

NEIGHBORS AS TOURISTS: REGIONAL TOURISM DEVELOPMENT POTENTIAL OF NORTH MACEDONIA

Biljana Petrevska¹, Mimoza Serafimova², Iva Nikoloska³

¹Full Professor, Faculty of Tourism and Business Logistics, Goce Delcev University, Stip, North Macedonia, biljana.petrevska@ugd.edu.mk

²Full Professor, Faculty of Tourism and Business Logistics, Goce Delcev University, Stip, North Macedonia, mimoza.serafimova@ugd.edu.mk

³PhD Student, Municipality of Ohrid, iva.nikoloska@ohrid.gov.mk

Abstract

This study examines the potential of North Macedonia for regional tourism development through tourism flows from its neighboring countries: Albania, Bulgaria, Greece, Kosovo and Serbia. The analysis is conducted in two stages. First, seasonality indices are calculated to assess the concentration and temporal distribution of tourist arrivals from neighboring countries. Second, tourism demand from Albania and Serbia, identified as key markets within the regional tourism framework, is forecasted using the SARIMA model. The findings reveal heterogeneous seasonality patterns across neighboring markets, while the projected increase in tourist arrivals from Albania and Serbia indicates significant potential for strengthening regional tourism cooperation. The study contributes theoretically to the understanding of regional tourism development and provides practical implications for policymakers in designing targeted regional tourism policies.

Keywords: Tourism policy, Regional tourism development, Seasonality, SARIMA, North Macedonia.

Introduction

Tourism is important for regional economic development, particularly when it comes to areas where neighboring countries share cultural, geographic, and economic ties (Lew et al., 2008). Although tourism is often not the primary focus at the initial stages of regional alignment, it gradually emerges as a key element in socioeconomic negotiations enabling easier circulation of visitors and travelers (Timothy & Teye, 2004). Generally, the move toward regionalism implies cooperation between countries that individually face socioeconomic challenges (Teye, 2000). Particularly neighboring countries unite to achieve national development objectives more effectively through collective regional effort (Hussain, 1999).

As tourism grows in significance, it increasingly emerges as a driver of regional development (Timothy, 2000). Neighboring countries devote considerable effort to developing tourism collaboratively, including the creation of common cultural and natural areas (Kliot, 1996). Within such frameworks, tourism plays an important role in boosting individual national economies.

Tourism in North Macedonia has experienced growth, but it continues to face many challenges related to tourism seasonality and market diversification. Although regional collaboration has intensified in recent years, empirical research examining the interaction of tourism dynamics among neighboring countries and their mutual benefits remains limited, with certain exceptions (Petrevska, 2024). In this context, this research discusses the regional tourism prospects of North Macedonia by addressing the following research questions (RQs):

RQ₁: What are the concentration patterns and temporal distribution of tourists from the neighboring countries? Seasonality represents temporal fluctuations in tourist arrivals during the year and provokes many challenges for tourist destinations (Prideaux, 2000). Therefore, to explore the presence and dynamics of tourism seasonality patterns in the broader regional context offers opportunities for raising awareness about the necessity of managing regional strategic development (Petrevska, 2024).

RQ₂: What is the projected tourism demand for Albania and Serbia as key markets within the regional tourism framework? Tourism is pointed out as an area with growth potential that may contribute to significant cross-border cooperation (Petrevska, 2022, 2024).

After the introduction, the study follows with the research methodology, results and findings, and ends with the conclusion section that includes limitations of the study and suggestions for future research.

Methodology

The research was based on a four-stage combined methodological approach:

- Stage 1 was the desk-research when the background materials were obtained for adequately addressing the RQs.
- At stage 2, monthly data on tourist arrivals of neighboring countries (Albania, Bulgaria, Greece, Kosovo, and Serbia) to North Macedonia, for the period 2011-2024, was the basic variable for the calculations, collected from the State Statistical Office of North Macedonia. (n.d.).
- Stage 3 encompassed data processing when tourism seasonality indices were calculated with standard indicators (Gini index – G, Theil index - T, Seasonality Indicator - SI, and Coefficient of Variation-CV) and tourism demand was projected. Furthermore, tourism demand from Albania and Serbia (RQ₂) was projected with the Seasonality AutoRegressive Integrated Moving Average model (SARIMA). The time-series were first pre-processed by computing logarithms, differentiations, unit root test, identifying structural change, ensuring stationarity and correlation of the series, and identifying the seasonal autoregressive component. Then several AutoRegressive (AR) and Moving Average (MA) models were tested and the SARIMA (12.1.2) was selected as the most suitable model.
- At stage 4 main findings were discussed.

Results and discussion

Figure 1 presents pronounced peaks during the summer months indicating the presence of seasonality due to high temporal concentration of tourists. In 2024, the total sample of neighbors (177,068 tourists) encompassed 21% of the total share of international tourist arrivals in North Macedonia. Tourists from Serbia represent the dominant segment (40.9%), then tourists from Greece (22.2%), Bulgaria (18.2%), Albania (10.7%) and the fewest from Kosovo (8%). There was a structural breakdown in 2020 due to the COVID-19 pandemic, which on the other hand, opened possibilities for neighbors to visit North Macedonia more frequently.

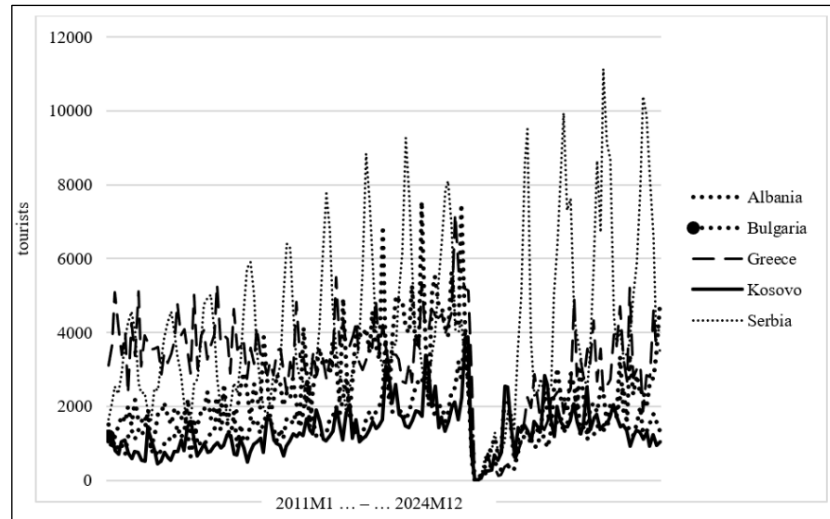


Figure 1. Monthly tourist arrivals of neighboring countries to North Macedonia, 2011-2024

Source: State Statistical Office of North Macedonia (n.d.)

Table 1 presents the summarized average values of standard tourism seasonality indices for sampled countries.

Table 1. Average seasonality indices for neighboring countries, 2011-2024

Country	G	T	SI	CV
Albania	0.175	0.112	0.346	0.360
Bulgaria	0.116	0.071	0.274	0.301
Greece	0.238	0.157	0.467	0.496
Kosovo	0.382	0.181	0.591	0.376
Serbia	0.202	0.131	0.379	0.406

Source: Authors

Since seasonality is a concern of every destination (Turrión-Prats & Duro, 2017), it is of high importance to explore its dynamics.

As per Table 1, Kosovo records the highest mean seasonality indices ($G=0.382$; $T=0.181$, and $SI=0.591$) and exhibits the strongest seasonality patterns. Greece ranks second with relatively high mean values across all indicators, especially the SI (0.467) and CV (0.496), which points also to strong seasonal fluctuations. Serbia and Albania show a moderate level of seasonality and variability. Their mean values of SI (0.379/0.346) and CV (0.406/0.36) confirm noticeable seasonality effects, although their intensity is lower than Kosovo and Greece. Finally, Bulgaria demonstrates the weakest seasonality effects with the lowest mean seasonality indices among the neighbors ($G=0.116$, $T=0.071$, $SI=0.274$, $CV=0.301$), which suggests a more balanced distribution of tourism arrivals throughout the year.

Summarized findings in Table 1 revealed that seasonality varies notably among the neighbors, thus influencing regional tourism dynamics of North Macedonia. This was also found in previous discussions (Petrevska, 2022, 2024) when arguing the importance to acknowledge the challenges that seasonality impacts on the broader regional connection. On the other hand, having neighbors with diverse seasonality may be interpreted as an opportunity for creating a complementary regional tourism supply with minimal seasonality.

During the sampled period (2011-2024), tourists from Kosovo encompassed only 8% of all neighbors visiting North Macedonia but exhibited the highest mean values of almost all measured indices. The calculations present very high tourist concentration in peak summer months, pronouncing uneven distribution of tourist arrivals throughout the year. In this context, the highest mean G value of 0.382 indicates the greatest difference, along with the highest mean T value of 0.181 and the largest SI mean value of 0.591. Though the mean CV value of 0.376 is not the highest, it still reflects considerable variability in monthly arrivals. Such differences occur since each indicator captures somewhat distinct aspects of seasonality and concentration, explaining the discrepancy in the relative position of Kosovo across this metric. These findings point out that Kosovo has the strongest tourism seasonality among neighbors.

A similar pattern was observed for tourists from Greece, which exhibits relatively strong seasonal fluctuations during the third quarter of the year (July-September). Given that North Macedonia is a summer destination meaning that it offers a standard summer tourist product, it is often detected as a factor for unbalanced tourism flows (EC, 1996). To this one may add the natural conditions of the country, such as continental climate with hot summers, which additionally support the presence of seasonality (Costa & Lima, 2018). As a small country, the limited tourism market structure furthermore adds to provoking seasonal temporal concentration of tourism demand (Vaidyanathan & Scott, 2012) and many negative effects like increased traffic congestion, environmental pollution, degradation of natural and cultural resources (Albrecht, 2013; Bititci et al., 2004), along with unstable employment, social instability and outmigration (Lehmeier, 2010), and inefficient use of investments and financial instability for local businesses (Cao & Zhang, 2010). This means that new strategies must be introduced to attract tourists from Kosovo and Greece throughout the year. The idea is to attract them not only during summer, but also to introduce new tourism products, like cultural, heritage and off-season activities which are less sensitive to the weather and can attract visitors during the year. This creates opportunities for tourism planners to develop complementary product diversification tailored to different seasons.

In summary, there is an urgent need to create new strategies for attracting tourists from Kosovo and Greece out of the main summer season, while on the other hand, for tourists from Albania, Serbia and Bulgaria, moderate and low seasonality was found. Despite the relatively even distribution of tourist flows, the results must not be neglected, but rather tourism policymakers should target promotion and management for the off-peak months for these neighbors as well.

In this context, the results revealed that Albania and Serbia show moderate seasonality, suggesting a smoother distribution of arrivals and less concentrated in summer months as compared to Kosovo and Greece. This means that tourists from these countries show increasing potential for visiting North Macedonia for year-round tourism. This aligns with Xu (2003) who found favorable seasonality as a suitable precondition for creating sustainable regional tourism product based on cultural heritage, tradition, gastronomy, and other cultural similarities.

Finally, Bulgaria has the lowest level of seasonality, indicating a more even spread of tourists throughout the year. The results that show the lowest inequality among neighbors indicate fewer sharp peaks in arrivals and balanced tourism patterns. This is most likely due to diverse attractions dispersed all year that attract tourists from Bulgaria.

Seasonality poses many challenges for both North Macedonia and the region, but if coordinated with cross-border regional strategies among neighboring countries, it may be balanced and reduced, thus extending tourist season and improving the competitiveness of the destination (Cao & Zhang, 2010). In this line, it is of great importance to create regional cooperation which may support management strategies for reducing the pressure during high peaks and fostering sustainable regional development.

Furthermore, Table 2 presents the summarized computed values for the SARIMA (12.1.2) model.

Table 2. Forecasting model

Included observations: 168				
Convergence achieved after 293 iterations				
Coefficient covariance computed using outer product of gradients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AR(12)	0.963938	0.025539	38.40338	0.0000
AR(1)	-0.054244	0.024883	-2.090484	0.0384
MA(2)	-0.195293	0.054478	-3.3200555	0.0014
SIGMASQ	0.058184	0.004724	11.26745	0.0000
R-squared	0.902231	Mean dependent var		-9.86E-05
Adjusted R-squared	0.896851	S.D. dependent var		0.718362
S.E. of regression	0.233708	Akaike info criterion		0.252491
Sum squared resid	4.874594	Schwarz criterion		0.361718
Log likelihood	-7.870424	Hannan-Quinn criter.		0.297396
Durbin-Watson stat	2.014027			

Source: Authors

Figure 2 showcases the 10-year projection of the model for demand of tourists from Serbia and Albania that is expected to visit North Macedonia until 2034.

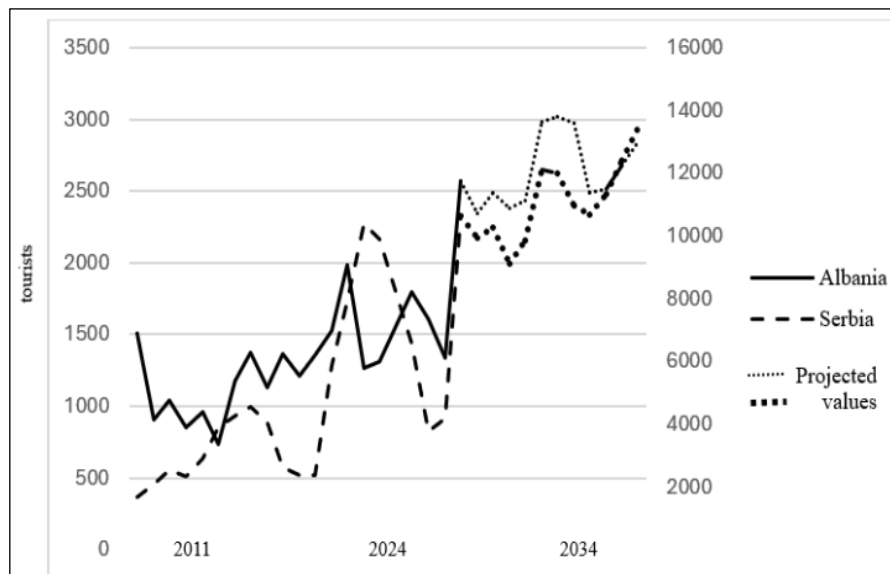


Figure 2. Current and projected tourism demand for Albania and Serbia

Source: Authors

The projected data indicate steady growth of both OB partner countries, reflecting increasing travel activity and interest over the next decade. The estimation foresees 132,765 tourists from Serbia and 31,719 tourists from Albania visiting North Macedonia until 2034. A higher growth rate of Serbia (6.25%) means that Serbian tourists will increase their visits at a faster pace compared to the 5.26% growth rate from Albania, which implies that Serbia will continue to be the dominant neighbor. Such growth predictions promise positive tourism relationships between neighbors, whereas slightly different growth dynamics should be strategically guided and planned.

Finding that Albania and Serbia have moderate inequality and tourism seasonality, along with North Macedonia having low seasonality with no significance, adds to these favorable projections. It suggests a potential to establish a regional 'four-season' destination with zero seasonality. Joint efforts to promote tourism potential as a unique destination further highlight the prospects that regional

cooperation offers. Projections suggest sustained demand and positive momentum that contributes to better strategic tourism development based on neighboring countries. These findings assist tourism planners and policymakers in understanding regional context and the importance of creating and managing integrated, economic, social, and environmental regional development. Projected trends allow targeted improvements along with strategic plans for maximizing benefits from regional tourism development.

Conclusion

The research investigates issues related to the possibilities of supporting tourism development of North Macedonia through tourism flows from neighboring countries within a broader regional development framework. It addressed the seasonality patterns and found that a deeper understanding of tourism time dispersion is important to allocate resources for coordinating regional policies to balance seasonality effects, thus fostering tourism growth. Managing seasonality with joint regional efforts may result in creating attractive and competitive regional tourism supply during the entire year, opening many development opportunities. A possible pathway for national tourism development is suggested in targeted promotion towards neighboring countries, and for the broader regional development is the diversification of tourism supply. This refers to creating joint regional tourism products, primarily based on culture and heritage, that can be consumed in all seasons.

Furthermore, the research projected tourism demand from Albania and Serbia for the next 10 years, which may serve as a starting point when highlighting the benefits of regional interconnection. The growth trend implied that both neighboring countries would continue to be important for the tourism development of North Macedonia, suggesting positive impulses for sustainable demand, which tourism planners and policymakers in North Macedonia should consider when managing regional development.

This study has several limitations that should be considered when interpreting the results. First, the analysis was limited to North Macedonia, which restricts broader regional generalization; therefore, future research could expand the geographical scope by including neighboring countries and conducting comparative regional assessments. Second, the relatively short observation period may constrain the precision of seasonality measurement and demand forecasting, while longer time series could enhance the reliability of future estimates. Finally, the study adopted a focused analytical approach to regional tourism development, and subsequent research may employ more sophisticated methodologies and complementary models to achieve a more comprehensive understanding of regional tourism dynamics.

Regardless of limitations, this study contributes to revealing the challenges for managing regional prospects when utilizing neighbors of North Macedonia as tourists. It also provides a foundation for policymakers and tourism stakeholders to design integrated regional tourism strategies as a precondition for long-term growth.

References

- Albrecht, J. N. (2013). Networking for sustainable tourism – towards a research agenda. *Journal of Sustainable Tourism*, 21(5), 639-657.
- Bititci, U. S., Martinez, V., Albores, P., & Parung, J. (2004). Creating and Managing Value in Collaborative Networks. *International Journal of Physical Distribution and Logistics Management*, 34(3-4), 251-268.
- Cao, M., & Zhang, Q. (2010). Supply chain collaborative advantage: a firm's perspective. *International Journal of Production Economics*, 128, 358-367.
- Costa, T., & Lima, M. J. (2018). Cooperation in tourism and regional development. *Tourism & Management Studies*, 14(4), 50-62.
- EC. (1996). COM (96) 0168 final, proposal of the commission for a council decision on a first multiannual programme to assist European Tourism Philoxenia (1997–2000). Brussels, 31.7.1996: Eur-lex. Retrieved from: <http://ec.europa.eu> [accessed: 17 October 2025].

- Hussain, R. M. (1999). SAARC 1985–1995: A review and analysis of progress. In E. Gonsalves & N. Jetley (Eds.), *The Dynamics of South Asia: Regional Cooperation and SAARC* (pp. 21–39). New Delhi: Sage.
- Kliot, N. (1996). Turning desert to bloom: Israeli–Jordanian peace proposals for the Jordan Rift Valley. *Journal of Borderlands Studies*, 11(1), 1–24.
- Lehmeier, H. (2010). Tourism policy and regional development in the European Union. *Geographica Timisiensis*, 19(2), 121–131.
- Lew, A. A., Hall, C. M., & Williams, A. M. (Eds.). (2008). *A companion to tourism*. John Wiley & Sons.
- Petrevska, B. (2022). Open Balkan initiative: Prospects for tourism development. *UTMS Journal of Economics*, 13(2), 214–220.
- Petrevska, B. (2024). Exploring tourism dynamics: North Macedonia in regional context. *Journal of Applied Economics and Business*, 12(1), 39–46.
- Prideaux, B. (2000). The role of the transport system in destination development. *Tourism Management*, 21(1), 53–63.
- State Statistical Office of North Macedonia. (n.d.). Makstat baza. Retrieved from: <https://www.stat.gov.mk> [accessed: 17 October 2025].
- Teye, V. B. (2000). Regional cooperation and tourism development in Africa. In P. U. C. Dieke (Ed.), *The Political Economy of Tourism Development in Africa* (pp. 217–227). New York: Cognizant Communication Corporation.
- Timothy, D. J. (2000). Tourism planning in Southeast Asia: Bringing down borders through cooperation. In K. S. Chon (Ed.), *Tourism in Southeast Asia: A New Direction* (pp. 21–35). New York: Haworth Hospitality Press.
- Timothy, D. J., & Teye, V. B. (2004). Political boundaries and regional cooperation in tourism. In A. A. Lew, C. M. Hall, & A. M. Williams (Eds.), *A companion to tourism* (pp. 584–595).
- Turrión-Prats, J., & Duro, J. A. (2017). Tourist seasonality and the role of markets. *Journal of Destination Marketing & Management*, 8, 23–31.
- Vaidyanathan, L., & Scott, M. (2012). Creating shared value in India: The future for inclusive growth. *Journal for Decision Makers*, 37(2), 108–113.
- Xu, K. (2003). *How has the Literature on Gini's Index Evolved in the Past 80 Years?* Halifax: Dalhousie University.