

ORIGINAL SCIENTIFIC PAPER

Can Sport Events Reduce Tourism Seasonality? Evidence from an Emerging Coastal Destination

Brixhilda Imeri¹¹Aleksander Moisiu University, Faculty of Business, Durrës, Albania**Abstract**

Sport events are increasingly considered strategic tools for destination marketing and tourism diversification. Tourism seasonality remains a persistent structural challenge for coastal destinations, where visitor arrivals are concentrated within a limited number of peak months. This study examines tourism seasonality patterns in Albania and explores whether sports events can help reduce seasonal concentration in tourism demand. The analysis is based on monthly tourism data for the period 2018–2025, comprising 96 observations of visitor arrivals and overnight stays in accommodation establishments. Descriptive statistics were used to identify seasonal patterns, while a one-way analysis of variance (ANOVA) tested whether tourism demand differs across months. Additionally, an independent-samples t-test examined differences between months that hosted major sports events and non-event months. The findings reveal a pronounced seasonal pattern, with international visitor arrivals peaking in July and August and significantly lower during the winter months. ANOVA results indicate statistically significant variation across months (Welch ANOVA: $F(11, 32.7) = 3.85, p = 0.001$), confirming strong tourism seasonality. However, no statistically significant difference was found between event and non-event months ($t(94) = -0.064, p = 0.949$). The findings indicate that sport events held in shoulder seasons are not associated with statistically significant changes in international tourism demand. This suggests that participation-based sport events, at their current scale, have limited capacity to influence mobility patterns. From a sport science perspective, the results highlight the importance of event scale and integration within broader sport systems in shaping seasonal tourism dynamics.

Keywords: *tourism seasonality, sport tourism, tourism demand, seasonal variation, Albania*

Introduction

Tourism seasonality is widely recognised as one of the most persistent structural challenges affecting tourism development, particularly in coastal destinations where tourism demand is highly concentrated during specific periods of the year. Seasonality leads to uneven resource utilisation, labour market instability, and inefficiencies in tourism infrastructure, thereby limiting the long-term sustainability of tourism systems (Butler, 1998). Similar constraints have been documented in rural destinations, where seasonality is identified as a limiting factor for sustainable tourism development (Martin Martin et al., 2020). In many coastal regions, tourism activity is strongly influenced by climatic conditions, institutionalised holiday periods, and leisure travel prefer-

ences, resulting in a pronounced concentration of visitor arrivals during the summer months (Koenig-Lewis & Bischoff, 2005). The concentration of tourism demand within a limited time frame creates significant economic and operational imbalances. High-season congestion is often accompanied by underutilisation of tourism capacity during the off-season, which reduces profitability and increases the vulnerability of tourism-dependent destinations (Amelung, Nicholls, & Viner, 2007). As a result, addressing tourism seasonality has become a central concern for both researchers and policymakers, particularly in emerging tourism destinations seeking to achieve more balanced and sustainable tourism development. One strategy increasingly discussed in the literature for mitigating tourism seasonality is the development

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of event-based tourism. Events are considered important instruments for attracting visitors, enhancing destination visibility, and diversifying tourism products (Getz, 2008). In particular, sports events have been identified as effective tools for stimulating tourism activity outside the traditional peak season, as they can attract participants, spectators, and media attention, thereby generating both direct and indirect tourism impacts (Higham & Hinch, 2002). Shoulder seasons, the transitional spring and autumn periods with intermediate tourism demand, are considered particularly valuable for stimulating visitor arrivals and reducing seasonal concentration. Sport tourism, as a growing segment of the global tourism market, offers destinations opportunities to broaden their tourism offerings and reduce their dependence on seasonal leisure tourism. Regional evidence also highlights the role of sport tourism in positioning destinations such as Montenegro as high-quality sports tourism hubs, reinforcing its potential to mitigate seasonality (Jaksic-Stojanovic, Jankovic, & Seric, 2019). Previous studies suggest that sport events attract specialised visitor segments such as active participants and create engagement with the destination (Shipway & Jones, 2007). However, the extent to which sports events can effectively reduce tourism seasonality remains an open empirical question, particularly in emerging tourism contexts where tourism systems are still developing.

In Albania, tourism has experienced rapid growth driven largely by coastal tourism, yet demand remains strongly seasonal with visitor arrivals concentrated during summer months (Dhimitri, Çinaj, Brakaj, Qosja, Dibra, & Mbrica, 2025). Albania has increasingly hosted sporting events such as marathons held in spring and autumn, suggesting potential for tourism diversification. However, empirical research examining the relationship between sport events and tourism seasonality in this context remains limited.

Therefore, the purpose of this study is to examine tourism seasonality patterns in Albania and to explore whether sporting events may help mitigate seasonal concentration in tourism demand. By combining secondary tourism data with information on the timing of major sports events, this study aims to provide empirical evidence on the role of sports events as a potential tool for addressing tourism seasonality in an emerging tourism destination. Previous research in the Albanian hospitality sector has also highlighted structural limitations in market development and governance, which may influence tourism dynamics and the effectiveness of strategic interventions (Imeri & Rustani, 2025).

This study contributes to the sport science and sport tourism literature by challenging the assumption that sport events inherently generate measurable macro-level tourism impacts. Empirical evidence is provided that small-scale participation-based events may not be sufficient to alter aggregate mobility patterns, shifting the analytical focus from the mere presence of events to their scale, structure, and integration within broader sport systems.

Methods

Research Design

This study adopts an exploratory quantitative research design based on secondary data analysis. The objective is to examine tourism seasonality patterns and to assess whether the occurrence of sports events is associated with changes in international tourism demand. Given the aggregate nature of the available data, the analysis focuses on identifying temporal patterns rather than establishing causal relationships. This study used publicly available aggregated secondary data from INSTAT (<https://www.instat.gov.al>) and did not involve human or animal participants. No individual-level or sensitive data were used. Therefore, institutional ethics approval was not required.

Data Sources and Sample

The data were obtained from publicly accessible databases provided by INSTAT. No formal permissions or data access requests were required, as the dataset is openly available for research use.

The data include information on tourism activity in accommodation establishments, specifically:

- total number of visitors;
- number of foreign visitors;
- number of overnight stays.

These indicators are commonly used in tourism research to measure tourism demand and seasonal fluctuations.

In addition to tourism data, information on major sports events organised in Albania during the same period was compiled from publicly available sources, including official event websites and organiser announcements. The event month was operationalised as a binary variable coded 1 for months with verified participation-based sport events and 0 otherwise. This study focuses specifically on participation-based endurance events open to recreational participants, as distinguished from spectator-oriented or elite-only competitions (Higham & Hinch, 2002). Two recurring event types were identified: (1) the Maratona e Ditës së Dëshmorëve “5 Maj” (Martyrs’ Day Marathon), an annual endurance race held in Durrës on May 5, organised by Shoqata Maraton Albania; and (2) the Tirana Marathon, a mass-participation running event held annually in October, organised by the Municipality of Tirana. May and October were therefore selected as the primary event months. Months in which tourism was severely disrupted by the COVID-19 pandemic (May 2020, October 2020) or in which no events were documented (May 2021) were coded 0, resulting in 13 event months across 2018–2025 (see Appendix, Table A1). It is noted that Albania also hosted several large-scale international competitions during the study period, including the European Senior Weightlifting Championships (May 2022), the U23 and Senior World Wrestling Championships (October 2024), and the Giro d’Italia (May 2025). These were excluded due to their elite-participant profile and spectator orientation, which differ substantially from the participation-based events under study (see Table A2).

Variables and Operationalisation

The main variables used in the analysis are:

Foreign visitors (dependent variable): number of international visitors in accommodation establishments, used as the primary indicator of tourism demand.

Month: categorical variable representing the twelve months of the year, used to capture seasonal variation.

Event month: binary variable indicating whether at least one major sport event took place in a given month (1 = event month; 0 = non-event month).

Foreign visitors were selected as the key dependent variable because they better reflect international tourism demand and are more sensitive to destination attractiveness and event-related travel.

Data Analysis

Statistical analyses were conducted using Jamovi. The analytical approach consists of three main steps.

First, descriptive statistics were calculated to summarise tourism activity and to identify general patterns in visitor arrivals and overnight stays. Monthly averages were computed to examine the distribution of tourism demand across the year.

Second, a one-way analysis of variance (ANOVA) was conducted to test whether tourism demand differs significantly across months. Due to unequal variances across groups, the Welch ANOVA was used. This approach is considered appropriate when the assumption of homogeneity of variances is violated. Post hoc comparisons were performed using the Tukey test in order to

identify specific differences between months.

Third, an independent-samples t-test was conducted to examine whether months hosting sporting events differ from non-event months in international visitor arrivals. This analysis assesses whether sports events are associated with observable differences in tourism demand at the monthly level.

Prior to conducting the main analyses, normality was assessed using the Shapiro-Wilk test. The Shapiro-Wilk test indicated a significant departure from normality in the distribution of foreign visitor arrivals ($W = 0.876$, $p < 0.001$). Levene's test confirmed significantly unequal variances across monthly groups ($F(11, 84) = 5.48$, $p < 0.001$). Welch's ANOVA was therefore applied as the

appropriate alternative to the standard one-way ANOVA.

Results

Descriptive statistics for tourism activity in Albania over the period 2018–2025 are presented in Table 1. The dataset comprises 96 monthly observations and indicates substantial variability in tourism demand across the year. The average number of total visitors was 163,323 per month ($SD = 158,421$), while the mean number of foreign visitors was 104,658 ($SD = 118,302$). The average number of overnight stays was 396,631 ($SD = 436,728$). These results indicate significant fluctuations in tourism activity and a pronounced seasonal pattern.

Table 1. Descriptive Statistics of Tourism Activity (2018–2025)

Variable	N	Mean	SD	Minimum	Maximum
Total visitors	96	163,323	158,421	0	878,901
Foreign visitors	96	104,658	118,302	0	650,108
Overnight stays	96	396,631	436,728	0	2,263,355

Note. Data based on monthly tourism statistics for accommodation establishments. Minimum values of 0 reflect April 2020, when Albania's tourism sector was fully closed due to COVID-19 restrictions.

The analysis of monthly averages (Table 2) reveals a clear concentration of tourism demand during the summer period. The number of foreign visitors increases gradually from winter to summer, with the lowest average values observed in January ($M = 30,867$) and February ($M = 32,533$). Tourism demand then rises steadily throughout spring, reaching its peak in July ($M = 225,673$)

and August ($M = 276,709$). Following the summer peak, visitor numbers decline sharply during the autumn and winter months. The difference between peak and off-peak periods is substantial, with summer tourism demand nearly 9 times higher than in winter months. This pattern is further illustrated in Figure 1, which shows the seasonal distribution of international visitor arrivals.

Table 2. Average Monthly Number of Foreign Visitors (2018–2025)

Month	N	Mean	SD
January	8	30,867	19,410
February	8	32,533	20,747
March	8	37,132	27,124
April	8	62,530	51,650
May	8	97,150	79,049
June	8	147,123	118,501
July	8	225,673	151,505
August	8	276,709	188,994
September	8	162,314	126,880
October	8	82,663	70,918
November	8	55,259	38,123
December	8	45,946	31,665

To statistically assess whether tourism demand differs across months, a one-way analysis of variance (ANOVA) was conducted using foreign visitor arrivals as the dependent variable. The results indicate a statistically significant effect of month on tourism demand (Welch ANOVA: $F(11, 32.7) = 3.85$, $p = 0.001$), confirming strong tourism seasonality (Table 3). Post hoc comparisons using the Tukey test identified 14 significant pairwise differences ($p < 0.05$). August differed significantly from January ($p < 0.001$), February ($p < 0.001$), March ($p < 0.001$), April ($p = 0.001$), May ($p = 0.013$), October ($p = 0.005$), November ($p < 0.001$), and December ($p < 0.001$). July differed significantly from January ($p = 0.005$), February ($p = 0.005$), March ($p = 0.007$), April ($p = 0.038$), November ($p = 0.024$), and December ($p = 0.013$). No significant differences were found among winter months or among shoulder-season months. These results confirm a pronounced concentration of international tourism demand during the peak summer

months of July and August.

In addition to examining seasonal patterns, the analysis investigated whether the occurrence of sports events is associated with differences in tourism demand. An independent-samples t-test (Student's t , equal variances assumed) was conducted to compare months with sport events to months without such events (Table 4). Event months ($n = 13$) recorded a mean of 106,622 foreign visitors ($SD = 70,535$), while non-event months ($n = 83$) recorded a mean of 104,351 ($SD = 124,441$). The results indicate that the difference between the two groups is not statistically significant ($t(94) = -0.064$, $p = 0.949$). This finding suggests that the presence of sports events does not immediately produce a measurable increase in monthly international visitor arrivals at the aggregate level. This finding may be explained by the nature of sport events in emerging destinations. Many events are relatively small-scale and primarily attract local or regional participants rather than in-

Table 3. One-Way ANOVA Results for Monthly Differences in Foreign Visitor Arrivals.

Month	N	M	SD	F	df1	df2	p
January	8	30,867	19,410				
February	8	32,533	20,747				
March	8	37,132	27,124				
April	8	62,530	51,650				
May	8	97,150	79,049				
June	8	147,123	118,501				
July	8	225,673	151,505				
August	8	276,709	188,994				
September	8	162,314	126,880				
October	8	82,663	70,918				
November	8	55,259	38,123				
December	8	45,946	31,665				
Welch ANOVA				3.85	11	32.7	0.001

Note. Welch ANOVA was used due to unequal variances.

Table 4. Independent Samples t-test Comparing Event Months and Non-event Months.

Group	N	M	SD	t	df	p
Event months	13	106,622	70,535	-0.064	94	0.949
Non-event months	83	104,351	124,441			

Note. Event months (n = 13) represent months with verified major sporting events across 2018–2025. May and October months affected by COVID-19 restrictions (2020) and the absence of documented events (May 2021) were coded as non-event months (0), yielding n = 13 event months and n = 83 non-event months. Student's t-test (equal variances assumed). No statistically significant difference was found between event and non-event months.

ternational sport tourists. In addition, the limited integration of sport event planning within broader sport and tourism development strategies may reduce their capacity to influence aggregate mobility patterns. From a sport science perspective, this suggests that not all sport participation events are equally capable of generating measurable changes in population-level behaviour.

Overall, the results confirm the existence of a pronounced and statistically significant seasonal pattern in tourism demand in Albania, while indicating that sport events, although potentially relevant for destination marketing and tourism diversification, do not have a direct short-term impact on aggregate tourism volumes. The sensitivity analysis excluding 2020 yielded consistent results: the seasonal pattern remained highly significant (Welch ANOVA: $F(11, 28.1) = 4.39, p < 0.001$), and the event vs. non-event comparison remained non-significant ($t(82) = 0.304, p = 0.762$), confirming that COVID-19-affected observations did not distort the findings.

Discussion

The results confirm a pronounced seasonal pattern in Albania's tourism sector. International visitor numbers peak in July and August and decline sharply during winter, consistent with research identifying climatic conditions and institutional vacation periods as primary drivers of seasonal concentration (Butler, 1998; Koenig-Lewis & Bischoff, 2005). Post hoc comparisons confirm significant differences between peak summer months and the winter period, as well documented in Mediterranean coastal destinations (Amelung et al., 2007).

In addition to examining seasonality patterns, this study explored whether sports events can help mitigate tourism seasonality. Sport events are frequently considered strategic tools for destination marketing and tourism diversification because they attract participants and spectators while generating media exposure for

the destination (Getz, 2008). In many cases, sports events are intentionally scheduled during shoulder seasons in order to stimulate tourism activity outside the traditional peak season (Higham & Hinch, 2009).

However, the statistical analysis did not reveal a significant difference between event and non-event months, suggesting that participation-based sport events do not produce measurable changes in aggregate monthly tourism demand. The tourism impact of sport events is often indirect, depending on event scale, marketing strategies, and long-term image effects (Weed & Bull, 2009). Recent research in Albania has highlighted structural challenges in tourism systems related to trust and market maturity (Imeri & Rustani, 2025), which may reduce their effectiveness as diversification tools. This aligns with research identifying sport tourism as a strategic tool for managing seasonality (Higham, 2006). Sport events should therefore be interpreted as components of broader sport participation systems rather than isolated short-term stimulators.

The findings indicate that participation-based sport events, at their current scale, do not generate measurable changes in aggregate tourism demand. This highlights the importance of event scale and international reach in shaping tourism impacts. Unlike mega-events, which attract substantial international flows, smaller participation-based events tend to operate at local or regional levels, limiting their influence on overall tourism volumes. Therefore, the effectiveness of sport events as a tool for reducing seasonality depends on their strategic integration within broader sport and tourism systems rather than their mere occurrence.

For emerging destinations such as Albania, integrating sports events into tourism development strategies may help diversify tourism offerings and boost tourism activity during non-peak periods. This approach may help reduce seasonal imbalances while strengthening the destination's competitiveness in the interna-

tional tourism market.

This study relies on aggregated secondary data, which limits the ability to capture individual-level behaviour or causal relationships. The analysis focuses on national-level data, which may mask regional variations. The event variable was restricted to participation-based endurance events, excluding large-scale international competitions hosted during the study period (e.g., European Senior Weightlifting Championships, May 2022; World Wrestling Championships, October 2024; Giro d'Italia, May 2025). Their exclusion limits the generalisability of the findings to the broader category of sport events, and future research should examine whether larger-scale events produce measurable tourism impacts.

Furthermore, operationalising sport events as a binary variable does not account for differences in event scale, type, or visitor impact. As a result, the findings should be interpreted as indicative of general patterns rather than definitive causal effects. Other studies have proposed more advanced statistical approaches to decompose and test changes in the seasonal concentration of tourist flows (Grossi & Mussini, 2021).

Despite these limitations, the use of official statistical data and established analytical techniques provides a preliminary basis for examining tourism seasonality and exploring the potential role of sports events in an emerging tourism destination.

Conclusion

This study examined tourism seasonality patterns in Albania and explored the potential role of sports events in reducing seasonal concentration of tourism. Using monthly tourism statistics

Conflict of Interest

The author declares no conflict of interest.

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