also identified.

The relationship between tourism and economic growth in island countries was examined by Alcalá-Ordóñez et al. (2024) using the Granger causality test for a sample of 20 island countries in the period 1995-2019. In Granger causality tests, causality indicates whether one variable precedes the other or which variable moves first. There are different variants of the Granger test for panel data. Two results

emerged from the analysis: First, there is a causal relationship between tourism and economic development, and second, it was shown that there is a causal relationship that leads to the idea that tourism expansion contributes to economic development.

The quantitative method and deductive approach of Hossain, Kumar and Islam (2024) concluded that infrastructural development has largely influenced the resilience of the destination. The survey method was conducted using a self-administered questionnaire for data collection. Ngoc Su et al. (2021) focus on the practices of human resources who employed organizational resilience development during the COVID-19 pandemic crisis to cope with the first wave of the crisis and used a semi-structured interview for this purpose. The findings highlight the importance of human resources before, during and after the lockdown.

The analysis of economic resilience of tourist villages in Indonesia in 2019-2022 during the COVID-19 pandemic was analyzed by Ariyani and Fauzi (2024) using a novel method - the Adjusted Mazziotta-Pareto Index (AMPI) - to measure and rank economic resilience through cluster analysis. In the study by Wu et al. (2024), rural ecological resilience is analyzed, which is composed of three dimensions such as stress index, condition index and response index. The authors use the entropy method to calculate the weights for each index, and the composite index method was used to calculate the level of ecological resilience.

Bartosz (2023) uses a cartodiagram to analyze the impact of the COVID-19 pandemic on tourist spending on transport, accommodation and restaurants in Europe for the period 2019-2021. The study shows a different picture in terms of changes in tourist expenditure in 2021 compared to 2019, with smaller declines in Central European countries, which can be interpreted as higher resilience to the COVID-19 pandemic. Despite declines in countries such as Germany and France, spending remained high in 2021, underlining its key role in the tourism market. This study shows the huge impact that tourism-related spending has on the economy.

To assess resilience in tourism, Yang, Lu and Wang (2023) used the vertical-horizontal stratification method to select the fundamental indicators. The fixed-base efficiency index method was used to standardize the indicators and calculate the tourism economy resilience index. The vertical-horizontal stratification method of Yang, Lu and Wang (2023) is a more dynamic and broader approach to resilience assessment, and the fixed-base efficiency index method was used to compare tourism resilience across different years in an efficient way. The authors constructed a resilience assessment system based on the key economic components of the tourism industry and suggest that tourism resilience focuses on the degree of integration and comparability between the tourism industry and the regional economy. The resilience and management resilience, with several specific and relevant indicators associated with each criterion.

The main factors influencing the economic resilience of tourism identified by Zhang et al. (2022) in China include the quality of the ecological environment, the government's management capacity and the level of technological innovation. The research results show that the economic resilience of tourism in China includes four types: robust, autonomous, laissez-faire and fragile. The autoregressive integrated moving average model (ARIMA) and the geographic detector model were used in this study to evaluate the spatio-temporal development.

More recently, an important driver for increasing tourism resilience of the tourism economy is the digital economy, and the heterogeneity test shows that the digital economy has a spatial diffusion effect on the economic resilience of tourism in the region. To this end, the Spatial Durbin Model (SDM) was used to test the impact of the digital economy on economic resilience in tourism (Tang, 2024). The role of innovation and diversification in accelerating recovery from a shock is also related to regional and European policies for EU Member States, and tourism shows favorable potential for recovery from a shock (Pascariu et al., 2021).

2.2 Qualitative approaches to resilience analysis in tourism

Cochrane (2010) also points to the importance of qualitative research, particularly oriented towards ethnographic and cultural aspects of communities and the analysis of social networks, to better

understand human systems and develop the ability to adapt and accept new directions of development and implement innovative solutions.

The qualitative research by Zhang, Lv and Sarker (2024) used the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes (PRISMA) to conduct a systematic review of the literature published between 2000-2023 and highlight the importance of governance strategies for building resilience in tourism. Qualitative case studies are among the most appropriate methods for analyzing social phenomena and are particularly useful for exploring the multiple interactions between the dimensions of tourism, sustainable development and governance (Langer and Schmude, 2024).

2.3 Factors impacting tourism resilience to multiple and overlapping crises

Resilience factors can be structural characteristics, processes or other determinants that motivate the ability of a territorial system to return to its initial state or even better after significant disturbance (Bănică et al., 2021). Resilience capacity assesses the overall capacity of a country or region before a shock, to withstand and recover from a crisis. Resilience encompasses three dimensions, namely: absorptive capacity (reduces exposure to shocks as a result of prevention measures), adaptive capacity (adds proactive capacity) and transformation (infrastructure that enables systemic changes).

Diversifying the tourism offer can contribute to increasing the resilience of EU economies to the multiple shocks affecting the EU. Following the analysis of tourist regions in Europe, Romão (2020) finds that tourism demand is a positive factor that influences resilience but also regional growth resulting from external shocks. Also referring to the regional approach, Hall, Safanov and Naderi Koupaei (2023) consider that tourism can contribute to greater economic and demographic resilience, a conclusion also supported by Ibănescu, Eva and Gheorghiu (2020) who indicated the positive effect of tourism on economic and demographic resilience in highly accessible rural areas. The development of regional tourism can increase resilience by reducing regional income inequality, as shown by previous studies (Lee et al., 2021).

The recovery of the tourism sector after the severe pandemic crisis is being achieved at EU level, through the implementation of a recovery and resilience mechanism, under which Member States benefit from financial support from the EU. Among the sectors benefiting from this financial support is tourism, where common themes have been identified, such as green and digital tourism, greater diversification of the tourism offer, sustainability of the tourism sector or development of workforce skills. During the pandemic, these themes have proven to be of strategic importance (Mileva and Lyutova, 2023).

2.4 Assessment of the economic resilience of tourism in the EU Member States

Economic resilience is defined as the multidimensional capacity for change of an economy that affects its businesses, employees and financial institutions, which is able to absorb shocks, adapt or move towards sustainable development (Bănică et al., 2021). Thus, for each indicator analyzed, three key moments were identified in the analysis of resilience: the peak year (before the manifestation of the crisis, when resilience begins), the trough year (it is associated with the moment of the crisis, when the resilience phase ends and the recovery phase begins) and the year of full recovery (it is reached when the indicator fully recovers to the value of the peak year).

The assessment of economic resilience in tourism can be roughly divided into two main categories:

1. Assessing economic resilience by constructing a composite index. Briguglio et al. (2009) were the first to develop a system for assessing economic resilience that encompasses four aspects: economic stability, market efficiency, economic governance and social development.

2. *Measuring economic resilience by creating correlation indices*. The method consists of choosing a variable to represent its change in the face of the disturbing shock and relating the change in the value of the underlying variable before and after the shock to the threshold value (Zhang et al, 2022).

It is therefore evident that it is necessary to integrate the two meanings of resilience (Boschma, 2015), a short-term and a long-term approach. Among the ways to increase resilience, new industries or

technological innovations can play an important role, which was demonstrated to some extent during the COVID-19 pandemic. It is particularly important to identify the key drivers within a region to develop new growth pathways. Furthermore, an evolutionary approach to resilience at the regional level is required, considering the complexity and dimensional nature of resilience.

The primary objective of this study was to offer a brief review of the main methodologies used to assess resilience in the tourism sector across European Union Member States, focusing on the sector's responses to two major disruptions: the financial and economic crisis that began in 2008 and the challenges triggered by the COVID-19 pandemic in 2020. Following this analysis of preferred methodologies, we propose a research framework for exploring this topic, presenting a modest set of variables, organized in a table, which could be utilized in future studies employing diverse research methodologies. These variables can be constructed using statistical data available from Eurostat databases.

3. Proposed Research Framework

Quantitative research is a research method that focuses on the systematic collection and analysis of numerical data (Cărbunaru-Băcescu and Condruz-Băcescu, 2014). This study proposes a methodological framework for analyzing resilience in the tourism sector across European Union Member States, focusing on the sector's responses to two major disruptions: the financial and economic crisis of 2008 and the COVID-19 pandemic in 2020. For the financial-economic crisis, we suggest examining the 2004–2010 period, encompassing a pre-crisis phase (2004–2007), the shock year (2008), and a post-crisis phase (2009–2010). For the pandemic crisis, we propose analyzing the 2016–2022 period, including a pre-crisis phase (2016–2019) with a peak in 2019, the shock year (2020), and a post-crisis phase (2021–2022), for which comprehensive statistical data are available from Eurostat databases for the selected indicators.

One possible method for conducting this analysis would be to perform a multiple linear regression analysis using SPSS for each year within the specified time periods. As an example, the proposed model could include the following variables, all of which can be constructed from Eurostat data:

- Dependent variable: Total number of international tourists accommodated in tourist accommodation establishments.
- Independent variables: Gross domestic product (GDP) per capita, number of overnight stays, total tourists arriving in accommodation establishments, total number of unemployed individuals, number of employed individuals across various activities, and the Human Development Index (HDI).

This methodology is offered as a modest foundation for future research, aiming to facilitate a systematic exploration of tourism resilience and its economic implications.

The aim of the regression is to determine how a dependent variable changes depending on the change in one or more explanatory or causal variables (Anghel, Grigorescu and Dumbravă, 2020). The regression method describes the dependency between the effect and the influencing factors. Multiple regression was chosen, where the dependent variable is the number of international tourists staying in accommodation facilities and the independent variables are GDP per capita, the total number of tourists, the total number of unemployed, the working population and the Human Development Index (HDI). Several steps will be carried out to create the regression model:

- 1. Identify the effect variant (dependent) and the explanatory variables that are considered causal (independent).
- 2. Selection of the most appropriate form of expression of the relationships between the variables (specification), on the basis of which the regression model is defined.
- 3. Estimation of the model parameters.
- 4. Testing the model by ANOVA analysis of variance.
- 5. Validation of the model by means of acceptance tests.

The correlation method makes it possible to measure the degree of interdependence between variables, and the value that the correlation coefficient can take is between 0 and 1. The correlation between two variables can be explained by the existence of a common cause that influences both (Cărbunaru-Băcescu and Condruz-Băcescu, 2014).

Another research direction is the processing of panel data, which makes it possible to estimate dynamic relationships. Panel data models are formed by regression equations in which both chronological series and cross-sectional data series are used (Eugenio-Martin and Patuelli, 2022; Seetaram and Petit, 2012).

A cluster analysis could also be carried out. It identifies a set of homogeneous groups by grouping elements in such a way that the variation within the group is minimized and the variation between the groups is maximized. Variables are sorted into groups in such a way that similarities exist between members of the same cluster. Cluster analysis is an important exploratory analysis tool for creating taxonomies based on similarities and differences between distant branches are large compared to nearby branches, this shows that clustering is not very effective. Similar regions form a cluster, and the most distant ones are isolated because they are different from the other regions. Correlation and regression show the relationships that exist between two series of observations considered simultaneously. In the case of correlation, a large coefficient indicates a strong relationship (D'Urso et al., 2021; Stylidis, 2018).

The method of composite indices includes phases in which subjective assessments are made: the selection of variables and individual indicators, the treatment of missing data, the choice of aggregation model, the choice of weights (Vaida-Muntean, Voineagu and Munteanu, 2014).

4. Proposed Key Indicators for Analyzing Tourism Resilience in EU Member States

Research on economic resilience in tourism includes a series of indicators, such as: the share of tourism in economic activity, the direct share of tourism in total employment, the mix of tourism transport, tourism yield, business insolvency rates, the share of visitors to key destinations, according to OECD (2022). Zhang et al. (2022) use several indicators that analyze resilience based on several components, such as: Tourist arrivals for the tourism market; GDP per capita, which is relevant to the regional economy; the contribution of tourism revenues reported to tourism employment, the share of tourism employment in total employment, the share of reported domestic trips in total tourist trips, and the tourism consumption index of residents, which are considered representative tourism indicators; the total number of star-rated hotels, the total number of tourism employees, indicators related to the capacity to receive tourists. These categories of indicators are also attributed to the government's management capacity.

This study proposes a set of indicators for future research aimed at analyzing tourism resilience across European Union Member States, encompassing both tourism-specific and macroeconomic dimensions. We recommend the following indicators, which can be constructed using statistical data available from Eurostat databases for the periods 2004–2010 and 2016–2023, corresponding to the financial-economic crisis and the COVID-19 pandemic, respectively: Total Gross Domestic Product (GDP), GDP per capita, number of overnight stays, total number of tourists arriving at accommodation establishments, total number of individuals employed individuals, number of individuals employed across various sectors, and the Human Development Index (HDI). These proposed indicators are offered as a modest framework to support future studies, suitable for data modeling with tools such as SPSS and XLSTAT 2024 to investigate tourism resilience during the specified crisis periods (Table 1).

Table 1. Indicators proposed to be used in tourism resinence research		
Indicator name	Indicator description	Source
Gross Domestic	Indicator expressing the economic	https://ec.europa.eu/eurostat/databrowser/vi
Product	situation of a nation.	ew/tec00001/default/table?lang=en&categor
		y=t_na10.t_nama10.t_nama_10_ma
Gross domestic	Indicator measuring economic	https://ec.europa.eu/eurostat/databrowser/vi
product per capita	development and growth per capita.	ew/tec00114/default/table?lang=en&categor
		y=t_na10.t_nama10.t_nama_10_ma

Table 1. Indicators proposed to be used in tourism resilience research

Indicator name	Indicator description	Source
Human Development	Indicator of human development. It is	https://hdr.undp.org/data-center/human-
Index	a comparative measure of life expectancy, literacy, education and	development-inde#/indicies/HDI
	standard of living.	
Number of unemployed	Person able to work but without a work contract, looking for a job.	https://ec.europa.eu/eurostat/databrowser/vi ew/tps00203/default/table?lang=en&categor y=t_labour.t_employ.t_lfsi.t_une
Employed population	All persons engaged in productive activity within the boundaries.	https://ec.europa.eu/eurostat/databrowser/vi ew/tesem010/default/table?lang=en&catego ry=es.tesem
Number of international tourists accommodated	Total international tourists arriving/staying in tourist accommodation establishments	https://ec.europa.eu/eurostat/databrowser/vi ew/tin00174_custom_13920320/default/ta ble?lang=en
Total number of tourists accommodated	Total tourists accommodated in tourist accommodation establishments	https://ec.europa.eu/eurostat/databrowser/vi ew/tin00174/default/table?lang=en&categor y=t_tour.t_tour_inda.t_tour_occ
Number of overnights	Number of nights spent by tourists in accommodation establishments	https://ec.europa.eu/eurostat/databrowser/vi ew/tin00171/default/table?lang=en&categor v=t_tour_t_tour_indm

Source: Author's proposal (Eurostat, 2024; UNDP, 2024)

5. Conclusions

This paper examines the research methods used to investigate the resilience of the tourism sector in EU Member States, paying particular attention to how the sector has responded to two major crises: the financial downturn in 2008 and the COVID-19 pandemic in 2020. Rather than relying on a single approach, researchers have analyzed a mix of quantitative, qualitative and combined methods to assess resilience. These approaches have proven valuable in examining how tourism systems respond across economic, social and operational dimensions. Common indicators, such as GDP, GDP per capita, tourist arrivals and the Human Development Index, are widely used in the literature and largely supported by data from Eurostat.

Based on this overview, the study outlines a tentative framework to guide future research. It is oriented towards quantitative tools, including regression analysis, correlation techniques, clustering and panel data modeling. The framework includes a selected set of indicators, all accessible through Eurostat, to shed light on how tourism sectors have withstood and recovered from external shocks in 2004–2010 and 2016–2023. Although the framework is practical and data-driven, it is not presented as definitive; further testing and adjustments in different environments are recommended.

The results show that resilience is not a single trait, but a multi-layered concept— that encompasses impact absorption, adaptation to change and, in some cases, complete transformation. By proposing a structured yet flexible approach, the paper contributes to the ongoing debates on the potential of tourism to support economic stability and sustainability in the EU. Ultimately, it should provide a starting point for future studies and help policy makers and industry experts to develop strategies that strengthen the long-term resilience of the tourism sector.

References

- Alcalá-Ordóñez, A., Brida, J.G., Cárdenas-García, P.J. and Segarra, V. (2024). Tourism and economic development: a panel data analysis for island countries. *European Journal of Tourism Research*, 36, 3615. https://doi.org/10.54055/ejtr.v36i.3308.
- Ariyani, N. and Fauzi, A. (2024). Measuring the resilience of rural tourism in Indonesia using the Adjusted Mazziotta-Pareto index. *Journal of Infrastructure, Policy and Development*. 8(4), 3467. https://doi.org/10.24294/jipd.v8i4.34 67.
- Anghel, M.G., Grigorescu, D.L. and Dumbravă, Ş.G. (2020). Aspecte teoretice privind utilizarea regresiei liniare în studiul corelaiților economice. *Revista Română de Statistică*, Supliment (7), pp. 43-57.
- Balaguer, J. and Cantavella-Jordá, M. (2002). Tourism as a Long-Run Economic Growth Factor: The Spanish Case. *Applied Economics*, 34(7), pp. 877-884.

- Bartosz, K. (2023). From resilience to collapse: a cross-country study of tourist spending in Europe during the COVID-19 pandemic. *Environmental & Socio-economic Studies*, 11(3), pp. 54-64. https://doi.org/ 10.2478/environ-2023-0017.
- Briguglio, L., Cordina, G., Farrugia, N. and Vella, S. (2009). Economic Vulnerability and Resilience: Concepts and Measurements. Oxford Development Studies, 37(3), pp. 229-247. https://doi.org/10.1080/ 13600810903089893.
- Bănică, A., Eva, M., Iaţu, C., Nijkamp, P. and Pascariu, G.C. (ed.) (2021). *The European atlas of resilience*, Iaşi: Editura Universităţii "Al. I. Cuza", [online] Available at: https://www.researchgate.net/ publication/357223217_The_European_Atlas_of_Resilience#fullTextFileContent>, [Accessed 03 November 2024].
- Boschma, R. (2015). Towards an Evolutionary Perspective on Regional Resilience. *Regional Studies*, 49(5), pp. 733-751. https://doi.org/10.1080/00343404.2014.959481.
- Cărbunaru-Băcescu, A. and Condruz-Băcescu, M. (2014). Analiza seriilor interdependente prin metoda corelației. *Revista Română de Statistică*, Supliment (2), pp. 3-8.
- Cochrane, J., 2010. The Sphere of Tourism Resilience. *Tourism Recreation Research*, 35(2), pp. 173-185. https://doi.org/10.1080/02508281.2010.11081632.
- Drăgan, M. (2015). Reziliența în Planificarea Regională Aspecte Conceptuale și Metodologice. *Geographia* Napocensis, IX (2).
- D'Urso, P., De Giovanni, L., Marta Disegna, M., Massari, R. and Vincenzina Vitale, V. (2021). A Tourist Segmentation Based on Motivation, Satisfaction and Prior Knowledge with a Socio-Economic Profiling: A Clustering Approach with Mixed Information. *Social Indicators Research*, 154, pp. 335-360, https://doi.org/10.1007/s11205-020-02537-y.
- Eugenio-Martin, J.L. and Patuelli, R. (2022). Panel data models in tourism research: Innovative applications and methods. *Tourism Economics*, 28(5), pp.1348-1354. https://doi.org/10.1177/13548166221115784.
- Eurostat (2024). *Databases*. [online] Available at: https://ec.europa.eu/eurostat/data/database>, [Accessed 03 November 2024].
- Gunlu, E.A. and Aktas, G. (2006). Vulnerability of coastal resorts to crises: Probable scenarios and recovery strategies. *Tourism in Marine Environments*, 3(1), pp. 3-13, https://doi.org/10.3727/ 154427306779380293.
- Hall, C.M., Safanov, A. and Naderi Koupaei, S. (2023). Resilience in hospitality and tourism: issues, synthesis and agenda. *International Journal of Contemporary Hospitality Management*, 35(1), pp. 347-368. https://doi.org/10.1108/IJCHM-11-2021-1428.
- Hossain, M.I., Kumar, J. and Islam, T. (2024). Antecedents of Sustainable Tourism Development in Sundarbans, Bangladesh with the Moderation of Political Instability and Mediation of Destination Resilience. *Tourism Planning & Development*, pp. 1-29. https://doi.org/10.1080/21568316.2024.2347222.
- Ibănescu, B.C., Eva, M. and Gheorghiu, A. (2020). Questioning the Role of Tourism as an Engine for Resilience: The Role of Accessibility and Economic Performance. *Sustainability*, 12(14), 5527. https://doi.org/ 10.3390/su12145527.
- Langer, M. and Schmude, J. (2024). COVID-19 as a paradigm shift? Insights from the degrowth debate in tourism. *European Journal of Tourism Research*, 36, 3607. https://doi.org/10.54055/ejtr.v36i.3137.
- Lee, Y-J.A., Kim, J., Jang, S., Ash, K. and Yang, E. (2021). Tourism and economic resilience, *Annals of Tourism Research*, 87, 103024. https://doi.org/10.1016/j.annals.2020.103024.
- Mileva, S. and Lyutova, Z. (2023). Tourism in the National Recovery and Resilience Plans of the EU member states. *Eastern Journal of European Studies*, 14(SI), pp. 181-202. https://doi.org/10.47743/ejes-2023-SI10.
- Ngoc Su, D., Luc Tra, D., Thi Huynh, H. M., Nguyen, H.H.T. and O'Mahony, B. (2021). Enhancing resilience in the Covid-19 crisis: lessons from human resource management practices in Vietnam. *Current Issues in Tourism*, 24(22), pp. 3189-3205. https://doi.org/10.1080/13683500.2020.1863930.
- OECD (2022). OECD Tourism Trends and Policies 2022, Paris: OECD Publishing. https://doi.org/ 10.1787/a8dd3019-en.

- Pappas, N., Michopoulou, E. and Farmaki, A. (2023). Tourism Innovation and Resilience during Uncertainty. *Tourism Planning & Development*, 20(2), pp. 135-137, https://doi.org/10.1080/ 21568316.2023.2176647.
- Pascariu, G.C., Ibănescu, BC., Nijkamp, P. and Kourtit, K. (2021). Tourism and Economic Resilience: Implications for Regional Policies. In: Suzuki, S., Kourtit, K., Nijkamp, P. (ed.) *Tourism and Regional Science. New Frontiers in Regional Science: Asian Perspectives*, 53. pp. 129-147, Singapore: Springer. https://doi.org/10.1007/978-981-16-3623-3_8.
- Pascariu, G.C. and Ibănescu, B.C. (2018). Determinants and Implications of the Tourism Multiplier Effect in EU Economies. Towards a Core-Periphery Pattern? *Amfiteatru Economic*, 20(Special no. 12), pp. 982-997, https://doi.org/10.24818/EA/2018/S12/982.
- Popescu, D., Pop, I., Coroş, M.M. and Gheorghe, G. (2022). Overcoming the Negative Consequences of Coronavirus Pandemic on Tourism: The European Union Experience. In: R. Pamfilie, V. Dinu, C. Vasiliu, D. Pleşea, L. Tăchiciu (eds). *New Trends in Sustainable Business and Consumption*, pp. 359-366. Bucharest: ASE. https://doi.org/10.24818/BASIQ/2022/08/048.
- Romão, J. (2020). Tourism, smart specialisation, growth, and resilience. *Annals of Tourism Research*, 84, 102995. https://doi.org/10.1016/j.annals.2020.102995.
- Sariişik, M., Calli, D.S., Sari, S. and Halis, M. (2011). Tourism Sector in Order to Recovering from the Recession: Comparison Analyses for Turkey. *Procedia-Social and Behavioral Sciences*, 24(7), pp. 181-187, https://doi.org/10.1016/j.sbspro.2011.09.070.
- Seetaram, N. and Petit, S. (2012). Panel data analysis in Tourism Research. *Handbook of Research method in tourism*. HAL Id: hal-01831529 https://hal.science/hal-01831529v1.
- Stylidis, D. (2018). Residents' place image: a cluster analysis and its links to place attachment and support for tourism. *Journal of Sustainable Tourism*, 26(6), pp. 1007-1026. https://doi.org/10.1080/ 09669582.2018.1435668.
- Tang, R. (2024). Can digital economy improve tourism economic resilience? Evidence from China. *Tourism Economics*, 30(6), pp. 1359-1381, https://doi.org/10.1177/13548166231206241.
- UNDP (2024). *Human Development Index*. [online], Available at: https://hdr.undp.org/data-center/human-development-index#/indicies/HDI, [Accessed 03 November 2024].
- Vaida-Muntean, C., Voineagu, V. and Munteanu, G. (2014). Incertitidine și sensibilitate în datele statistice. *Revista Română de Statistică*, Supliment (12).
- Zhang, F., Lv, Y. and Sarker, M.N.I. (2024). Resilience and recovery: A systematic review of tourism governance strategies in disaster-affected regions. *International Journal of Disaster Risk Reduction*, 103, 104350. https://doi.org/10.1016/j.ijdrr.2024.104350.
- Zhang, P., Huang, Y., Pan, S., Chen, W., Zhong, H., Xu, N. and Zhong, M. (2022). Does Resilience Exist in China's Tourism Economy? From the Perspectives of Resistance and Recoverability. *Sustainability*, 14, 10641. https://doi.org/10.3390/su141710641.
- Yang, S., Lu, Y., and Wang, S. (2023). Quantitative simulation and verification of the tourism economic resilience in urban agglomerations. *Scientific Reports*, 13(1), 18879. https://doi.org/10.1038/s41598-023-46166-0.
- Yang, Y., Zhang, C.X. and Rickly, J.M. (2021). A review of early COVID-19 research in tourism: Launching the Annals of Tourism Research's Curated Collection on coronavirus and tourism. *Annals of Tourism Research*, 91, 103313, https://doi.org/10.1016/j.annals.2021.103313.
- Yingjie, W, Shanshan, J. and Xiaoyue, Z. (2024). Resilience Assessment and the Diagnosis of Obstacles at Ancient Capital Tourism Sites. *Journal of Resources and Ecology*, 15(1), pp. 77-89. https://doi.org/10.5814/j.issn.1674-764x.2024.01.007.
- Wu, J., Yang, Y., Zuo, J., Cao, Q., Guo, D. and Liu, S. (2024). Evaluation and influencing factors of ecological resilience in tourism villages from farmers' perspectives: a case study of Chinese minority settlement areas. *Frontiers in Environmental Science*, 12, 1400546. https://doi.org/10.3389/fenvs.2024.1400546.