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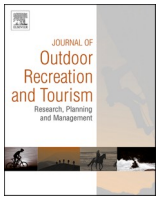

Research Article

Economic impacts of trail destinations: The case of the Peaks of the Balkans trail

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A B S T R A C T

This study quantifies the economic impact of the Peaks of the Balkans (PoB) Trail, a 192 km transnational hiking trail in Albania, Kosovo, and Montenegro, on rural mountain regions in the post-pandemic Anthropocene. Using Hubert Job's Value-Added Analysis (VAA), the research integrates electronic visitor counting (2024) and expenditure surveys (2023) to estimate visitor numbers, spending patterns, and primary and secondary local income effects. Results show approximately 43,075 hikers annually, with an average daily expenditure of EUR 73.93 per person. The trail generates an estimated EUR 25.48 million in gross annual turnover, contributing EUR 16.28 million in local income effects and supporting the equivalent of 1380 full-time jobs. The findings highlight the PoB Trail's role in driving rural economic development through tourism revenue, job creation, and infrastructure improvements. Building on the adapted methodology, a transferable and cost-efficient model is presented for evaluating the economic effects of long-distance trails on rural communities in emerging economies.The case of the PoB trail exemplifies how long-distance trail destinations can transform local economies while promoting regional cooperation and resilience in the post-pandemic Anthropocene, offering insights into evolving hiker mobilities driven by an intensified desire for nature-based experiences during that period and reinforcing the significance of long-distance trails as both economic assets and a form of movement heritage.

Management implications

Based on the study's findings on the PoB Trail's significant economic impact, stakeholders should focus on the following key actions:

Policymakers and tourism organizations.

- **Invest in trail infrastructure:** Improve trail conditions, signage, and waste management to sustain the quality of experience.
- **Create a unified management and marketing strategy:** Cross-border collaboration must be revived. The establishment of a standalone, multi-national trail management organisation is recommended.
- **Continuously monitor and evaluate:** Continue to monitor hiker numbers and sentiments to prevent over-tourism, protecting the region's natural and cultural assets.

Local businesses and communities.

- **Elevate service quality:** Capitalize on demand for comfortable accommodation and services and increase revenues by raising the quality level of services.
- **Strengthen digital presence:** Update the official trail website and incorporate interactive technology and up-to-date information.
- **Diversify offerings:** Derived community-based tourism offers along the trail destination can capitalize on the PoB brand while diversifying the product portfolio.

Researchers:

Pursue targeted research: Academics **should** build on this methodology with comparative studies on other trail destinations and research into the long-term social and environmental impacts of trail tourism.

1. Introduction

Hiking tourism and long distance trails are often considered effective drivers of economic development in rural areas. From boosting local economies, increasing revenue, and creating jobs for local businesses (Lemelin & Chalifour, 2007) to the sustainable diversification of local income sources through the reduction of dependencies on single industries (Hall & Higham, 2005), trail-based tourism is attributed with a multiplier effect, "where tourist spending circulates through the local

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economy, supporting various sectors like hospitality, retail, and transportation, [that] can have a substantial impact on overall economic growth" (Dwyer & Kim, 2003).

Utilising these positive effects for the economic development of rural mountain regions in the Western Balkans was the declared aim of the establishment of the 'Peaks of the Balkans Trail' (PoB), a 192 km long multi-day hiking trail in the three-country region of Albania, Kosovo and Montenegro (Peaks of the Balkans Trail, n.d.). Opened in 2011 following a joint effort of German development cooperation agency GIZ, the tour operator DAV Summit Club, and local stakeholders, the objective was to counteract the rural exodus and create local prospects (GIZ et al., 2022). While an early study carried out by the consultancy firm Mascontour between 2013 and 2014 confirmed that guests on the trail do generate local turnover (Mascontour, 2016), the extent and characteristics of the actual economic added value of hiking tourism along the PoB Trail have never been comprehensively investigated. In particular, neither data regarding visitor numbers and overall visitor spending along the trail existed prior to the present research.

The aim of this study is to quantify the economic effects of the PoB Trail and to contextualise the corresponding added value generated by this tourism offer in a rural region of three emerging countries. This is of particular importance, as economic impact analyses are crucial to promote agreement and satisfaction among stakeholders and to evaluate the meaningfulness and economic viability of comparable tourism-related projects in the region in the future (Lukoseviciute et al., 2022). To achieve this, this study aims to develop a replicable methodology through a transferable framework for evaluating the economic impact of trail-based tourism along long-distance hiking trails.

In concrete terms, two central research questions are to be answered: How many visitors hike the Peaks of the Balkans Trail in one annual season? And what is the specific expenditure of these guests during their stay?

The researchers used Hubert Job's Value-Added Analysis (VAA) (Job et al., 2005) as the main methodological framework to assess the economic impact of the Peaks of the Balkans (PoB) hiking trail. It quantifies visitor expenditures across categories like accommodation, food, grocery shopping and transportation, linking them to broader economic outcomes such as income generation, job creation, tax generation, and regional infrastructure improvements. The VAA offers a systematic way to measure the trail's contribution to the local economies of Albania, Kosovo, and Montenegro. For this, the number of visitors along the trail was measured electronically over an entire hiking season (2024) and combined with survey data from the previous year (2023). In order to operationalise the analysis introduced by Job for tourist destinations for the specific context in Germany, a theoretically substantiated definition of the long-distance trail destination is also introduced.

The COVID-19 pandemic has profoundly altered global travel patterns, with a marked shift toward outdoor and nature-based tourism (Bustad et al., 2022). This trend, often termed the 'post-anthropause,' reflects heightened demand for remote, sustainable destinations that offer physical and psychological respite from urban confinement. The PoB, with its transnational reach and rugged landscapes, exemplifies this shift, attracting hikers seeking solitude, adventure, and cultural immersion. This study not only quantifies the trail's economic impact but also situates it within this evolving mobility paradigm, offering insights into how long-distance trails can serve as catalysts for rural recovery in a post-pandemic world. The methodology developed here—combining sensor-based visitor counts with expenditure surveys—provides a replicable framework for assessing trail-based tourism in other emerging economies. As global interest in outdoor recreation surges, this model can help policymakers and planners predict visitor trends, allocate resources, and balance economic benefits with ecological sustainability.

Thanks to its mountain ranges and diverse natural landscapes, the Western Balkans have become a sought-after destination for outdoor and adventure tourists (GIZ et al., 2022), not least due to so-called flagship products like the PoB Trail or the High Scardus Trail (Kogge et al., 2021). The surge in outdoor activity and increased demand for outdoor recreation during the post-pandemic Anthropocene raises concerns about potential ecological impacts and the need for adapted visitor management strategies (Bustad et al., 2022). This makes it all the more important to be able to estimate and contextualise the economic added value of hiking tourism for developing regions in order to be able to weigh up the corresponding management costs and negative effects against the benefits. The study presented here seeks to close the existing research gap and provide the first reliable figures on the economic effects and added value of this long-distance trail destination.

2. Literature review

The PoB is, per design, a hiking trail aimed to increase tourism value creation in rural areas (Peaks of the Balkans Trail, n.d.). There is disagreement in the literature as to how the activity of hiking can be distinguished from other nature-based recreational activities such as walking and trekking. While Matlovičová et al. (2015) define a hike by the length of the distance traveled, Knoll (2016) sees a speed of five to 6 km per hour and a minimum duration of 2 h as distinguishing factors. According to him, the decisive criteria for a hike are the search for the experience of nature, for relaxation, the desire to do something for one's health and to get to know something new. Following the COVID-19 pandemic, researchers have observed an increased interest in hiking and walking, with new demographics engaging in the activity (Bustad et al., 2022). In this period of the post-pandemic anthropocene, or "post-anthropause" (ibid.), leisure walking recovered quickly and even surpassed pre-pandemic levels in many areas, highlighting its importance for exercise and well-being and potentially counteracting the effects of increased online consumption during the pandemic (Cawood & Amiradakis, 2022). In their discussion of the cultural practice of walking in the Anthropocene in general, Shepherd and Ernsten (2021) explore walking as a "form of embodied research practice", where individuals experience natural and cultural landscapes as layered with history, memory, and representation. In their notion, the practice represents a way to engage with the changing landscape under anthropogenic environmental change, acting as a form of witnessing. If hiking is viewed as a specific and touristically practiced form of walking in general, then hiking in this sense can be considered a distinct form of tourism mobility, influenced by motivations, available infrastructure, and technological advancements (Lew, Hall, & Williams, 2024).

Taking all these considerations into account, hiking as a tourism product overlaps greatly with the UNWTO's proposed definition of rural tourism as products that are associated with "nature-based activities, agriculture, rural lifestyle/culture, […] and sightseeing" (UNWTO, 2023). There is a common understanding that rural tourism offers usually involve small private businesses (Sajn & Finer, 2023) in rural areas and represent the complex pattern of the rural environment, economy, and history (OECD, 1994). This is also mirrored in Matlovičová et al.'s observation that hiking trails are specifically located in attractive places for tourists offering cultural or historical sights (Matlovičová et al., 2015). The original intent behind the PoB to "create income for local population, stop abandonment of the mountain region […] and […] to preserve the cultural, natural and spiritual heritage of these communities" (Peaks of the Balkans Trail, n.d.) reflects these criteria and caters to the motivations of hikers assumed by Knoll and the required length of distance proposed by Matlovičová et al. The PoB can thus be categorised as both a long-distance hiking trail and a rural tourism product or product bundle. For the sake of this study, all recreational users of the paths that form the trail are considered hikers.

2.1. Long-distance hiking trails as destinations

More challenging is the categorisation of the PoB trail as a tourism destination. While a long-distance trail like the PoB meets UNWTO's core definition of a destination as a "physical space in which a visitor

spends at least one overnight", the additional aspect that the destination "includes tourism products such as support services, attractions, or tourism resources within one day's return travel time" (UNWTO, 2014) somewhat contrast with the nature of the trail as a space of continual movement for the tourist where each overnight stay normally takes place at a different location. Following this strict logic, the trail as a whole cannot be classified as one destination but rather a network of individual, smaller destinations, connected by walkable infrastructure.

However, this strict restriction does not adequately cover the complexity of the concept of destinations. Dredge and Jenkins (2007) claim any unique site people travel to, as opposed to their typical place of residence, can be classified as a destination. Freyer (2009) perceives destinations as geographical, landscape, socio-cultural, or organisational entities with attractions that spark tourists' interest. Following a similar approach to destinations through the lens of tourist's needs and decision-making, Bieger and Beritelli (2013) argue the size of a destination depends on the perspective and needs of the guest. Bieger (2008) had previously established the further away a destination is, the more extensive the region that is labelled as a destination and the more narrowly the purpose of the trip is defined, the more spatially and temporally limited the destination becomes. He concludes: "It is a geographical area that the respective guest selects as a travel destination. It contains all the accommodation, food, and entertainment/employment facilities necessary for a stay. It is therefore a competitive unit in incoming tourism that must be managed as a strategic business unit" (Bieger, 2008, p. 56). Employing a systems approach and drawing support from consumption patterns observed among consumers, one could posit that a destination is best understood as a geographical space harbouring a cluster of tourism resources, as opposed to being strictly confined by political boundaries (Pike, 2008), as in the case of the tri-national PoB Trail.

This perception-centred approach to defining the destination is also mirrored in the subsequent parts of the otherwise somewhat ill-fitted UNWTO definition: "It has physical and administrative boundaries defining its management, images and perceptions defining its market competitiveness. Local tourism destinations incorporate various stakeholders often including a host community, and can nest and network to form larger destinations" (UNWTO, 2019). The aspect of a standardised market perception, for example under a common brand, is also addressed here. This aspect is particularly important for trails such as the PoB, as it is both a brand and, inherently, the reason for traveling.

When comparing the aforementioned definitions of a destination, a set of recurring criteria becomes clear, whereby none of the definitions mentioned covers all criteria. When applying these criteria to the PoB Trail, it can examined to what extent one can even speak of a destination in the definitional sense in the case of a long-distance trail (Table 1).

Based on this literature review, the authors of this paper thus propose a classification of a long-distance hiking trail as rural tourism destination, since it represents a geographically localised space in the shape of a path or proposed route leading through countryside, mountain, or forest area in one or multiple regions with the possibility of expansion across political boundaries including national borders. It conceptualises one continuous path or a multi-faceted path network for selective use by the traveller. The destination is structured by a varied infrastructure, including marked routes, signposting, access roads, information centers, as well as planning and navigation media including digital and/or paper maps and route descriptions. It usually includes a product bundle consisting of accommodations, food and beverage facilities, guided activities, and additional services such as luggage transportation. Operated and marketed by various stakeholders, it is managed as a destination.

2.2. Economic impact analysis

In order to determine and contextualise the economic added value and effects of tourism value creation in and around the long-distance trail destination, the scope of this impact must first be outlined and narrowed down. The term "economic impact" pertains to the significant influence or repercussions that a specific event, policy, industry (such as tourism), or activity exerts on the economy (Park & Allaby, 2017). In travel, this refers to the comprehensive assessment of the effects that tourism demand has on various economic variables, including measurable changes to the current situation of the specific number of jobs in an area, or particular amounts of revenue in sales or income for a community (Stynes, 1999).

In general, a distinction must be made between three forms of economic impact: direct, indirect, and induced effects (Icoz & Icoz, 2019), whereby the latter two together constitute the secondary effects and the former the primary effects. Direct impacts involve economic variables such as value added, employment, labour compensation, gross operating surplus, and government revenue, predominantly from taxes. These are mostly generated by service providers that either explicitly cater to tourists or are frequented by them, such as hoteliers, shopkeepers, taxi and transportation businesses, restaurants, and other service providers. Indirect effects recognize additional economic benefits as productive units respond to tourism demand by buying and selling among themselves, producing additional output, jobs, and income (Lukoseviciute et al., 2022). Induced effects occur as employees of tourism industry establishments spend their wages and salaries, generating further economic benefits. This might also include effects of increased tax revenue from these induced economic activities and other secondary effects such

Table 1
Comparison of destination definitions and adaptation for long-distance trail destinations.

	Duration of stay	Geographical classification	Cultural classification	Marketing	Destination as a product bundle	Political factors
UNWTO (2019)	Min. one overnight stay	✓	✓	–	–	✓
Bieger (2008)	Stay	✓	–	✓	✓	–
Freyer (2009)	–	✓	✓	–	✓	–
Dredge and Jenkins (2007)	–	✓	–	–	–	–
Bieger and Beritelli (2013)	–	–	–	✓	✓	–
Pike (2008)	–	✓	–	✓	✓	✓
Applied to the PoB Trail	Usually multiple overnight stays	Clearly pre-defined route passing multiple mountain valleys	Traditional mountain villages, food, historical sights in all three countries	Common brand: "Peaks of the Balkans Trail"; one mountain range	Accommodations, F&B, guided tours, luggage transportation	Three municipalities share destination management

as infrastructure improvements rooted in tourism demand that also benefit residents and other local industries. Together, these primary or direct effects and the secondary impacts constitute the overall economic benefits, known as tourism economic benefits, generated by tourism demand (Crompton et al., 2016).

A truly precise determination of the economic added value that can be causally attributed to tourism would necessitate intricate and multi-layered analyses, encompassing the respective local economic activities, expenditure, and turnover, as well as transregional economic interrelationships. Given the inherent complexities and fragmentation of the tourism sector, such comprehensive analyses are often not feasible without substantial effort. Consequently, empirical values and suitable indicators derived from previous studies and established literature are commonly employed to approximate the actual economic effects as accurately as possible. Notably, direct effects, which stem from the immediate spending of visitors on tourism-related goods and services, not only exert a significant influence on the scale of indirect and induced effects that follow but also typically demonstrate a higher absolute magnitude in economic impact (WTTC, 2024).

Rural tourism, in particular, has been identified as a significant driver of economic growth that benefits local residents through a heightened leisure demand from urban residents and augmented revenues through increased sales of agricultural products (Lukoseviciute et al., 2022). Accounting for nearly 44 % of beds in tourism accommodation in the EU in 2021, rural tourism makes for an important pillar of the tourism industry (Sajn & Finer, 2023). The European Commission (2023) sees rural areas as a core part of Western Balkans identities, thus emphasizing the role of rural tourism as an important economic sector.

In trail-based tourism, as a special form of rural tourism, the diverse economic impacts can be well theorised. These go beyond the purely measurable direct value creation effects and include economic diversification, incentives for nature conservation and investment, and constitute trail-based tourism as a multiplier for economic impact.

Particularly in mountain communities around the world, tourism has brought prosperity and is currently the most important economic sector (Shin et al., 2017). Due to the declining demand for labour in mining, forestry, and agriculture, tourism has gained new significance for many mountain communities, both socially and economically (Godde et al., 1999; Lundmark, 2005). The UNWTO (2023) highlights the importance of rural tourism, especially in terms of its contribution to GDP, job creation, and its capacity to promote the dispersal of demand in time to counteract seasonality and along a wider territory.Fejza (2020) posits that the realization of benefits from rural tourism's offerings and experiences hinges upon a set of critical conditions. Primarily, the proper preservation of natural and cultural resources is deemed essential. Also crucial is the integration of accommodations into the existing environment. Service provision should prioritize the showcasing of local products and handicrafts as well as regional cuisine. Moreover, the upholding of traditional practices is identified as a key factor. These conditions, collectively, serve to underscore the inherent interconnectedness between sustainable economic benefits and the sustainable use and management of natural and cultural heritage.

Subject to a functional and practicable methodology, these positive economic effects along the long-distance trail destination can be determined and quantified with approximate precision. For the PoB region the tourism consultant agency Mascontour in collaboration with the Deutsche Gesellschaft für Internationale Zusammenarbeit GIZ GmbH, conducted a tourism income analysis between 2013 and 2014. This study revealed, among other findings, an average daily expenditure of approximately EUR 41per person on the trail in 2014 (Mascontour, 2016). Even though the Mascontour study had only a limited number of participants and offered a less comprehensive approach, chapter 6 includes a comparison of the findings from both studies, allowing for a rough estimate of the development of prices and expenditure over the last decade.

3. Methodology

The researchers employ Hubert Job's Value-Added Analysis (VAA) (Job et al., 2005) as the primary methodological framework to evaluate the economic impact of the Peaks of the Balkans (PoB) hiking trail. This analysis focuses on quantifying the economic contributions generated by visitors through their expenditures across the tourism value chain. The methodology links spending categories such as accommodation, food, and transportation to broader economic effects, including income generation, job creation, and improvements to regional services and infrastructure. By using the VAA, the study provides a systematic approach to measure how the PoB Trail contributes to the local economies of Albania, Kosovo, and Montenegro.

This approach aims to estimate the economic effects of hikers for the local economies during a full four-month hiking season (July 5 through November 5). For this, data collected through surveys in 2023 is cross-calculated with electronic visitor count data from 2024.

The VAA, initially designed to measure a company's internal performance by evaluating the gap between input costs and sales revenue, has been adapted for tourism and large protected areas. In the 1990s, researchers refined the method for tourism (Küpfer & Elsasser, 2000; Rütter et al., 1996) and later applied it to Germany's protected areas. It introduced a standardized, cost-effective procedure enabling protected area managers to independently study regional economic impacts. VAA in tourism has since been implemented in eleven German national parks and serves as both an analytical and planning tool, reflecting direct and indirect value creation. The results support stakeholder communication and investment decisions and are applicable to various spatial scales, including sub-segments like hiking trails (Job, 2014). The method is applicable to different spatial scale levels. This makes it possible to apply the method to sub-segments, such as for hiking trails (Job, 2014) (see Fig. 1).

3.1. Adaptation

To tailor the VAA to the unique characteristics of the PoB trail, the study integrates specific factors associated with long-distance hiking. This involves emphasizing direct expenditure by visitors and its economic ramifications while accounting for the trail's geographical, logistical, and operational aspects. The adapted methodology is designed to address the challenges of assessing tourism in a transnational trail setting and ensures that the results can be extrapolated to similar hiking destinations. Job's standardised procedure for national parks is originally based on three data collection instruments plus the fourth and final step, the sector-specific Cost-Structure Analysis which determines the economic impact. Following the inductive refinement of the method, the four steps have been adjusted and merged into three (Fig. 2).

(1) Digital counting of visitors between Valbonë and Theth to determine the basic population

Firstly, the random counting has been updated to a digital counting via a sensor. This allows the researchers to have precise numbers for the whole season - rather than a sample-based extrapolation, actual counting data over the entire study period is taken as a basis.

(2) Long digital survey

The conflation of four to three steps in the overall adaptation is a result of combining flash interviews with long interviews. The reason is that the feasibility of flash interviews over the whole summer season proved to be difficult and would not correspond to a simple and cost efficient execution of the methodology. For example, not all stages of the PoB trail can be easily reached and also in terms of sustainable execution, frequent travel to and from the trail poses a problem. In order to be

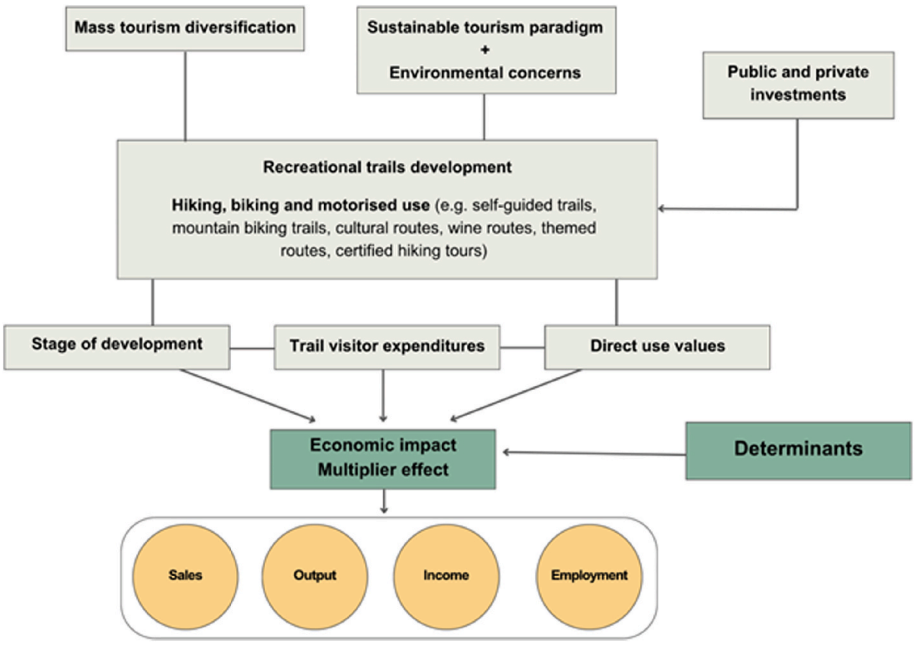

Fig. 1. Own presentation based on Lukoseviciute et al., 2022.

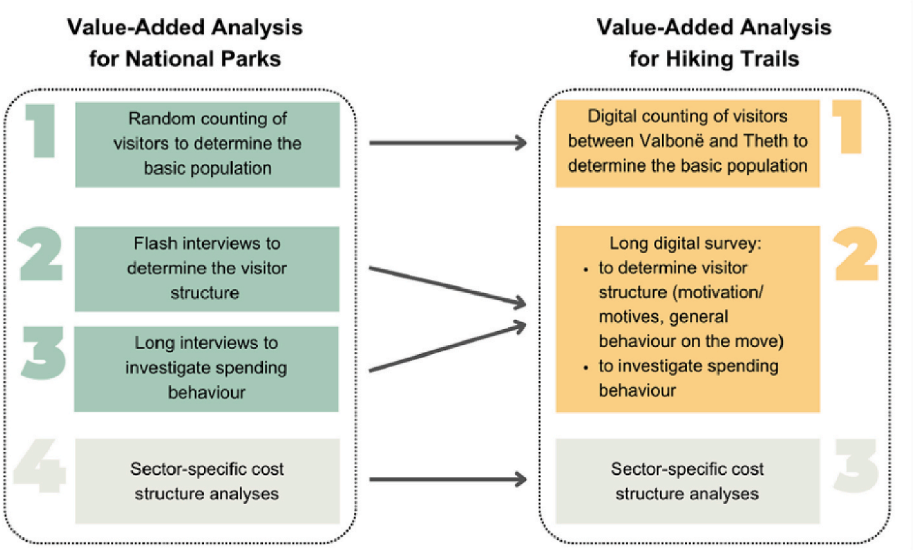

Fig. 2. The adaptation of the Value-Added Analysis.

able to draw comparable data on visitor structure and spending behaviour for the entire season, long quantitative interviews were made available throughout the entire summer season of 2023 and investigated the daily expenditure per capita and day as well as the hiker's average spending structure.

(3) Sector-specific Cost-Structure Analysis

The third step of the Value-Added Analysis for hiking trails is the sector-specific Cost-Structure.

Analysis. The six calculation steps determine the economic effects by using the within the previous steps determined. After concluding the primary surveys carried out on site such as the counting of visitors and following variables.

- Number of visitors
- Daily expenditure per capita and day
- Spending structure

To determine the economic effects, Job introduces six steps for calculation, additionally including a variety of statistical data is needed such as regional statistical records, VAT rates of the different tourism sectors, and value-added-ratios (Job, 2014; Job et al., 2005).

(1) Determination of gross turnover (incl. VAT)
(2) Determination of net turnover (gross turnover without VAT)
(3) Determination of the primary income effects
(4) Determination of the secondary income effects
(5) Determination of the total income effects (sum of first and second turnover level income effects)
(6) Determination of the employment effects.

The statistical data needed for the calculations proposed by Job are retrieved from the literature and detailed in chapter 5.

4. Data collection

The study's data collection process is based on a dual approach combining quantitative visitor counting and detailed expenditure surveys. Visitor numbers were measured using a digital sensor[1] to achieve accurate and reliable results. Simultaneously, a comprehensive quantitative survey collected data on hikers' expenditures, demographics, motivations, and travel behavior. The combination of these methods enabled the researchers to create a robust dataset that captures the economic dynamics associated with the PoB trail.

4.1. Sensor-based visitor counting

Sensor-based visitor counting formed a critical component of the methodology. Because of bureaucratic hurdles and delivery delays, a complete visitor count for the entire 2023 summer season could not be obtained, even though the surveys had been conducted in this period. In order to increase the reliability of the data and make the estimates more precise, the sensor was installed for the entire 2024 summer season, from 5 July to 5 November.

The digital sensor was installed along a key section of the trail, the stage between Valbonë and Theth, to monitor hiker traffic. Fig. 3 shows the position of the sensor at the pass of the stage. This position was chosen deliberately as this section of the trail is one of the most frequented along the trail. While by no means all hikers walk the entire circuit of the PoB, this stage is rarely skipped according to local mountain guides and tour operators. In this way, a complete count could be approximately achieved with just one sensor. The sensor recorded real-time data on trail usage allowing for a precise estimate of visitor numbers. While the manufacturer claims an error margin of no more than ±5 %,[2] the presence of locals using the trail for non-leisure purposes as well as the presence of guides must be taken into consideration. An overcount of approximately 20 % is therefore assumed and taken into account in all calculations (see chapter 5). The counting of visitors to determine the basic population is the first part of the data basis for the VAA and addresses the first research question.

4.2. Quantitative survey

In addition to visitor counting, a quantitative survey was conducted with hikers to gather detailed information about their expenditures, demographics, and travel behavior during the summer of 2023. The survey focused on expenditure categories such as accommodation, food, guiding services, transportation, and other expenses, enabling an accurate calculation of average daily spending per hiker. Valuable insights into the motivations and preferences of hikers were also gained, contributing to a deeper understanding of how their spending behaviors impact the regional economyThis data was critical in linking visitor numbers to economic outcomes and validating the findings of VAA.

The survey was conducted in the form of an online questionnaire,[3] implemented with the digital survey tool QuestionPro. Survey responses were collected from July 1 to November 15, 2023. 2500 flyers with a QR code and link to the online questionnaire were printed and displayed in accommodation, restaurants, cafés and tourist information centers along the trail to promote participation. Between July 3 and 21, two researchers visited the field and proactively asked hikers on the trail to self-complete the questionnaire. In addition, hikers who were on the PoB Trail in 2023 were invited to participate via several thematically linked Instagram channels and a Facebook group. Of the 222 hikers who answered the questionnaire, 189 indicated that they had hiked the Valbona-Theth section and thus met the inclusion criteria. Among them, 163 completed the questionnaire in full.

By integrating sensor-based visitor counting with comprehensive survey data, the study developed a robust and replicable methodology to evaluate the economic impact of the PoB trail.

5. Results

5.1. Counting of visitors

From July 5th to November 5th, 2024, the counter recorded 53,844 total crossings: 32,919 hikers traveling from Valbona to Theth, and 20,925 traveling in the opposite direction. Adjusting for a 20 % margin of error (to exclude animals and locals passing through), the total count is reduced to 43,075 hikers, with 26,335 on the Valbona-Theth route and 16,740 on the Theth-Valbona route.

5.2. Expenditures

The demographic analysis of the survey sample reveals a relatively homogeneous age structure, with most individuals falling within the 26–35 years age range. In terms of income, the majority of hikers earn between EUR 20,000 and EUR 40,000 annually. The median income suggests that at least half of the hikers earn within this range or less, while a small number earn over EUR 100,000. Gender distribution is balanced, with no significant disparities between male and female participants. When analyzing nationality, the hikers come from a diverse range of 31 different countries. Notably, Germany represents the largest share with 25 %, followed by the Netherlands (14 %) and Belgium (9 %). This diversity highlights the international appeal of the PoB trail. Regarding professional status, most respondents are employees.

Regarding the average expenditures, the following results could be obtained.

Accommodation (average spending per night: EUR 28.25, Fig. 4) and guiding services (average spending per day: EUR 5.83, Fig. 7) display the highest variability with a few expensive options increasing the average, while food (average spending per day: EUR 14.60, Fig.1 5) and groceries (average spending per day: EUR 3.93 per day, Fig. 6) are more consistent. Other expenses are generally of little significance (Fig. 8).

Hikers on this trail typically spend an average of EUR 73.93 per day. Their overall spending during their entire stay on the trail averages around EUR 364.63, with half of the hikers spending less than EUR 345 and the other half spending more.The wide range of spending, from a low of EUR 95 to a high of EUR 845, shows that hikers have very different spending habits. It's important to note that the length of a hiker's stay significantly affects how much they spend. The longer they stay on the trail, the more they will generally spend.

5.3. Calculation

To calculate the economic impact of the hiking trail in the PoB region and to finalise the last step of the VAA, the following variables are required: visiting days (visitor count multiplied with average visiting days ≈ 344,600), daily expenditure per capita (EUR 73.93), and the expenditure structure, which includes accommodation (EUR 28.25), food and beverages (EUR 14.60), groceries (EUR 3.93), and other expenses (EUR 1.38).

Additionally, the average VAT rate from the three countries (8.33 %), average value-added ratios (primary: 54.49 %; secondary: 33.40 %), and the average regional income (EUR 11,811 annually) are factored into the calculation (see Table 2).

Using Job's six-step calculation process, the gross annual turnover

[1] The electronic counter used on the PoB trail is a "Nature Post Evo" by Eco-Counter.

[2] The manufacturer-claimed error margin was confirmed for non-freezing conditions in a 2014 study (Andersen et al., 2014).

[3] Annex 1 contains the complete questionnaire.

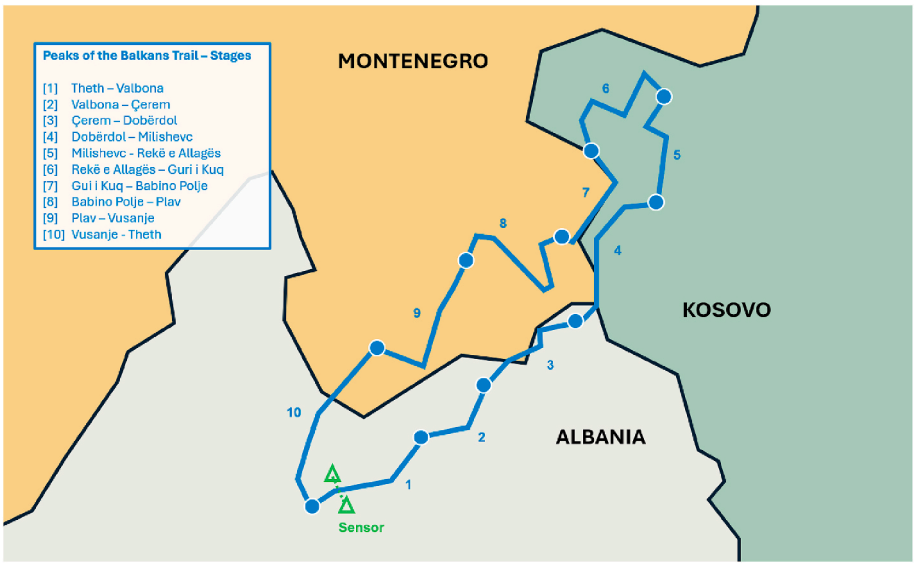

Fig. 3. Schematic map of the PoB Trail and placement of the visitor counter; based on Bauer, 2024.

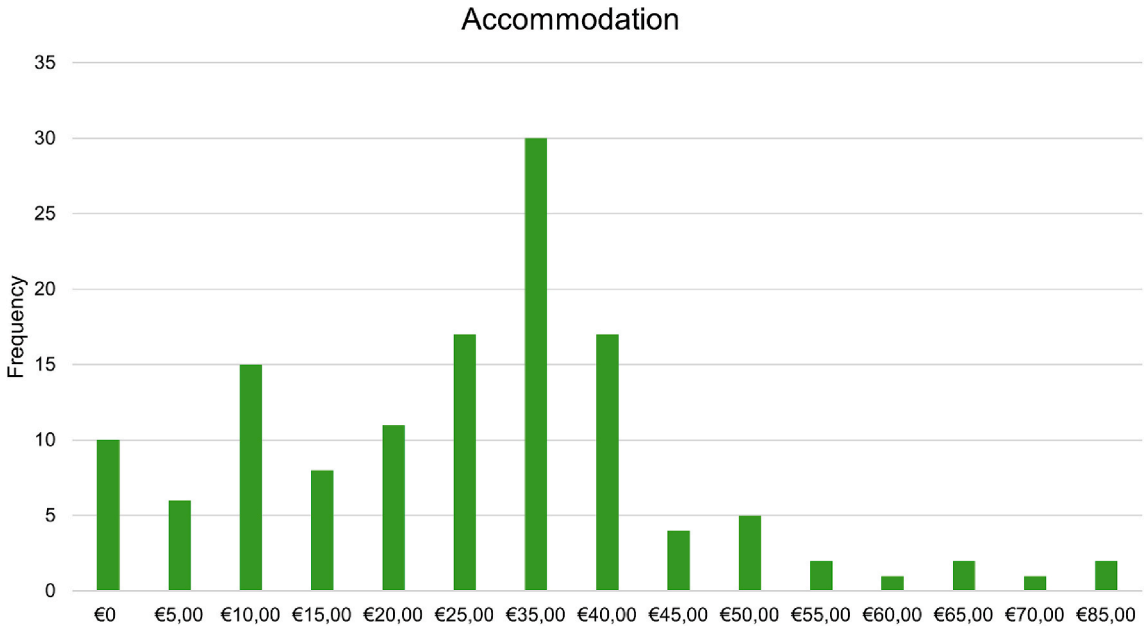

Fig. 4. Hikers' expenditure on accommodation per night on the PoB Trail.

through PoB hikers can be estimated at EUR 25.48 million. Taking into account the average value-added-ratios, primary income effects of EUR 12.73 million and secondary income effects of EUR 3.44 million can be estimated, totaling at overall income effects of an estimated EUR 16.28 million. Based on the average annual earnings in the three countries, this results in an employment potential of 1380 full-time equivalents through hiking tourism along the PoB Trail (see Table 3).

6. Discussions

An examination of the economic contribution of various expenditure categories reveals lodging and guiding services as the most variable cost components, with a few expensive options raising the average. It implies while there are affordable options, premium services are available to hikers with higher spending levels, allowing for prospects for revenue diversification in the tourism sector. In contrast, food and grocery expenses remain relatively stable, indicating local restaurants, markets, and small vendors benefit from consistent spending patterns by hikers.

The range of hiker spending reveals diverse preferences and financial priorities, influencing the choice of overnight stays. Some hikers prioritize comfort, opting for higher-priced, more sophisticated accommodations, while others seek affordability, choosing simpler, budget-friendly lodging. Given that accommodation accounts for 38 % of total hiker expenditure, it becomes a critical factor in the economic success of the PoB region. The essence of rural tourism, defined by nature experiences, agricultural connections, and a rustic lifestyle, traditionally favors simpler accommodations. However, upscale lodging options appear to be desired by a portion of the target group and should be expanded in order to exploit economic added value to a greater extent and in particular to attract those travelers who make an above-average contribution to local value creation.

For local businesses, these spending patterns emphasize the importance of offering a range of price points to attract different customer segments. Accommodation providers can capitalize on premium options

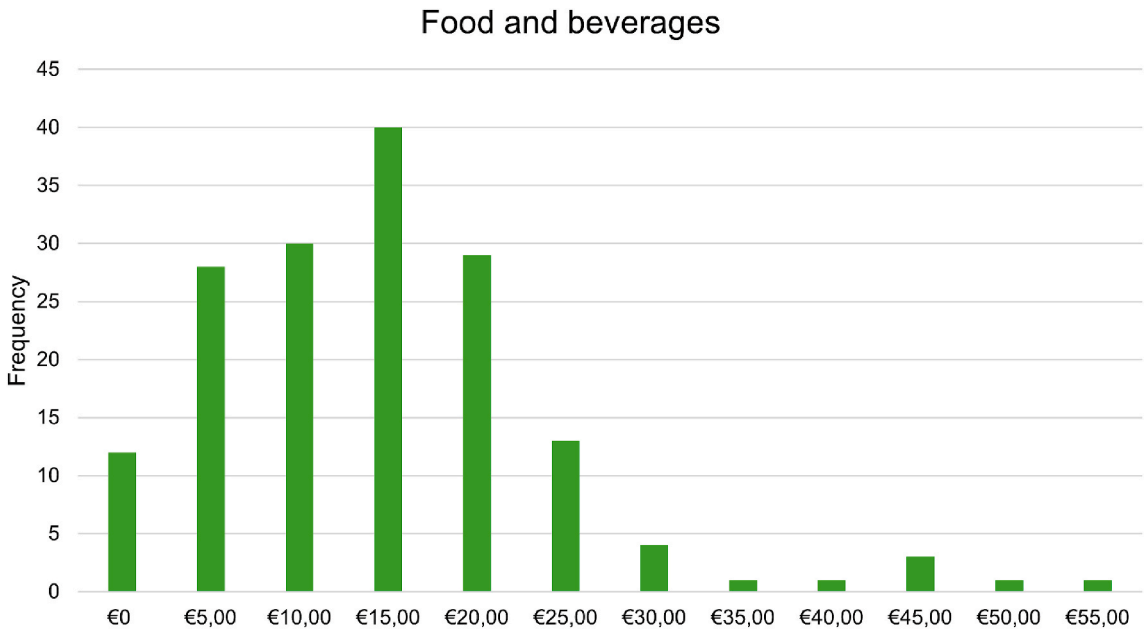

Fig. 5. Hikers' daily expenditure on food and beverages on the PoB Trail.

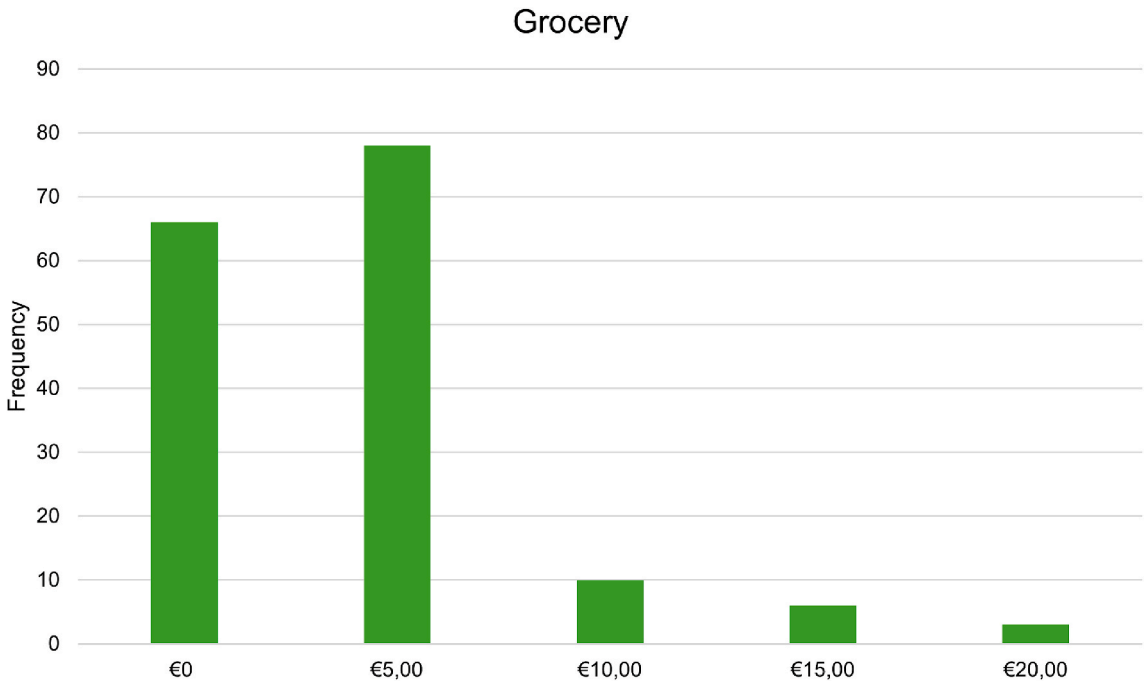

Fig. 6. Hikers' daily expenditure on groceries on the PoB Trail.

while maintaining affordability for budget-conscious travelers. Similarly, guiding services, though not utilized by all hikers, represent a valuable revenue stream for local guides and tour operators, encouraging skill development and job opportunities in the region.

From a tourism and marketing perspective, the data suggests opportunities to promote high-value services such as guided experiences, premium lodging, and tailored food offerings. Additionally, the minimal transportation expenses highlight the self-sufficient nature of hikers, reinforcing the need to market the trail as an accessible, nature-immersive experience. By leveraging these insights, regional tourism strategies can be refined to enhance visitor experiences, support local businesses, and maximize the economic impact of hiking tourism in the area.

Table 4 presents a comparison between the 2023/2024 results and the findings of the Mascontour study from 2014 (Mascontour, 2016). It is essential to recognize that these figures provide only a general indication of the region's development. Particularly noteworthy are the "accommodation expenses," which increased by 58 %, and the "daily expenses," which increased by 81 %. These increases align with the growth of the tourism sector in Kosovo, Albania, and Montenegro, positively impacting the local economy and the overall economic impact in the region. The higher expenses for accommodation could indicate an improvement in the quality of available lodging, leading to increased revenue, which, in turn, can be reinvested in further quality

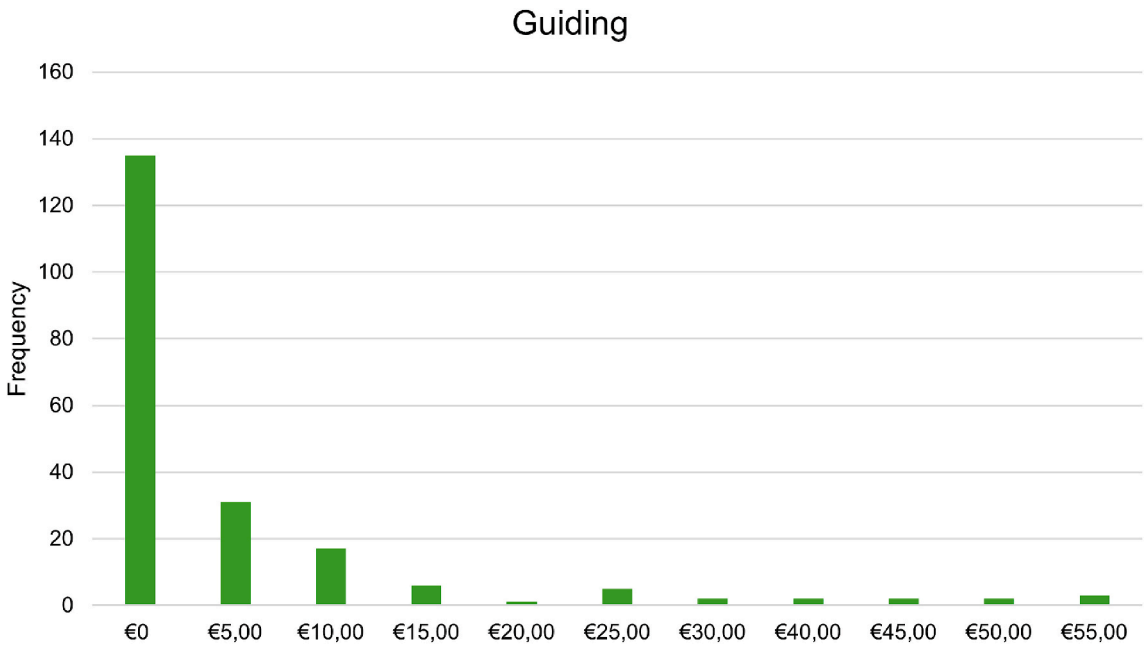

Fig. 7. Hikers' daily expenditure on guiding on the PoB Trail.

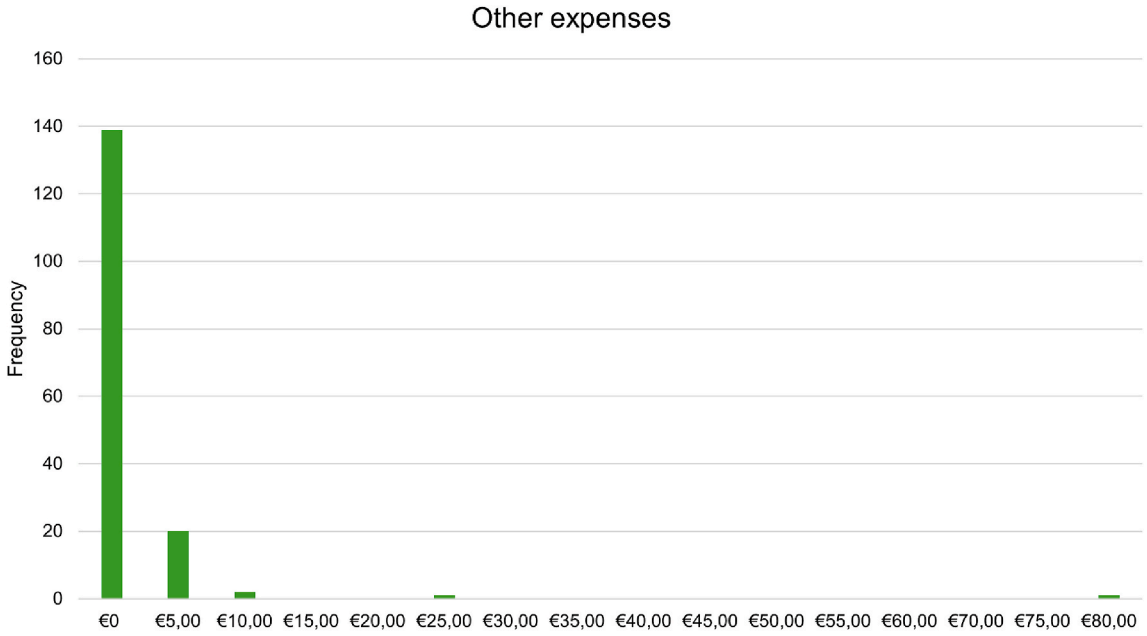

Fig. 8. Hikers' daily expenditure on other expenses on the PoB Trail.

enhancements.

The significant price increases can also be attributed to inflationary trends from 2014 to 2023. During this period, inflation rates in Albania, Montenegro, and Kosovo have fluctuated due to various economic factors, including global market trends, energy price volatility, and post-pandemic economic recovery. Albania experienced notable inflationary pressures, particularly from 2021 onwards, with rising costs in food, energy, and services (Sejko, G. 2023). The country experienced an average of 2,5 % inflation between 2014 and 2023 (Statista, 2024). Similarly, Montenegro saw considerable price increases, driven by external economic dependencies and rising import costs. In 2023, Montenegro recorded an average inflation rate of approximately 8,6 %. (Montenegro Statistical Office, 2023). Kosovo, while experiencing relatively lower inflation rates, still faced steady price growth in key consumer sectors, including tourism-related services. Between 2014 and 2023, Kosovo had an average annual inflation rate of approximately 3.5 %. During this period, the annual inflation rates fluctuated significantly from 0.2 % to 11,6 % (Salopiata et al., 2023). To sum it up, the average inflation rate during the discussed time span in Albania, Montenegro and Kosovo together results in an average of 4.87 %.

These inflationary trends have directly influenced the cost structure of tourism-related expenses. Accommodation providers have had to adjust their pricing to counteract increased operational costs, such as higher wages, energy prices, and food costs. Similarly, daily expenditures, including food, transport, and guiding services, have risen as businesses in the tourism sector adapt to the changing economic environment. The observed 81 % increase in daily expenses reflects not only higher demand and tourism development but also the macroeconomic

Table 2
Variables and data sources for the calculation of economic impacts.

Variable	Key figure	Obtained from
Visiting days	344.600 days	Sensor-based visitor counting in 2024
Daily expenditure per capita	Ø EUR 73.93	Quantitative survey in 2023
Average tourism VAT rate	Ø 8.33 %	Albania: 10 % Kosovo: 8 % Montenegro: 7 % (Albertins, 2023)
Average Value-added ratios of service sector (first level)	Ø 54.49 %	Albania: 47.29 % Kosovo: 45.48 % Montenegro: 70.7 % (ILOSTAT Department of Statistics, nd)
Average Value-added ratios of service sector (second level)	Ø 33.44 %	Albania: 21.39 % (Drejtoria e Pergjithshme e Tatimeve, n.d) Kosovo: 45.48 % Montenegro: unknown (ILOSTAT Department of Statistics, nd)
Average regional income per year (in EUR)	Ø EUR 11,811	Albania: USD 12,852 (CEIC Data, 2024a) Kosovo: USD 8928 (CEIC Data, 2024b) Montenegro: USD 15,072 (CEIC Data, 2024c)

Table 3
Calculated annual economic effects of the PoB Trail.

Indicators	Calculations
(1) Determination of gross turnover	Volume of demand x daily expenditure = gross turnover Total estimated expenditure per summer season: 344,600 visiting days x EUR 73.93 ≈ EUR 25.48 million
(2) Determination of net turnover	Gross turnover - average VAT rate = net turnover Estimated primary income effect: EUR 25.48 million - EUR 2.12 million ≈ EUR 23.36 millionen
(3) Determination of primary income effects	Net turnover x value added ratio = primary income effects Estimated primary income effect: EUR 23.36 million x 54.4 % ≈ EUR 12.73 million
(4) Determination of secondary income effects	(Net turnover - primary income effects) x value added ratio = secondary income effects Estimated secondary income effect: (EUR 23.36 millionen - 12.73 million) x 33.44 % ≈ EUR 3.55 million
(5) Determination of the total income effects	Primary income effects + secondary income effects = total touristic income effect Estimated total income effect: EUR 12.73 million + EUR 3.55 million ≈ EUR 16.28 million
(6) Determination of the employment effects	Total touristic income effect/average primary income per person = potential employment effect Potential employment effect: EUR 16.28 million/EUR 11.8 k ≈ 1380 full-time job equivalents

impact of inflation on consumer prices in the region.

The economic impact analysis of the PoB Trail across Kosovo, Montenegro, and Albania, based on cumulative data from the 2023 and 2024 seasons (due to differing survey and counting periods), highlights its significant contribution to the local economy. With total gross sales of EUR 25.48 million annually, the hiking trail generates direct and indirect income, supporting businesses and employment in the region. Primary income effects of EUR 12.73 million and secondary income effects of EUR 3.55 million make for an estimated total income effect of EUR 16.28 million for local stakeholders. This is the equivalent of 1380 full-time employments based on average regional income.

Table 4
Comparison Mascontour study 2014 and PoB survey from 2023.

Average …	2014	2023
Duration of stay	5 days (n = 77)	8 days (n = 189)
Self-organised	64 % (n = 76)	48 % (n = 182)
Packaged tour guests	36 % (n = 67)	40 % (n = 182)
Daily expenses	EUR 40.85 (n = 70)	EUR 73.93 (n = 163)
Accommodation expenses	EUR 17.90 (n = 70)	EUR 28.25 (n = 163)
Catering expenses	EUR 8.95 (n = 70)	EUR 14.60 (n = 163)
Transport	EUR 6.96 (n = 70)	–
Guiding services	EUR 3.25 (n = 70)	EUR 5.83 (n = 163)

However, while the economic benefits are evident, it is essential to ensure a fair distribution of these gains among local communities and businesses across all three countries. The PoB trail spans multiple regions with varying economic structures and levels of tourism development. If income is concentrated in a few key hubs, such as Theth, Valbonë, or Plav, smaller communities along the trail may not fully benefit from the increasing tourism revenue. Sustainable development strategies should focus on equitable growth, ensuring that businesses of all sizes, including local guesthouses, guides, and suppliers, receive adequate support and visibility.

Furthermore, fostering cross-border collaboration between Kosovo, Montenegro, and Albania can enhance regional tourism competitiveness while preventing economic disparities. Strategic investments in foundational infrastructure, fostering local entrepreneurial ventures, and implementing comprehensive training programs for tourism service providers can significantly enhance the equitable distribution of economic benefits derived from tourism activities. Ultimately, while the PoB trail drives positive economic change, strategic planning is necessary to ensure that all stakeholders, particularly local communities, can reap the rewards of sustainable hiking tourism.

7. Limitations

Although the study provides valuable insights into the economic impact of the PoB, several limitations should be acknowledged that affect the comprehensiveness and generalisability of the findings. These limitations include temporal constraints, methodological challenges, and contextual nuances specific to the trail's distinctive setting.

A key limitation concerns the temporal inconsistencies in data collection. While the quantitative survey was conducted in the summer of 2023, a complete count of visitors could only be completed over the 2024 hiking season. Hence, the study does not provide an accurate analysis of one particular hiking season but rather the average annual economic effects based on accumulated data from 2023 to 2024.

While this temporal mismatch limits the ability to capture season-specific dynamics, the combination of the two datasets offers a pragmatic solution for estimating average annual impacts. The trail infrastructure, route configuration, and scope of tourism services are assumed to have remained largely unchanged between 2023 and 2024, and the consistent use of the same trail segment for both survey distribution and visitor counting supports the internal coherence of the data. However, because the two datasets reflect different timeframes, there is an inherent risk that shifts in visitor composition, travel motivations, or spending behavior—however subtle—may not be fully captured. These discrepancies introduce a degree of uncertainty into the economic estimates and highlight the need for caution when interpreting results as representative of any single year.

Additionally, the reliance on sensors for visitor counting presented both logistical and methodological challenges. While the sensor provided reliable data for a specific segment of the trail, it was only installed in a key area such as Valbonë and Theth. This selective placement may have excluded hikers who used alternative routes or bypassed the monitored section. Consequently, the total visitor numbers could be underestimated, impacting the overall economic impact estimates.

While the use of a single digital sensor may appear limited, the chosen placement between Valbonë and Theth is strategically significant. According to anecdotal interviews with local guides and tour operators, this section is traversed by the vast majority of hikers – whether completing the full loop or only partial segments – making it a reliable proxy for overall trail usage. Although the PoB Trail has multiple ingress and egress points (approximately 6–8 depending on route configurations), the Valbonë-Theth segment is the most consistently traveled, and is frequently used to represent peak trail usage. This rationale underpins the use of one sensor to estimate overall trail traffic.

Similarly, the quantitative surveys relied on self-reported expenditure data provided by hikers after their trips, which introduces potential sources of error such as recall bias, estimation inaccuracies, and selective memory. Respondents may forget specific costs, round figures for convenience, or unintentionally omit certain categories of spending, particularly for incidental or cash-based transactions. While self-reported data is a widely accepted method in tourism research and remains the most practical approach in remote or logistically challenging settings like the PoB Trail, it inevitably limits the precision of the expenditure estimates and may contribute to under- or over-reporting in certain categories.

Another significant limitation relates to the adaptability of the VAA methodology for trail destinations. While this approach has been effectively applied to assess economic impacts in other tourism contexts, its application to a transnational, long-distance hiking trail like the PoB presented unique challenges. Such trails involve diverse stakeholders, varying levels of infrastructure, and differing degrees of economic integration across Albania, Kosovo, and Montenegro. The methodology, which was initially designed for more contained tourism destinations or protected areas, required considerable adaptation to address the dynamic and fragmented nature of a trail environment. As a result, certain economic contributions, particularly indirect and induced effects, may not have been fully captured within the adapted framework.

Furthermore, the study's focus on direct economic impacts excludes several important secondary dimensions, such as induced effects and broader socio-economic spillovers. This narrowing of scope was necessitated by limited availability of fine-grained regional data across the three countries, as well as the challenges of attributing indirect outcomes in a transnational trail setting. To approximate economic effects, the analysis draws on national averages for variables such as VAT rates, value-added ratios, and income levels. While this approach is grounded in established methodologies and offers a practical solution for data-scarce contexts, it inevitably introduces a degree of imprecision into the estimates. The use of national-level indicators may mask important regional disparities—especially between more developed and more remote segments of the trail—and reduces the ability to capture the full economic potential of trail-based tourism. Future studies with access to more localized economic data could refine these estimates and provide a more nuanced understanding of the trail's long-term value creation.

Finally, the comparison of the Mascontour study from 2014 and the findings presented in this study is only of limited significance, as there are major differences in terms of methodology, survey technique, sample size and scope of the research field.

8. Conclusion

A little over a decade after its opening, the PoB Trail and the corresponding tourism activities appear to be a significant contributor to local economies in rural mountain regions of Albania, Kosovo, and Montenegro. Despite some methodological challenges, Job's value-added analysis could be used as a clear calculation model for a well-founded estimation of the economic effects of the PoB Trail. The basis for this is the proposed definitional categorisation as a long-distance trail destination in the sense of established destination definitions as well as a comprehensive adaptation of Job's methodology for the present context.

The case of the PoB Trail proves that, particularly in the context of emerging destinations, hiking tourism and investments in trail infrastructure can have significant positive effects on local communities. Estimated total income effects of over 16 million Euros, an equivalent of over 1300 full-time job equivalents showcase a successful model for rural economic development. However, in view of these figures, it remains questionable whether this can actually be considered a diversification of local income sources. The risk of one-sided dependence on tourism and possibly negative effects of overtourism exists - especially in the context of a strong increase in and broader demographic demand for outdoor recreation in the post-pandemic Anthropocene.

Beyond these economic measures, a redefinition of the PoB Trail as a destination has taken place. Along the trail, the region operates as a coherent entity managed and marketed predominantly by local stakeholders, despite the absence of a unified tourism strategy across Albania, Kosovo, and Montenegro. Characterized as rural tourism, the trail emphasizes cultural exchange through local guest house stays, traditional cuisine, and immersion in mountain landscapes rather than historical attractions. While this approach fosters sustainable development and community involvement, it also requires concerted efforts to improve data availability and strategic planning across all three countries.

Moreover, cross-border collaboration emerges as a central theme, as demonstrated by the PoB trail, which traverses three countries with distinct economic conditions. This example highlights how coordinated efforts can lead to a cohesive tourism product, benefiting from consistent data collection and unified marketing strategies. Similar cross-regional or international trails can adopt a comparable integrated approach, thereby reinforcing cooperation and standardizing data-gathering processes.

Finally, tailoring to local contexts remains essential, as each destination possesses unique cultural, ecological, and economic attributes. By prioritizing local stakeholder involvement, rural tourism initiatives can effectively preserve cultural heritage, diversify income sources, and enhance resilience against external economic pressures. This contextual adaptation ensures the approach captures economic potential and sustains the social and environmental fabric of the destination in question.

The PoB Trail's resurgence in the post-pandemic Anthropocene underscores a broader transformation in travel behavior. As urban populations increasingly prioritize health, sustainability, and experiential tourism (Cawood & Amiradakis, 2022), long-distance trails are poised to become critical infrastructure for rural development. The findings of this study reveal that trails like the PoB not only generate substantial income and employment but also align with the 'slow travel' ethos, where visitors seek deeper connections to place and culture. This trend is likely to endure, as the pandemic has accelerated a permanent shift toward decentralized, nature-oriented tourism. Beyond economics, the PoB serves as a means of witnessing and preserving landscapes amid anthropogenic change. As climate crises and urbanization intensify, such trails may serve as lifelines for rural communities, blending economic resilience with cultural conservation. Future research could explore how these dynamics unfold in other global contexts, particularly where trails traverse contested or climate-vulnerable regions.

In conclusion, the PoB trail exemplifies how carefully planned rural tourism can generate substantial economic benefits while preserving local culture and fostering cross-border cooperation. The adapted Value-Added Analysis provides a replicable template for other trail destinations, facilitating evidence-based policy decisions and sustainable tourism development. Local communities can use these insights to adjust pricing, improve service quality, and better target different visitor segments. Understanding inflation's impact on tourism spending also strengthens the case for public support and strategic investment in the sector.

The study contributes to a greater understanding of the geographies and mobilities of hiking in the Post-Pandemic Anthropocene by providing empirical evidence of the economic resurgence of a long-distance trail in a post-lockdown context, aligning with the broader

trend of increased interest in outdoor recreation. Furthermore, by examining hiker spending patterns and preferences, this research offers insights into the evolving mobilities of individuals seeking nature-based tourism experiences in an era marked by both environmental awareness and a renewed appreciation for outdoor activities. The findings underscore the potential of trails like the PoB to serve not only as engines for economic growth in rural regions but also as vital components of a movement heritage, connecting people to landscapes and fostering cross-cultural exchange in a world navigating the complexities of the Anthropocene.

CRediT authorship contribution statement

Simon Reuter: Writing – review & editing, Visualization, Supervision, Project administration, Investigation, Formal analysis, Conceptualization, Writing – original draft, Validation, Resources, Methodology, Funding acquisition, Data curation. **Tessa Kemmerling:** Writing – review & editing, Visualization, Resources, Investigation, Data curation, Writing – original draft, Validation, Methodology, Formal analysis, Conceptualization. **Theresa Schmalenbach:** Writing – review & editing, Visualization, Resources, Investigation, Data curation, Writing – original draft, Validation, Methodology, Formal analysis, Conceptualization. **Claudia Brözel:** Supervision, Methodology, Writing – review & editing, Project administration, Conceptualization.

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Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Simon Reuter reports that he conducted the research when he was responsible for a project to strengthen rural tourism stakeholders in the Western Balkans ("OTDI-SEE") in cooperation with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The same organisation helped develop the Peaks of the Balkans Trail back when it was first inaugurated.

Tessa Kemmerling, Theresa Schmalenbach reports financial support, administrative support, and equipment were provided by Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH - Albania. Simon Reuter reports financial support was provided by German Federal Ministry for Economic Cooperation and Development (BMZ). If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jort.2025.100928.

Tessa Kemmerling is a Junior Consultant at dwif-Consulting in Berlin, specialising in infrastructure development projects and business consulting within the tourism industry.

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With a background in sustainable tourism management and cultural studies, Simon Reuter has worked at the intersections of tourism, development cooperation, and environmental conservation for several years. A passionate hiker and mountain climber from an early age, his career has finally led him to Outdooractive, the world's leading outdoor tourism platform. He manages research and innovation partnerships with a focus on sustainable regional development, visitor management, biodiversity protection, and climate action through the use of data and technology. Simon shares his time between Quito, Berlin, and the Allgäu and would really like to own a dog someday.

Theresa Schmalenbach completed her Master's degree in Sustainable Tourism Management at Eberswalde University for Sustainable Development (HNEE) in 2024. Through work experience and scientific expertise in outdoor tourism and its economic impact in the Western Balkans, her expertise lies in regional development through sustainable tourism. She currently works as a project coordinator and supports the EU application process for HNEE, especially in the field of gender equality research in tourism. Her work combines academic research with practical application orientation and European funding acquisition in order to realise innovative, sustainable and gender equality-oriented projects in tourism.

After 25 years in a wide variety of projects in the tourism industry, Claudia Brözel decided to do a doctorate in 2010 and has been a professor of tourism economics and marketing in the Master's programme in Sustainable Tourism Management at Eberswalde University for Sustainable Development since March 2012. In her diverse projects, she works and researches future potential through digitalisation.

Data availability

Data will be made available on request.

References

Albertins, J. (2023). Montenegro BTW GIDs | lovat compliance. *Lovat Compliance*. Retrieved January 5, 2024, from https://vatcompliance.co/de/countries/montenegro-de/.

Andersen, O., Gundersen, V., Wold, L., & Stange, E. (2014). Monitoring visitors to natural areas in wintertime: Issues in counter accuracy. https://doi.org/10.1080/09669582.2013.839693.

Bauer, T. (2024). Peaks of the balkans: Long-distance hiking trail through Albania, Montenegro and Kosovo. *Outdooractive*. Retrieved March 26, 2025, from https://out.ac/3vOuqA.

Bieger, T. (2008). Destinationen und Tourismusorganisation im Tourismussystem. In T. Bieger, & P. Beritelli (Eds.), *Mangement von Destinationen* (pp. 55–92). Munich: De Gruyter Oldenbourg. https://doi.org/10.1524/9783486711127.55.

Bieger, T., & Beritelli, P. (2013). *Management von Destinationen*. Munich: De Gruyter Oldenbourg. https://doi.org/10.1524/9783486721188

Bustad, J. J., Clevenger, S. M., & Rick, O. J. C. (2022). COVID-19 and outdoor recreation in the post-anthropause. *Leisure Studies, 42*(1), 85–99. https://doi.org/10.1080/02614367.2022.2115114

Cawood, H. M., & Amiradakis, M. J. (2022). From otium to opium (and back again?): Lockdown's leisure industry, hyper-synchronisation and the philosophy of walking. *Indo-Pacific Journal of Phenomenology, 22*(1). https://doi.org/10.1080/20797222.2022.2109331

CEIC Data. (2024a). Albania monthly earnings. Retrieved January 29, 2025, from https://www.ceicdata.com/en/indicator/albania/monthly-earnings.

CEIC Data. (2024b). Kosovo monthly earnings. Retrieved January 29, 2025, from https://www.ceicdata.com/en/indicator/kosovo/monthly-earnings.

CEIC Data. (2024c). Montenegro monthly earnings. Retrieven January 29, 2025, from: https://www.ceicdata.com/en/indicator/montenegro/monthly-earnings.

Crompton, J. L., Jeong, J. Y., & Dudensing, R. M. (2016). Sources of variation in economic impact multipliers. *Journal of Travel Research, 55*(8), 1051–1064. https://doi.org/10.1177/0047287515617298

Dredge, D., & Jenkins, J. M. (Eds.). (2007). *Tourism policy and planning*. Milton, Brisbane, Queensland: John Wiley.

Drejtoria e Pergjithshme e Tatimeve. (n.d). Value added tax. Retrieved December 15 2024, from https://www.tatime.gov.al/eng/c/5/78/91/value-added-tax.

Dwyer, L., & Kim, S. S. (2003). Tourist arrivals, tourism receipts and economic growth in Asian developing countries. *Tourism Economics, 9*(4), 353–362.

Fejza, A. (2020). Accursed Mountains impact in international freelance tourism. *International Journal of Progressive Sciences and Technologies, 23*(2), 38–46. https://doi.org/10.52155/ijpsat.v23i2.2309

Freyer, W. (2009). Tourismus: Einführung in die Fremdenverkehrsökonomie. *Oldenbourg*.

GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH. (2022). *DRV – Deutscher Reiseverband e. V. & GTAI – Germany Trade & Invest: Gesellschaft für*

Außenwirtschaft und Standortmarketing mbh. Neue Märkte – Neue Chancen: Tourismus auf dem Westbalkan. Retrieved October 1, 2023, from https://www.giz.de/de/downloads/giz2022-de-tourismus-neue-m%C3%A4rkte-barrierearm.pdf.
Godde, P. M., Price, M. F., & Zimmermann, F. M. (1999). Tourism and development in mountain regions. In *CABI eBooks*. https://doi.org/10.1079/9780851993911.0000
Hall, C. M., & Higham, J. (2005). *Tourism and economic development: A geographical perspective*. Routledge.
Icoz, O., & Icoz, O. (2019). The economic impact of tourism. In D. Gursoy, & R. Nunkoo (Eds.), *The routledge handbook of tourism impacts* (pp. 95–108). Oxon: Routledge.
ILOSTAT Department of Statistics. (n.d.). Data tools to find and download labour statistics - ILOSTAT. ILOSTAT. Retrieved January 3, 2024, from https://ilostat.ilo.org/data/.
Job, H. (2014). *Regionalökonomische Effekte des Nationalparks Harz. Endbericht*. Würzburg: Universität Würzburg.
Job, H., Harrer, B., Metzler, D., & Hajizadeh-Alamdary, D. (2005). Ökonomische Effekte von Großschutzgebieten – Untersuchung der Bedeutung von Großschutzgebieten für den Tourismus und die wirtschaftliche Entwicklung der Region. *Herausgeber: Bundesamt für Naturschutz. Bonn*.
Knoll, G. M. (2016). *Handbuch Wandertourismus: für Ausbildung und Praxis*. UTB.
Kogge, L., Kloppmann, E., & Reuter, S. (2021). Destination 2030 - Tourism changes people | regions | the world. *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*. https://www.giz.de/de/downloads/giz2021-en-destination-2030.pdf.
Küpfer, I., & Elsasser, H. (2000). Regionale touristische Wertschöpfungsstudien: Fallbeispiel Nationalparktourismus in der Schweiz. *Tourismus Journal, 4*(4), 433–448.
Lemelin, R. H., & Chalifour, A. (2007). The economic impact of outdoor recreation: A review. *Journal of Outdoor Recreation and Tourism, 1*(1), 1–20.
Lew, A. A., Hall, C. M., & Williams, A. M. (2024). *The wiley blackwell companion to tourism* (2nd ed.). Wiley Blackwell.
Lukoseviciute, G., Pereira, L. N., & Panagopoulos, T. (2022). The economic impact of recreational trails: A systematic literature review. *Journal of Ecotourism, 21*(4), 366–393. https://doi.org/10.1080/14724049.2022.2030745
Lundmark, L. (2005). Economic restructuring into tourism in the Swedish mountain range. *Scandinavian Journal of Hospitality and Tourism, 5*(1), 23–45. https://doi.org/10.1080/15022250510014273
Mascontour. (2016). Mountain tourism in the peaks of the Balkans Region (PoB). *Tourism Income Analysis Final Report*. Unpublished.
Matlovičová, K., Klamár, R., & Mika, M. (2015). Turistika a jej formy. https://ruj.uj.edu.pl/xmlui/handle/item/21726.
Montenegro Statistical Office. (2023). Quarterly GDP report, II Quarter 2023. Release date: 20 September 2023. Retrieved January 20, 2025, from https://monstat.org/uploads/files/BDP/2023Q2/Quarterly%20GDP%20_II%20quarter_2023.pdf.
OECD - Organisation for Economic Co-Operation and Development. (1994). Tourism strategies and rural development. Retrieved October 3, 2023, from https://www.oecd.org/industry/tourism/2755218.pdf.
Park, C., & Allaby, M. (2017). *A dictionary of environment and conservation*. Oxford University Press.
Pike, S. (2008). Destination marketing: An integrated marketing communication approach. https://eprints.qut.edu.au/9225/.
Rütter, H., Guhl, D., & Müller, H. (1996). *Wertschöpfer Tourismus: ein Leitfaden zur Berechnung der touristischen Gesamtnachfrage, Wertschöpfung und Beschäftigung in 13 pragmatischen Schritten*.
Sajn, N., & Finer, K. (2023). *Rural tourism*. EPRS (European Parliamentary Research Service. Retrieved October 3, 2023, from https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/751464/EPRS_BRI(2023)751464_EN.pdf.
Salopiata, M.-A., Haxhikadrija, D., Rexhebeqaj, V., & Sünnemann, J. (2023). The tourism sector in Kosovo: Economic relevance and potential. Retrieved January, 20, 2025, from https://www.german-economic-team.com/wp-content/uploads/2023/12/GET_KOS_PB_09_en.pdf.
Sejko, G. (2023). Address - Assembly of the Republic of Albania. Address by Mr. Gent Sejko, Governor of the Bank of Albania, to the Assembly of the Republic of Albania presenting the Annual Report of the Bank of Albania for 2022, Tirana, 6 July 2023. Retrieved January 20, 2025, from https://www.bankofalbania.org/.
Shepherd, N., & Ernsten, C. (2021). An Anthropocene journey: Walking as embodied research. In *Routledge handbook of art, science, and technology studies* (pp. 563–576). Routledge.
Shin, H., Kim, H. N., & Son, J. (2017). Measuring the economic impact of rural tourism membership on local economy: A Korean case study. *Sustainability, 9*(4), 639. https://doi.org/10.3390/su9040639
Statista. (2024). Albanien: Inflationsrate von 1990 bis 2022 und Prognosen bis 2029. Retrieved January 28, 2025, from https://de.statista.com/statistik/daten/studie/397771/umfrage/inflationsrate-in-albanien/.
Stynes, D. J. (1999). Approaches to estimating the economic impacts of tourism. *Some Examples*. https://msu.edu/course/prr/840/econimpact/pdf/ecimpvol2.pdf.
UNWTO - World Tourism Organization. (2019). *UNWTO tourism definitions*. Madrid: UNWTO. https://doi.org/10.18111/9789284420858
UNWTO - World Tourism Organization. (2023). *Rural Tourism*. from https://www.unwto.org/rural-tourism. (Accessed 1 October 2023).
WTTC - World Travel & Tourism Council. (2024). Travel & tourism economic impact 2024: Global trends. Retrieved https://wttc.org/research/economic-impact. (Accessed 24 March 2025).

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