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Dynamics of mountain tourism in Bușteni, Romania

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Dynamics of mountain tourism in Bușteni, Romania

Radu-Adrian LUCA

Dinamica turismului montan în Bușteni, România. Lucrarea analizează dinamica dezvoltării turistice a orașului Bușteni, stațiune montană situată pe Valea Prahovei, prin evaluarea evoluției istorice, a potențialului turistic natural și antropic, a bazei materiale și a circulației turistice în perioada 2001-2025. Cercetarea utilizează metode cantitative de analiză a seriilor de timp (modele ARIMA) pentru prognoza sosirilor și înnoptărilor în intervalul 2026-2030 și corelează rezultatele cu Modelul Ciclului de Viață al Destinației Turistice (TALC). Rezultatele indică o creștere moderată a sosirilor, o sezonalitate accentuată și o stabilizare a cererii pe termen mediu, în paralel cu o extindere rapidă a capacității de cazare și un grad redus de utilizare netă a acesteia. Prognozele evidențiază menținerea tiparului sezonier, fără un trend structural ascendent semnificativ. Corelarea cu modelul TALC sugerează că stațiunea se află într-o etapă de stagnare, cu risc de declin în absența unor intervenții strategice. Lucrarea propune direcții de dezvoltare sustenabilă și regenerativă, fundamentate pe rezultatele prognozelor și pe poziționarea actuală a destinației în ciclul său de viață.

Cuvinte cheie: : modelul TALC, sezonalitate turistică, prognoză ARIMA, dezvoltare sustenabilă, Bușteni.

Dynamics of mountain tourism in Bușteni, Romania. This study analyses the dynamics of tourism development in the town of Bușteni, a mountain resort located in Prahova Valley, by assessing its historical evolution, natural and human-made tourism potential, infrastructure, and tourist traffic for the period 2001–2025. The research uses quantitative time-series analysis methods (ARIMA models) to forecast arrivals and overnight stays for the period 2026–2030 and correlates the results with the Tourism Area Life Cycle (TALC) model proposed by Richard W. Butler (1980). The results indicate a moderate increase in arrivals, pronounced seasonality, and a stabilization of demand in the medium term, alongside a rapid expansion of accommodation capacity and a low net utilization rate. The forecasts highlight the persistence of the seasonal pattern, without a significant structural upward trend. Correlation with the TALC model suggests that the resort is in a stage of stagnation, with a risk of decline in the absence of strategic interventions. The study proposes directions for sustainable and regenerative development, based on the results of the forecasts and the destination's current position in its life cycle.

Keywords: TALC model, tourism seasonality, ARIMA forecast, sustainable development, Bușteni.

1. INTRODUCTION

Bușteni is one of the most emblematic mountain resorts in Romania. It lies at the foot of the Bucegi Massif, in the central part of Prahova Valley, and combines a spectacular natural setting with good accessibility and a diverse mix of natural and cultural attractions (Ciangă, Dezsi, 2007; Ciangă, Oprea, 2018). These features make it a relevant case for studying how mountain destinations in Romania are planned and developed. The town is also a good example of a resort of national interest in which the demands of contemporary tourism and a distinct local identity are both present, which makes it interesting for an analysis of the interaction between natural, anthropic and institutional factors.

The aim of this paper is to analyse the spatial-planning and tourism-development model of Bușteni, considering its geographical, socio-economic and historical particularities, and to identify sustainable directions for its future evolution. The specific objectives are: to describe the natural and built setting that defines the local tourism space; to outline the historical stages of tourism development and the territorial and functional changes the town has undergone; to identify the main drivers of its tourism evolution (economic, institutional, technological and environmental); to apply relevant theoretical models, in particular Butler's (1980) *Tourism Area Life Cycle* (TALC); to carry out a SWOT analysis; and to formulate strategic proposals for sustainable development.

The research is guided by several questions. How did Bușteni evolve from a traditional mountain settlement into a destination of national interest? Which natural, economic, social and institutional factors drove this evolution and how did they interact across different periods? To what extent does the resort's trajectory fit established models such as TALC? What are its current strengths and vulnerabilities in the competitive context of Prahova Valley? Which future scenarios can be outlined given current urbanisation trends, climate change and tourist demand? And which strategies and policies could support sustainable, competitive development in the medium and long term?

Strategies, policies and planning models are essential pillars for the sustainable and competitive development of tourist destinations. The literature offers a wide range of approaches, from creative and regenerative models (Duxbury et al., 2021; Bellato et al., 2022) to community-based strategies (Arintoko et al., 2020), integrated public policies (Khan et al., 2021; Guo et al., 2019; Fabricius, 2021) and strategic-planning instruments such as SWOT, AHP (Analytic Hierarchy Process) and QSPM (Quantitative Strategic Planning Matrix) (Fan et al., 2023; Kişi, 2019). Development models range from those centred-on branding and marketing to those that prioritise the conservation of natural and cultural resources, while effective policies require cooperation between public, private and community actors, the integration of digital technologies and

participatory governance (Ariyani, Fauzi, 2022; Astutik et al., 2025; Gretzel et al., 2015). Recent reviews underline that competitiveness and sustainability are closely linked, and that proactive, flexible and locally adapted approaches are needed (Štreimikienė et al., 2021; Ou, 2025; Voinova, Chuvatkin, 2024).

A central reference for this study is the *Tourism Area Life Cycle* model (Butler, 1980), which describes the stages a resort passes through: exploration, involvement, development, consolidation, stagnation and then either decline or rejuvenation. The model applies only partly to Buşteni, which, after intense development during the communist period, now faces the need for strategic reorientation. The experience of Alpine resorts shows that careful planning, climate-change adaptation and resident involvement are decisive for keeping mountain destinations sustainable and competitive (Paunović, Jovanovic, 2017; Bonzanigo et al., 2016; Schubert, Schamel, 2021), while studies of Carpathian resorts warn about the territorial pressure generated by rapid, poorly controlled urbanisation (Nistor et al., 2017).

2. METHODOLOGY

The study relies mainly on secondary sources. These include academic works from Romanian and international literature, accessed through scientific databases (Google Scholar, ResearchGate, ScienceDirect) and through the AI-assisted search platform Consensus (Consensus AI, 2025); institutional studies and reports, in particular statistical data from the NIS (National Institute of Statistics of Romania, 2025) and strategic documents such as the local development strategy of Buşteni (Town Hall of Buşteni, 2014); cartographic sources from OpenStreetMap and Google Earth; and official online sources of the local administration, Bucegi Natural Park, accommodation and leisure operators. Informal interviews and personal field observations were also used to obtain perspectives on how tourism development and the spatial structure of the resort are perceived locally. The interviews were conducted with a small number of respondents (approximately ten people) during 2020–2021 and included both residents of Buşteni and family members who could describe the situation of the town prior to 1990. They addressed themes such as respondents' overall assessment of the resort's development to date and their views on which aspects they considered to be working well or poorly. Field observations were carried out on a near-annual basis between 2020 and 2023, focusing on the central area (town hall, railway station), the area around Cantacuzino Castle, and the Kalinderu ski slope. These interviews were exploratory and non-representative and were intended to complement rather than substitute for the documentary and statistical sources used in this study.

The bibliographic review was carried out in October–November 2025. About 45 articles and studies were selected, mostly recent works published between 2019 and

2025, together with classic references (Butler, 1980; Lane, 1994). The selection criteria were thematic relevance, academic recognition (indexed articles) and applicability to sustainable tourism development.

Cartographic analysis was an essential stage. Historical maps (twentieth century) and recent digital maps (Google Earth) were compared to track the expansion of the built-up area and the change of green spaces, while multi-temporal satellite imagery (1985–2025) was used to assess the spatial transformations linked to rapid urbanisation, the appearance of new accommodation units and changes in land use. GIS tools (ArcMap 10.8) were used to produce thematic maps, and aerial photographs and field images completed the spatial analysis, especially in Kalinderu, Cerbului Valley, Zamora and Cantacuzino Castle areas.

To forecast tourist flows, seasonal ARIMA (SARIMA) models were applied to the monthly arrivals and overnight stays series. ARIMA models are well suited to time series with strong seasonality and allow forecasts based only on the historical series, without additional variables; in studies of tourist arrivals they have shown high accuracy, around 79% in the case of Hyderabad, India (Narige, Mallikarjuna Reddy, 2022). Model quality was assessed through fit statistics (R2, stationary R2, MAPE) and the Ljung-Box test for residual autocorrelation.

The research also has limitations. It depends heavily on secondary sources, which can affect the accuracy and timeliness of the data; access to detailed local spatial data (local GIS layers, recent cadastral plans) was limited; field observations were made mainly in the summer season, which may reduce the representativeness of conclusions about flows in other periods; the informal interviews reflect individual perceptions rather than a statistically validated picture; and detailed economic data on tourism revenue and private investment were not available. Despite these limitations, the methodology provides a solid basis for analysing the resort's development model and for identifying sustainable directions.

3. RESULTS

3.1. Historical evolution

The first documented construction on the present-day territory of Bușteni was the "Slonul de Piatră" inn, raised in the sixteenth century on the left bank of the Prahova and mentioned in a 1674 charter (Town Hall of Bușteni, 2014). The first dwellings appeared on Cerbului Valley around 1800, and by 1840 the locality was recorded as a rural settlement of twelve families (Ghinea, 2000). Development accelerated with the opening of the Bucharest-Predeal railway (1879) and the construction of the paper mill (1882); by the end of the nineteenth century three hotels and ten to twelve inns were operating

(Alessandrescu et al., 1897). In the interwar period the resort became a destination for cultural and political elites, associated with prestige tourism.

After 1945 the communist regime introduced urban-systematisation programmes and, later, more substantial tourism investment oriented towards international tourism. A balneoclimatic sanatorium was built in 1955, Youth Tourism Office (Biroul de Turism pentru Tineret – BTT) was set up in 1968 and built a hotel, and in the same year the Buşteni-Babele cable car was inaugurated. After 1989 the tourism infrastructure temporarily deteriorated, but after 2000 investment in the ski area and in the modernisation of accommodation resumed. The recent stage is marked by rapid urbanisation, with construction expanding especially in Zamora, Poiana Ţapului and Kalinderu areas, and by the reconversion of the former industrial zone after the closure of the cellulose and paper mill (Figure 1; Nistor et al., 2017). Tourism visibility was further amplified by the filming of the series "Wednesday" at Cantacuzino Castle, which helped increase the number of foreign visitors. Today, Buşteni (Figure 2) is a town and tourism resort of national interest, located at about 850 m altitude, with a population of 8,368 inhabitants and over 100,000 tourists a year. Despite its valuable natural and built heritage, recent urban development is often considered chaotic, which highlights the need for an integrated and sustainable development plan.

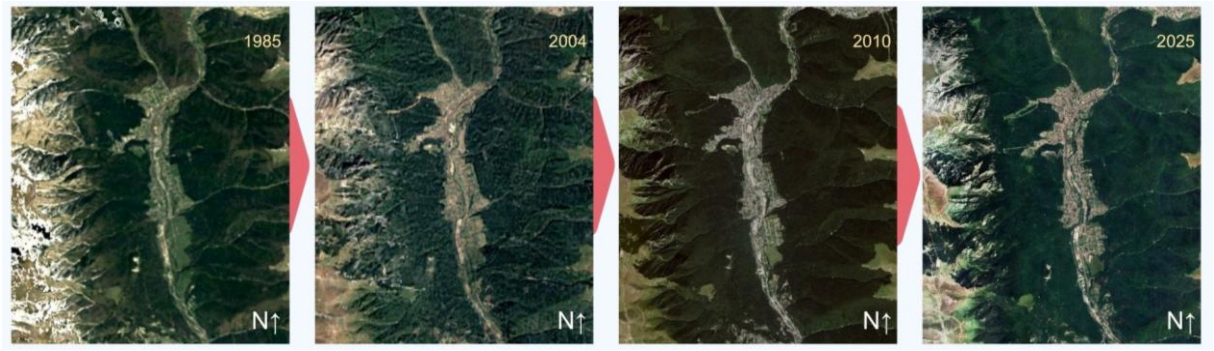


Figure 1. Spatial evolution of Buşteni (1985–2025) based on satellite imagery
Source: Google Earth (2026)

3.2. Tourism potential

Buşteni has remarkable natural tourism potential, the result of its geomorphological, climatic, hydrographic and biogeographical diversity. The glacial relief, formed during the Riss and Würm glaciations, generated specific landforms, clearly visible in Cerbului Valley area, together with numerous periglacial phenomena (scree slopes, moraines, nivation niches, etc.; Ciangă, Dezsi, 2007; Ghinea, 2000). Omu Peak (2,505 m), the highest peak of the Bucegi, stands out, alongside relief on limestone and conglomerates that produced differential-erosion landforms such as Sfinxul and Babele (Ciangă, Oprea, 2018).

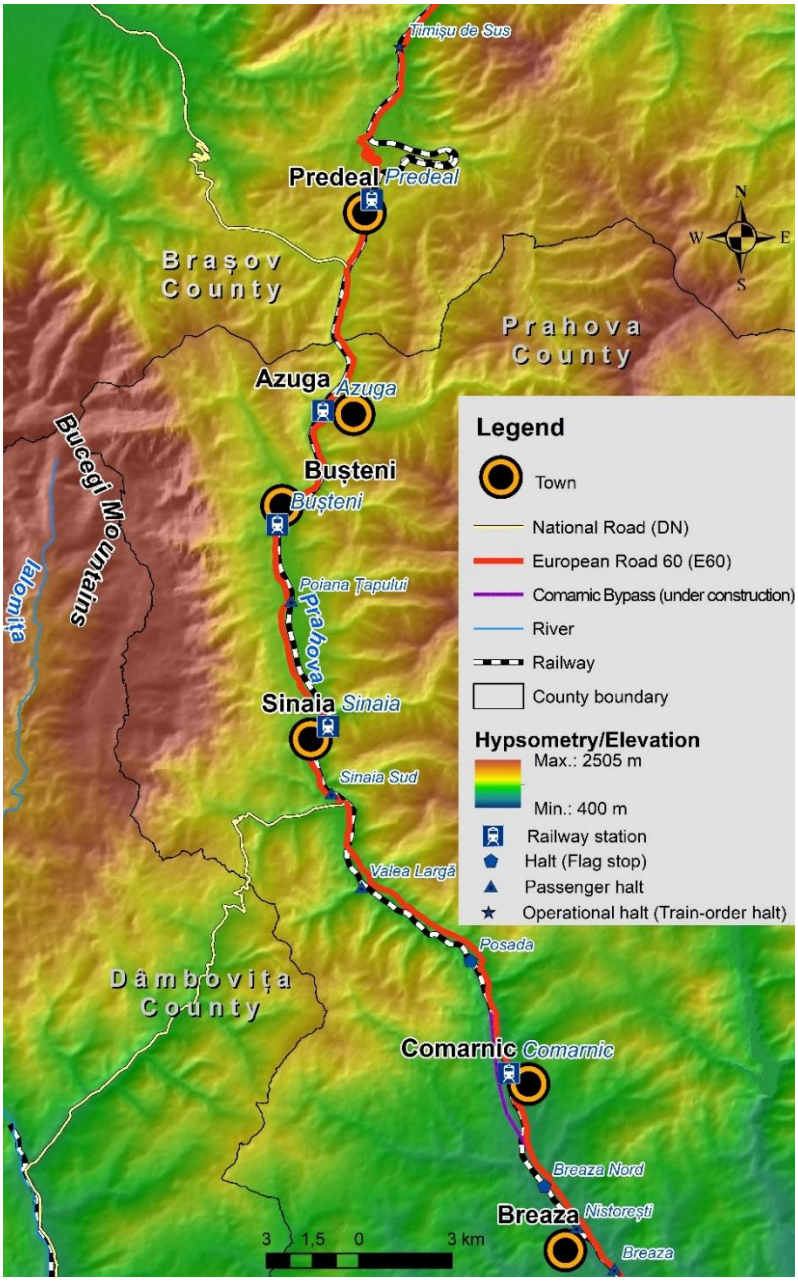


Figure 2. Road and rail accessibility of Bușteni along the Prahova Valley
Source: processed by the author in ArcMap 10.8 using OpenStreetMap and a 25 m DEM

The eastern escarpment of the Bucegi presents the greatest vertical drop in the country and is a major domain for mountaineering, while karst landforms and the Caraiman, Urlătoarea and Valea Spumoasă waterfalls add to the scenery. The subalpine climate, with cool summers and cold winters, an average annual temperature of about 6°C and a tonic-stimulating bioclimate, has beneficial effects on health (Ciangă, Oprea, 2018). The hydrographic component plays an important complementary role in recreation (Cocean, Dezsi, 2009; Chivoiu, 2010), and the biogeographical cover of beech and conifer forests, alpine grasslands, Carpathian endemics and rich fauna confer a distinct natural identity (Pehoiu, Murărescu, 2010). The Bucegi Natural Park (32,663 ha,

IUCN category V) and the "Bucegi Prahova Escarpment" reserve (Abruptul prahovean Bucegi) (3,478 ha) lie within the town's administrative territory, and human activities have generated pressure on these ecosystems, which requires protection measures.

The human made tourism potential is centred on Cantacuzino Castle, a representative early-twentieth-century neo-Romanian building with a museum and event function, set on a raised terrace with a landscaped park (Niculescu, 1984). The ecclesiastical heritage is diverse and includes the Caraiman and Holy Trinity monasteries and several churches of different denominations. Among commemorative monuments, Crucea Eroilor de pe Muntele Caraiman (2,291 m, built in 1924–1928) is one of the highest metal structures on a mountain peak in Europe, complemented by the "Ultima Grenadă" monument. The Cezar Petrescu Memorial House, the railway station and the relay on Coștila Peak complete the built heritage. The List of Historical Monuments confirms the density and value of this heritage (Ministry of Culture of Romania, 2015). Cultural events, however, have become less frequent in recent years.

3.3. Tourism infrastructure

The accommodation capacity of Bușteni shows significant structural change over 1990–2025 (Figure 3), based on NIS data. The 1990s and early 2000s were marked by stagnation or slight decline, as traditional forms such as motels, school camps and campsites lost ground during the post-socialist transition. Between 2006 and 2019 capacity gradually recovered, driven mainly by hotels, guesthouses and tourist villas, which diversified the offer. After 2020 total capacity grew sharply, driven above all by the expansion of apartments and rooms for rent, signalling a shift towards flexible forms based on individual private investment.

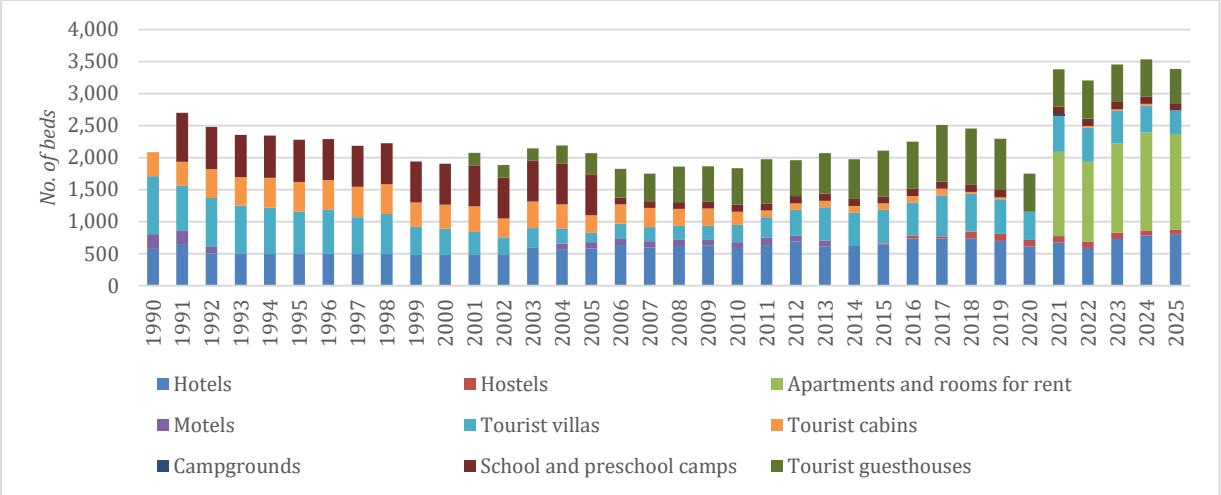


Figure 3. Evolution of tourist accommodation capacity by type of accommodation (1990–2025)
Source: National Institute of Statistics (2026)

The net occupancy rate (Figure 4), however, has remained low and oscillating over 2001–2024, according to NIS. Values were between 23% and 29% in 2001-2008, fell to a minimum of 14% in 2011 under the impact of the economic crisis, recovered moderately to 19–24% in 2015–2019, dropped again in 2020 with the pandemic restrictions, and then stabilised around 19–21% in 2021–2024. Overall, the occupancy dynamics indicate that capacity is used below its potential, especially after the strong post-2020 expansion in the number of places, which suggests that supply has grown faster than demand.

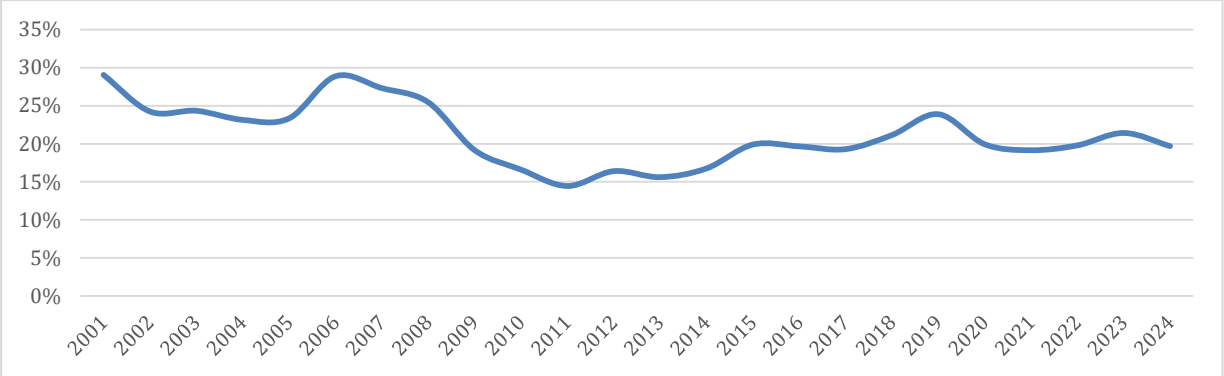


Figure 4. Dynamics of the net occupancy rate of tourist accommodation capacity in operation (2001–2024)
Data sources: National Institute of Statistics (2026)

Public catering is dominated by classic restaurants (30 of 55 units), followed by day bars (11) and family restaurants (7), while modern fast-food and entertainment formats are barely represented, according to the Romanian Ministry of Economy, Digitalisation, Entrepreneurship and Tourism (2026). This structure reflects an orientation towards family and stay tourism, specific to a traditional mountain resort. The transport infrastructure is a major competitive advantage: the town lies on DN1 (E60), the main road corridor between Bucharest and Braşov, is connected by DN71 and DN73A, and has rail access through Main railway line 300 (M300), although frequent congestion in peak periods calls for modernisation. Sports and leisure facilities include a stadium, sports halls, tennis courts, mountain trails, an adventure offer (ATV, climbing, paintball, horse riding, cycling) and a ski domain of about 3.07 km on the Kalinderu slopes, served by a chairlift, together with several marked mountain-bike routes.

3.4. Tourist flows

Over 2001–2025 tourism in Buşteni followed an oscillating but generally upward trajectory (Figure 5). Total arrivals were 71,779 in 2001, remained relatively constant until 2008, declined during the global economic crisis, then grew steadily to a pre-pandemic peak in 2019. The year 2020 brought a sharp drop because of COVID-19,

followed by a rapid recovery in 2021–2023, when record values were reached (123,985 arrivals in 2023), with a slight decrease in 2024 (110,246) influenced by inflation. Overnight stays followed a similar pattern, with a maximum in 2023. By contrast, the average length of stay declined gradually from about three days to around two to 2.2 days, which points to a shift towards short weekend stays. The low net occupancy rate confirms an under-used potential and marked seasonality of demand, suggesting the need to diversify the offer and to promote the resort throughout the year.

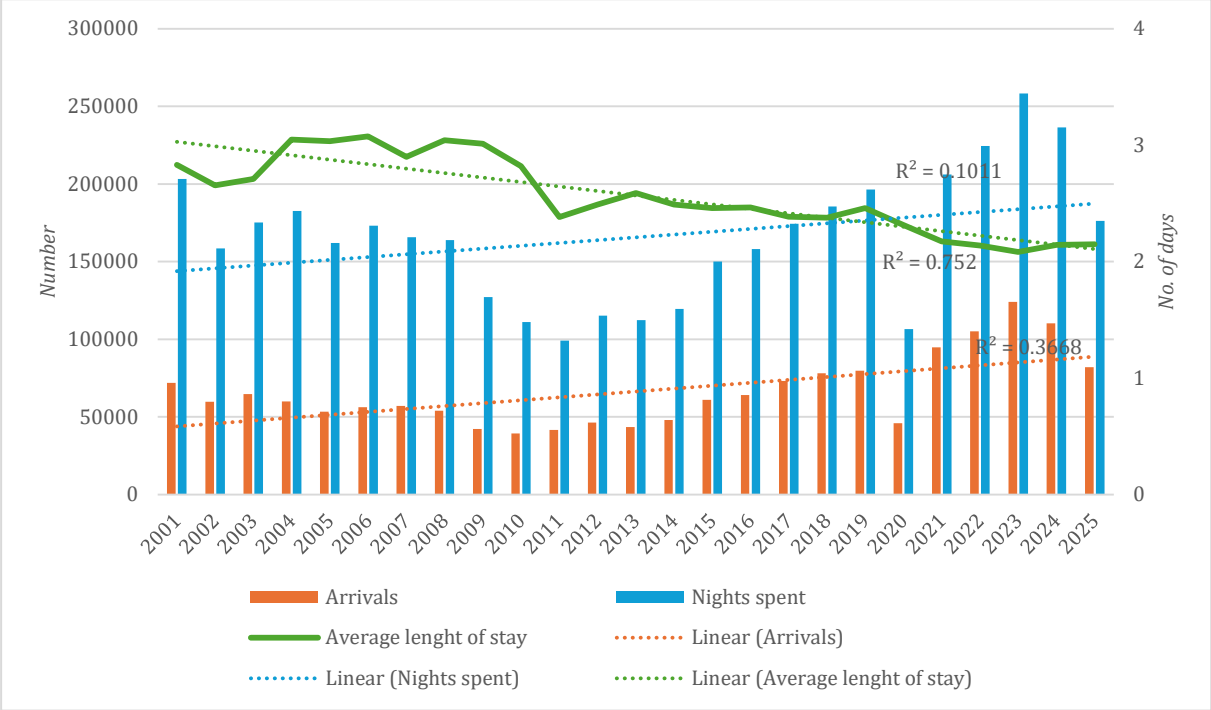


Figure 5. The dynamics of tourist flows between 2001 and 2025
Data sources: National Institute of Statistics (2026)

Trend analysis indicates a moderate increase in arrivals (R^2 = 0.3668), while overnight stays show stronger fluctuations (linear trend R^2 = 0.1011) and the average length of stay a pronounced downward trend (R^2 = 0.752). In 2025 arrivals and overnight stays rise markedly in the summer months, peaking in August, while the average stay remains fairly constant throughout the year.

To forecast arrivals, the optimal selected model was a seasonal ARIMA(1,0,3)(0,1,1)$_{12}$ (Figure 6). The fit is high (R^2 = 0.927; stationary R^2 = 0.804), so the model explains more than 90% of the variation in the series, and the Ljung-Box test ($p = 0.429 > 0.05$) confirms the absence of residual autocorrelation (Table 1). The mean percentage error (MAPE ≈ 24%) indicates acceptable accuracy for tourism forecasts, which are characterised by seasonal volatility. The forecast for January 2026–December 2030 suggests a stable seasonal pattern, with pronounced summer peaks in July–August (8,000–12,000 arrivals) and off-season minima of 3,000–4,000, without an accelerated structural trend; medium-term demand therefore appears relatively stabilised.

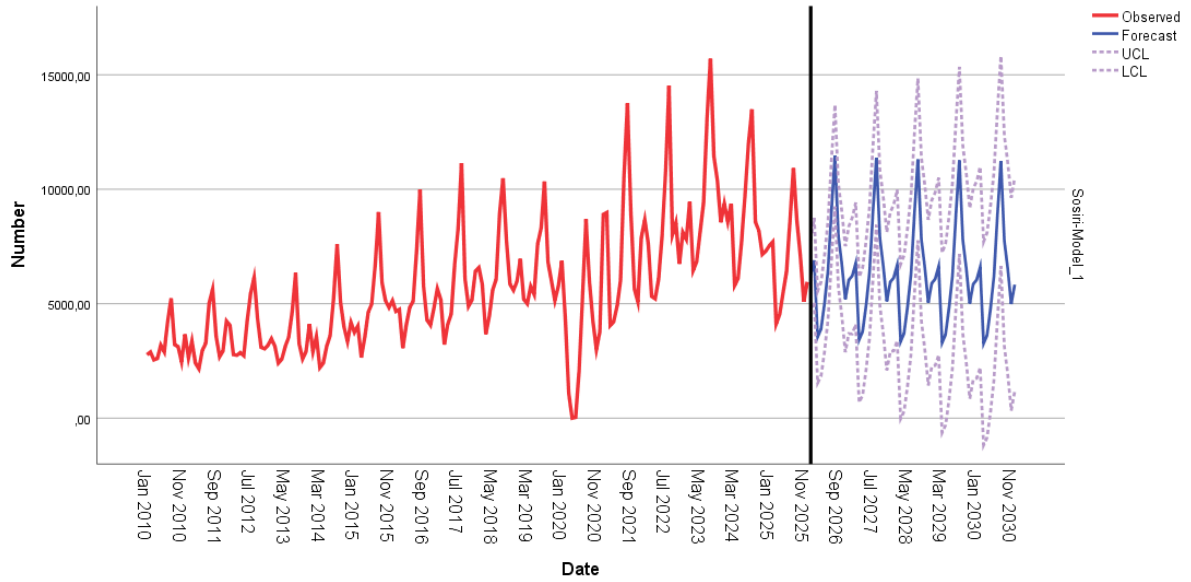


Figure 6. Tourist arrivals in Bușteni (2010–2030): observed data (2010–2025) and ARIMA forecast (2026–2030)

Table 1. Diagnostic statistics of the ARIMA model for tourist arrivals (Ljung-Box test and outliers)

Model	Number of Predictors	Model Fit statistics	Ljung-Box Q(18)			Number of Outliers
		Stationary R-squared	Statistics	DF	Sig.	
Sosiri-Model_1	0	.804	13.246	13	.429	4

For overnight stays, an ARIMA(1,0,0)(0,1,1)$_{12}$ model was used (Figure 7). The fit is good (R^2 = 0.882; stationary R^2 = 0.691), explaining about 88% of the variation, and the Ljung-Box test (p = 0.116 > 0.05) again indicates no residual autocorrelation (Table 2). The higher MAPE (≈ 33.4%) reflects the greater volatility of overnight stays, driven by variations in the length of stay and by conjunctural shocks. The forecast for January 2026–December 2030 indicates continued strong seasonality, with summer maxima above 30,000 overnight stays in July-August and off-season minima, and a stabilisation of the general level rather than a significant upward structural trend. Overall, the forecasts confirm the seasonal character of the resort and suggest a relatively constant medium-term evolution, with a higher degree of uncertainty for overnight stays than for arrivals.

3.5. SWOT analysis

The SWOT analysis (Table 3) highlights a tension that is characteristic of Bușteni: the town's main strengths (its favourable location on the Prahova Valley corridor, its rich natural and cultural potential, and its long-standing tourism tradition) are precisely the factors that generate its most pressing weaknesses.

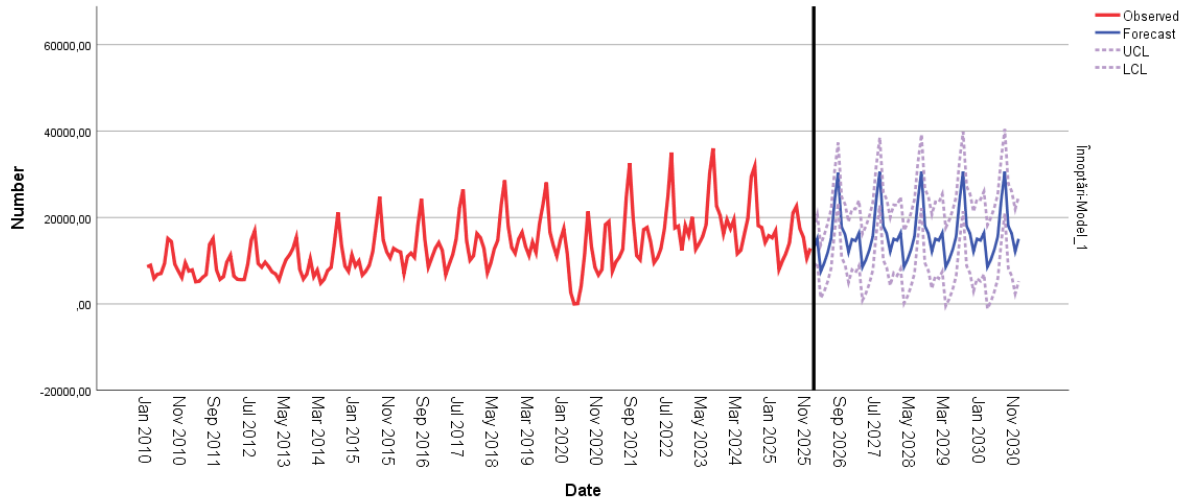


Figure 7. Nights spent in Bușteni (2010–2030): observed data (Jan 2010–Dec 2025) and ARIMA forecast (Jan 2026–Dec 2030)

Table 2. Diagnostic statistics of the ARIMA model for nights spent (Ljung-Box test and outliers)

Model	Number of Predictors	Model Fit statistics	Ljung-Box Q(18)			Number of Outliers
		Stationary R-squared	Statistics	DF	Sig.	
Înnoptări-Model_1	0	.691	22.900	16	.116	2

The national renown and accessibility that make the resort attractive also translate into severe seasonal overcrowding, traffic congestion and uncontrolled urban pressure, which in turn erode the very landscape and heritage on which its appeal depends. Many of the identified weaknesses are therefore not isolated shortcomings but consequences of a demand that has grown faster than the resort's planning and management capacity, in the absence of a coherent sustainable-development strategy.

Most of the opportunities point in the same direction: rather than requiring new resources, they call for better coordination and governance. Measures such as creating a Destination Management Organisation (DMO), establishing an inter-community association with neighbouring resorts, introducing integrated transport and park-and-ride facilities, and accessing European funds would primarily address the structural and organisational gaps revealed by the weaknesses. The main threats (climate change, growing competition from more modern resorts such as Sinaia, and continued environmental pressure) reinforce the urgency of such coordinated action, since the competitive position of Bușteni depends less on its natural endowment, which is already considerable, than on its ability to manage that endowment sustainably.

Table 3. SWOT analysis

Strengths	Weaknesses
• favourable geographical position (on the Prahova Valley, on the E60 road and the M300 railway, between Ploiești and Brașov); • spectacular natural and cultural potential; diversity of tourism forms (cultural, mountain, religious); • a developed and diversified material base; • tourism tradition and national renown.	• overcrowding in peak season (heavy traffic, parking shortage, pollution); • the lack of a coherent sustainable-development strategy; • a limited leisure offer (wellness, spa, cultural centres); • the lack of a national and international promotion strategy and of a strong brand; • uncontrolled urban pressure affecting the landscape and the natural heritage.
Opportunities	**Threats**
• developing ecotourism (Bucegi Natural Park); • accessing European funds for a coherent development strategy; • creating a Destination Management Organization (DMO); • setting up an inter-community development association with the other Prahova Valley resorts (e.g., Sinaia, Azuga, Predeal); • introducing integrated public transport; building park-and-ride facilities; • designing a destination brand; • organising events, festivals and mountain sports competitions.	• climate change (which can shorten the winter season and reduce the accessibility of mountain trails); • growing competition from other, more modern resorts (e.g., Sinaia); • pressure on the natural environment and the risk of ecosystem degradation through excessive tourism; • the migration of the tourism workforce and the lack of qualified staff; economic or political instability affecting local investment; • the lack of coordination between local authorities, investors and the community over territorial planning.

4. DISCUSSION

The results confirm the relevance of several theoretical models for Bușteni, above all the TALC model (Butler, 1980), the theories of sustainable development and strategic-planning approaches based on instruments such as SWOT (Fan et al., 2023; Kişi, 2019). According to the TALC, Bușteni is in an advanced stage of maturity: after significant expansion in the 1960s–1980s it entered a post-1990 stagnation, when urbanisation pressure and uncontrolled tourism began to affect environmental quality and attractiveness. As in other mountain resorts analysed in the literature (Bonzanigo et al., 2016; Paunović, Jovanovic, 2017; Zeng et al., 2021), Bușteni illustrates the need for a "rejuvenation" process through diversification of the offer and the adoption of sustainable policies.

The analysis also confirms the importance of community strategies and participatory governance (Arintoko et al., 2020; Ariyani, Fauzi, 2023): the involvement

of local actors, the administration, investors, the community and NGOs, is essential for revitalising the resort. The model of integrated public policies (Guo et al., 2019; Khan et al., 2021; Fabricius, 2021) provides a relevant framework, since coordination between transport, urban planning, environment and tourism remains a major challenge. Here the literature on the role of the public sector in tourism is instructive: public intervention is often justified precisely where private actors alone cannot deliver coordinated infrastructure and quality services (Bunja, Knežević, 2016), and the efficient use of public resources should be assessed against the value-for-money it generates (Glendinning, 1988). The results also align with regenerative-development models (Duxbury et al., 2021; Bellato et al., 2022; Yanan et al., 2024), which stress the role of culture, local heritage and creativity; valuing local identity through thematic events, cultural routes and the promotion of the natural heritage (Bucegi Mountains, Bucegi Natural Park) can support a transition towards sustainability and innovation. Buşteni therefore reflects a hybrid between the traditional model of mountain development and the sustainable one, and its future direction should be oriented towards modernisation, environmental protection and community involvement (Štreimikienė et al., 2021; Albeshchenko et al., 2024).

Building on these models and on the observed realities, three scenarios can be outlined (Figure 8). The first, sustainable and regenerative development, assumes integrated policies oriented towards conservation and heritage revitalisation; Buşteni could adopt a "smart destination" model based on digitalisation, ecological mobility, ecotourism education and community participation, with a diversified offer (cultural, educational, ecotourism, sports) that would spread flows more evenly across the year (Gretzel et al., 2015; Duxbury et al., 2021; Bellato et al., 2022). The second, stagnation, sees the resort keep its status without major investment in infrastructure and innovation; according to the TALC this implies stable flows but declining relative competitiveness, in line with the warnings of Lane (1994) and Štreimikienė et al. (2021) that the absence of proactive policies leads to environmental overload and a lower-quality experience. The third, decline and loss of competitiveness, would follow from a lack of strategic intervention: uncontrolled urbanisation, environmental deterioration, falling attractiveness and workforce migration could sharply reduce flows, a risk supported by analyses of anthropic pressure and natural hazards in mountain areas (Nistor et al., 2017; Alcántara-Ayala, Sassa, 2023). The ARIMA forecasts to 2030 are consistent with the second scenario in the absence of intervention: they indicate a stable seasonal pattern without an accelerated structural trend, which means that, without proactive policies, demand will plateau rather than grow. The most favourable scenario therefore implies a strategic reorientation towards a sustainable, participatory development model based on the responsible use of natural resources, the consolidation of infrastructure, climate-change adaptation and the integration of public policies into urban planning.

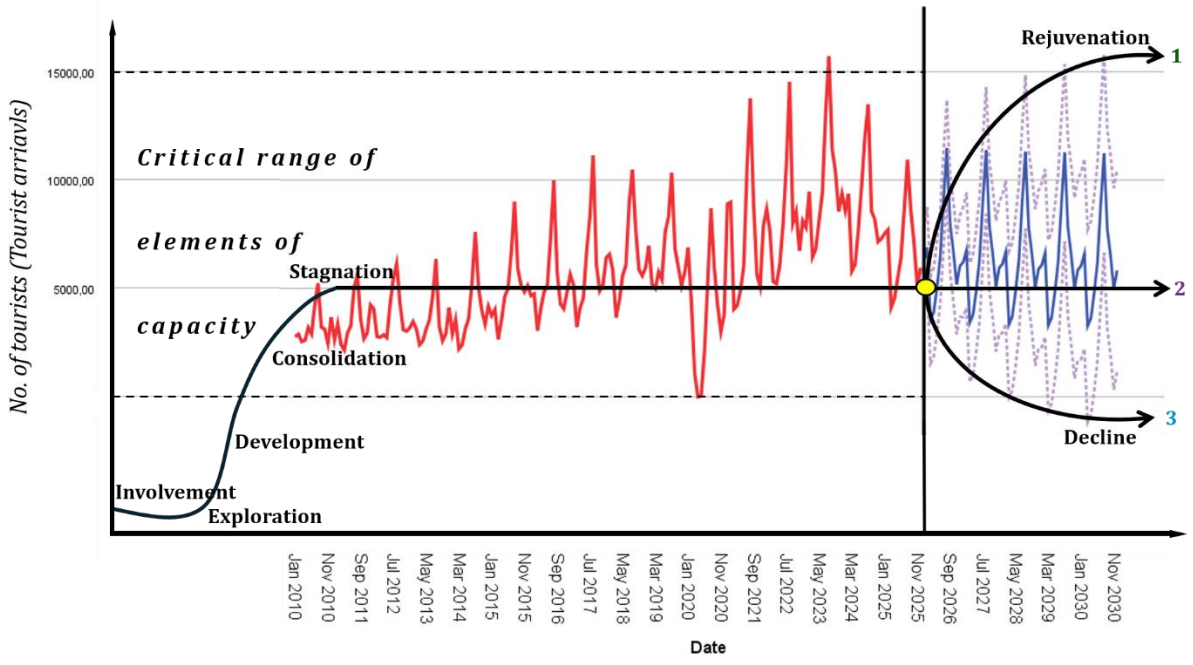


Figure 8. Tourist arrivals evolution based on the TALC model and ARIMA forecasting

5. CONCLUSIONS

Bușteni benefits from complex tourism potential, combining spectacular natural resources, a rich cultural-historical heritage and a long tradition of Romanian mountain tourism. Yet the analysis of its infrastructure and of the dynamics of tourist flows shows that its development has been uneven, with periods of stagnation and an under-use of existing resources. The low occupancy rate and the short average length of stay reveal a pronounced seasonality, specific to weekend tourism, while the resort retains a clear advantage in the authenticity of its landscape and the value of its natural and cultural heritage. The SWOT analysis highlights strengths such as its geographical position, the diversity of its tourism forms and its national renown, but also weaknesses such as the lack of a coherent promotion strategy, urban pressure and insufficient modern facilities; threats such as crowding, natural hazards and regional competition can be turned into opportunities through participatory governance and an orientation towards sustainable and smart tourism. In TALC terms, Bușteni is in an intermediate stage between stagnation and rejuvenation, and its future depends on implementing sustainable policies centred on infrastructure modernisation, digitalisation and the involvement of the local community.

On this basis, several strategic directions are proposed. The first concerns infrastructure, leisure and transport: modernising the Kalinderu ski domain and extending the mountain trails; creating a destination-management organisation with participatory governance; setting up a tourist information centre integrating digital

services (mobile applications, virtual tours, online booking); arranging green spaces and ecotourism routes in Cerbului Valley and Jepi areas; introducing integrated public transport in partnership with the neighbouring municipalities; and building at least two park-and-ride facilities to relieve traffic and reduce pollution. The second is the creation of an integrated tourism brand, "Buşteni. The Gateway to Bucegi Mountains", with a visual identity, an official slogan and the promotion of natural and cultural heritage through thematic festivals and digital campaigns. The third is the digitalisation of services and the development of a smart destination, including a single platform for tourist information, local transport and events, developed in cooperation with universities and IT firms. The fourth is support for local entrepreneurship and the circular economy through micro-grants, fiscal incentives and the promotion of traditional products. The fifth is environmental protection and the sustainable management of resources, through green transport (electric buses, cycle lanes) and a waste-management system in tourist areas. Potential funding sources include European funds (ERDF, the Regional Operational Programme 2021–2027, the National Recovery and Resilience Plan), local and county budgets, public-private partnerships and national programmes.

In conclusion, Buşteni has the potential to become again a competitive and sustainable mountain destination through an integrated development vision based on inter-institutional cooperation, digitalisation and environmental protection. Adopting these policies would ensure balanced economic growth, a more diversified offer and a better quality of life for the local community.

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