

## THE MISCONCEPTION OF TOURISM DEVELOPMENT: ANALYZING CROWDING IN OHRID, NORTH MACEDONIA

**Biljana Petrevska<sup>1</sup>, Simona Martinoska<sup>2</sup>, Mimoza Serafimova<sup>3</sup>**

*<sup>1</sup>Full Professor, PhD, Faculty of Tourism and Business Logistics, Goce Delcev University, Stip, North Macedonia, biljana.petrevska@ugd.edu.mk*

*<sup>2</sup>Full Professor, PhD, Faculty of Tourism and Hospitality – Ohrid, St. Kliment Ohridski University - Bitola, North Macedonia, simona.martinoska@uklo.edu.mk*

*<sup>3</sup>Full Professor, PhD, Faculty of Tourism and Business Logistics, Goce Delcev University, Stip, North Macedonia, mimosa.serafimova@ugd.edu.mk*

### **Abstract**

This study aims to highlight a misconception and a flawed direction in the development of tourism in Ohrid, a transboundary World Heritage (WH) site and the most visited summer tourist destination in North Macedonia. Based on the Tourism Area Life Cycle (TALC) model, the paper particularly addresses destination's 'Development stage' (covering the period 2010-2024). By calculating standard indicators for seasonality, tourism density, and intensity, the paper reveals strong pressure from total tourist arrivals resulting in crowding during the high season (July-September). The article emphasizes that the increased visitation is misinterpreted by local tourism policymakers as 'development' when it is, in fact, a classic case of 'tourism crowding' stemming from lack of planning. Finally, the results open a discussion on the unsustainability of the destination and the potential loss of its WH designation.

***Kew words:*** *Tourism crowding, Ohrid, Seasonality, Density, Intensity.*

### **Introduction**

Ohrid is the most visited summer destination in North Macedonia and the local economy relies on tourism revenues. Being tourism dependent, provokes problems concentrated in the third quarter (July-September) as a high season,

when destination's physical and social carrying capacity are beyond the limits (Ohrid SOS, 2019; Petrevska & Collins-Kreiner, 2017, 2019; Petrevska & Martinoska, 2024). Strong and robust tourism seasonality (Petrevska & Nikolovski, 2018; Petrevska, 2015, 2022) negatively impacts destination's attractiveness and jeopardizes its natural and cultural exceptional value for which the Lake Ohrid region received UNESCO designation as a transboundary mixed World heritage (WH) site (UNESCO, 1979, 1980). The anthropogenic pressure from mass visitation particularly in terms of crowding, waste, traffic, congestion, costal exploitation, and quality of living, affects destination's sustainability prompting a recommendation to place the site on the 'List of WH in Danger', thus losing the WH status (UNESCO, 2019).

Crowding is a complex phenomenon that can be investigated from many different perspectives (Stokols, 1972). In general, tourism crowding refers to increased visitor flows during peak seasons, provoking the exceeding of tourism carrying capacity (Bertocchi et al., 2021) and an overall negative impact on the destination (Zhao et al., 2018), raising many challenges for sustainable development (Nian et al., 2023; Zhang et al., 2023).

Rather than addressing the concerns arising from the negative crowding effects of mass visitation, local policymakers are mistakenly labeling these effects as 'tourism development.' This study aims to highlight this misinterpretation and the resulting flawed direction of the development of tourism in Ohrid, by examining the following research questions (RQ):

RQ<sub>1</sub>: To what extent does tourism seasonality exist, and how do density and intensity impact the destination's tourism capacity?

RQ<sub>2</sub>: Whether the observed phenomenon is “tourism crowding” or “tourism development”?

The paper is structured in several sections. After the introduction, the research design is outlined, followed by the findings and discussion. Finally, concluding remarks are provided. Besides its theoretical contribution to the literature on tourism seasonality, density and intensity, this study offers a practical contribution. It highlights the urgent need for proactive tourism policymaking to introduce a comprehensive tourism policy to effectively cope with crowding and prevent detrimental effects on the uniqueness of the destination, thereby preserving the WH status.

### **Research design**

The research employs a two-step methodology to address the research questions. First, it utilizes only the second cycle sequence of Ohrid's Tourism Area Life Cycle (TALC) model (Butler, 1980) as presented in Petrevska and

Collins-Kreiner (2019), and upgrades it with data on total annual tourist arrivals up to 2024 (Figure 1).

Second, to quantify seasonality and crowdedness, the study calculates several standard indicators (Table 1). Seasonality is assessed using the Gini coefficient (G), while the crowdedness is evaluated through tourism density (TD) and tourism intensity (TI). Calculations for these indicators are based on monthly/quarterly data on total tourist arrivals/overnights from the State Statistical Office (online) for the period 2010-2024, which has been identified as the 'Development stage' within the Ohrid's TALC cycle (Figure 1).

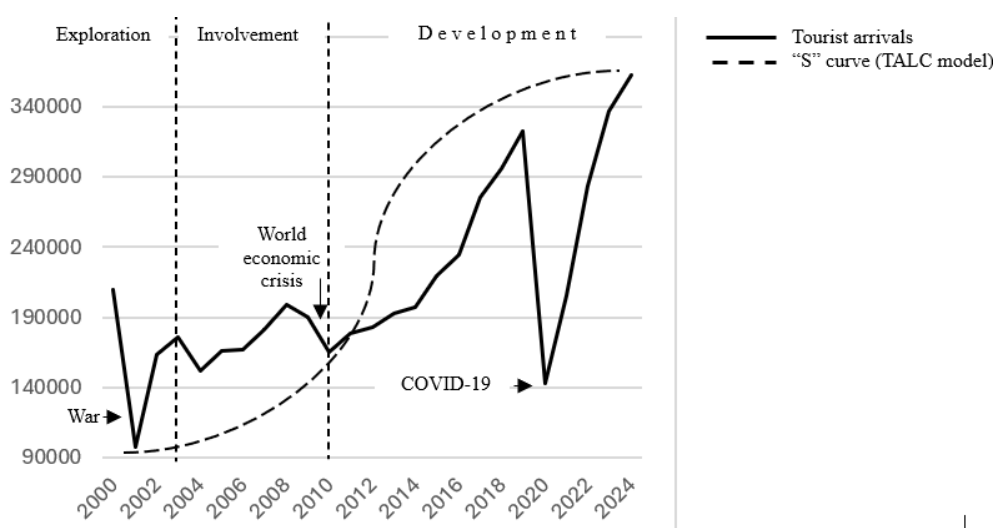


Figure 1. Ohrid's tourism area life cycle, 2000-2024

Source: Authors, adopted from Petrevska and Collins-Kreiner (2019)

The Gini coefficient is the most applied indicator for calculating seasonality patterns in tourism, with various methods for calculating (Xu, 2003). It may have a value from 0 to 1, where higher G means greater seasonality. In this study, the following equation is applied:

$$G = 2/n \sum_{i=1}^n (x_i - y_i) = 2/n[(x_1 - y_1) + (x_2 - y_2) + \dots + (x_n - y_n)] = 2/n[\sum_{i=1}^n x_i - \sum_{i=1}^n y_i] \quad (1)$$

Whereas:

n denotes number of months;

$x_i$  denotes rank of the months (1/12, 2/12, ..., 12/12); and

$y_i$  denotes cumulative relative frequency of tourist arrivals in rank by ascending order.

Crowding is calculated to reflect the concentration of tourists in space and time. TD measures the overall ‘load’ of tourists (in terms of tourist overnights) on the destination (an area of 203 km<sup>2</sup>). High tourist overnights per unit area indicate a high concentration of people, leading to crowding. TI measures the ratio of tourists to the resident population. It shows the relative impact of tourists on locals, where a high tourist-to-resident ratio indicates that tourists significantly outnumber residents, thus leading to crowding. For both TD and TI, calculations are performed for the high season i.e., the third quarter of the year (July-September). Table 1 presents summarized results on seasonality and crowding.

Table 1. Summarized results on G, TD and TI for Ohrid, 2010-2024

| Year    | G <sup>1</sup> | TD <sup>2</sup> | TI <sup>2</sup> |
|---------|----------------|-----------------|-----------------|
| 2010    | 0.489          | 3,250.020       | 2.390           |
| 2011    | 0.489          | 3,269.970       | 2.561           |
| 2012    | 0.484          | 3,209.768       | 2.561           |
| 2013    | 0.475          | 2,969.069       | 2.495           |
| 2014    | 0.445          | 2,750.680       | 2.508           |
| 2015    | 0.445          | 2,972.468       | 2.798           |
| 2016    | 0.402          | 2,902.650       | 2.823           |
| 2017    | 0.416          | 3,263.212       | 3.425           |
| 2018    | 0.407          | 3,589.783       | 3.651           |
| 2019    | 0.410          | 3,813.419       | 3.915           |
| 2020    | 0.632          | 3,018.025       | 2.576           |
| 2021    | 0.526          | 3,530.670       | 3.592           |
| 2022    | 0.428          | 3,769.384       | 4.073           |
| 2023    | 0.418          | 4,081.138       | 4.606           |
| 2024    | 0.409          | 4,295.399       | 4.930           |
| Average | 0.458          | 3,379.044       | 3.260           |

Source: Authors

Notes:

<sup>1</sup>Calculations for the year

<sup>2</sup>Calculations of the peak season (July-September)

## Findings and Discussion

When investigating a timeframe from 1956 to 2017, Petrevska and Collins-Kreiner (2019) found that Ohrid exhibits a double cycle sequence, with 1956-1990 as a period of the first S-curve, 2002-2017 as the second cycle sequence, and a transitional period in between. Figure 1 presents this second S-curve

extended to 2024, showing a classic “S” TALC curve for 2000-2024. This illustrates the evolution of the destination and the presence of exploration (2000-2003), involvement (2004-2010), and development stage (2011-2024), with a break in 2020-2022 due to the COVID-19 and post pandemic period. These stages are already argued by Petrevska and Collins-Kreiner (2019, 2020), who investigated the connection between the city’s urban context and tourism development and concluded the absence of consolidation, stagnation, and a decline/rejuvenation stage.

In this line, Figure 1 confirms this finding and further argues for the continuation of the ‘Development’ stage, indicating that the destination has reached tourism maturity. It can be easily expected that Ohrid may continue along this development trajectory, but only for a limited time, as it has exceeded its capacity. The destination has been profoundly transformed by tourism saturation, both in terms of landscape and its functional dimensions. Residential areas are rapidly interspersed with entertainment facilities, making locals highly dependent on tourism income, thus putting the focus on economic benefits while disregarding socio-cultural and environmental degradation.

A possible decline may be prolonged if the local government creates an exit strategy with ambitious, proactive planning that includes policies to guarantee sustainability. Rejuvenation cannot occur by accident (Argarwal, 2002) and the way-out is not simple to call for a reduction in tourist activity, but in identifying activities to maintain visitor arrivals with reduced pressure on the destination (Seraphin et al., 2018).

Calculations on indicators for seasonality and crowdedness are presented in Table 1. They reveal that Ohrid is facing with strong fluctuations with considerable concentration in the third quarter (July-September), and relatively low numbers during the rest of the year.

The mean value of G coefficient (0.458) is relatively high pointing to a large amount of uneven distribution and a significant degree of tourism seasonality in the destination. This is aligned with Petrevska (2022) on high seasonality in Ohrid, opposite to extremely low seasonality for Skopje (the capital) and relatively very modest seasonality for North Macedonia overall (Petrevska & Nikolovski, 2018). Too many visitors, aggravated by seasonality, as in the case of Ohrid, is the main cause for negative tourism impact known as visitor ‘overkill’ (Rosenow & Pulsipher, 1979).

Additionally, results regarding TD and TI reveal overuse of tourism capacity of the destination during the high season. On average, during July-September, there are almost 3,379 overnights per km<sup>2</sup> of Ohrid. This is considered a very

high density, indicating significant tourism pressure. So, Ohrid is experiencing a large volume of tourist activity during the high season, implying a high probability of crowding.

Furthermore, the number of tourists far exceeds the number of residents, showing that tourism is highly important to the local economy of Ohrid, implying a tourism-based economy (Garay & Cànoves, 2011). During the high season, there are, on average, approximately 3.26 tourists for every resident in the destination. This indicates a high degree of tourism penetration and a very significant tourist presence, since tourists outnumber residents by a considerable margin. Such high tourism intensity leads to social, economic and environmental impacts, highlighting the importance of sustainable tourism management to ensure that tourism benefits both tourists and residents. The presence of crowding pressures local services, quality of living, and results in the degradation of resources and infrastructure. This aligns with the findings of Petrevska et al., (2023) who elaborate on the disrupted quality of living, and Petrevska and Martinoska (2024) who argue for environmental degradation, strain on infrastructure, loss of cultural authenticity, and excessive pressure on the local community due to mass visitation to events.

Finally, the mean growth of tourism demand (in terms of arrivals) during the high season of the ‘Development’ stage (2010-2024) is 5.8%. When compared to the critical 2.5% threshold identified by Romão et al. (2013), this result indicates high demand within a short period, leading to tourism crowding and poor to non-development. It means a substantial pressure and strong, sustained interest in the destination within a concentrated timeframe, confirming once again that Ohrid is in its maturing phase and still expanding. This conclusion is alarming, as it poses a risk for a continuing crowding that may further erode the uniqueness of the destination, and potentially to lead to loss of its WH status. This is a signal for a need for careful planning and management to ensure sustainable development of tourism in the destination.

## **Conclusion**

The study confirms the general misinterpretation of increased numbers in tourist arrivals being declared as tourism development of the destination. It demonstrates the presence of tourism crowding during the high season (July-September), a direct result of significant seasonality, high density and strong tourism intensity. The research highlights a lack of planning by local tourism policymakers, which leads the destination toward unsustainability and a potential loss of its WH designation.

The study applies the TALC model as a framework for analysis and a basis for investigating tourism development of Ohrid. It found a continuing of the

‘Development’ stage, pointing that the destination has reached tourism maturity. Despite having a well-defined tourism market, many hot spots are identified that need to be addressed to successfully mitigate crowding (Petrevska & Martinoska, 2024).

Calculations on standard indicators reveal intensive negative impacts on the destination's tourism capacity seriously disrupting its development. A continued rise in the numbers of visits, without strategic planning and control over the numbers, may further add to strong physical and socio-cultural pressure of the destination, jeopardizing its authenticity and uniqueness.

‘Developing’ does not stand if the focus is only on increasing accommodation and catering facilities, and new auxiliary tourist facilities. It requires complete reorientation from quantity to quality, as the constant rise in tourist flow must not be a strategic goal of tourism policymakers. Ever-increasing numbers of visitors must be replaced with sustainable increase and growth. This includes improvements in local policies and municipal regulations to manage negative tourism impacts. A lack of urban planning and uncontrolled development leads to a decline in quality of residents’ life and erodes destination’s unique character (Smith et al., 2018)

Safeguarding Ohrid's cultural and ecological values must be a priority for policymakers, who urgently need to reshape the approach and introduce a proactive planning process for responsible tourism development. The destination’s limits in terms of economic, socio-cultural and natural environment must be respected to ensure sustainable growth and development. This demands a complex and interconnected approach to establish a general framework for implementing and maintaining the principles of sustainability.

Being in the ‘Development’ stage does not necessarily mean automatically led only by mass visitation. It also presumes having a vision for responsible development, simultaneously balancing the number of tourists and their impact on destination’s future growth. Constant ignoring of recommendations for sustaining uniqueness of the destination will result in it being placed on the ‘List of WH in Danger’ (UNESCO, 2019), leading to systematic degradation and easy tourist commodification. Herein, the local government should focus on addressing the challenges posed by seasonality to reduce pressure during the third quarter of the year. As a start, tourism policymakers must establish a clear conceptual distinction and clarification: an increased number of tourists within a short period does not equate to tourism development but rather represents significant crowding and pressure on the destination.

## References

- Argarwal, S. (2002). Restructuring Seaside Tourism: The Resort Life-Cycle. *Annals of Tourism Research*, 29(1), 25-35.
- Bertocchi, D., Van der Borg, J., & Camatti, N. (2021). Tourism peaks on the three peaks: Using big data to monitor where, when and how many visitors impact the Dolomites UNESCO World Heritage site. *Rivista geografica italiana: CXXVIII*, 3, 2021, 59-81.
- Butler, R. (1980). The concept of a tourist area cycle of evolution. Implications for management of resources. *Canadian Geographer*, 24(1), 5-12.
- Garay, L., & Cànoves, G. (2011). Life cycles, stages and tourism history: The Catalonia (Spain) Experience. *Annals of Tourism Research*, 38(2), 651-671.
- Nian, S., Chen, M., Zhang, X., Li, D., & Ren, J. (2023). How outstanding universal value attractiveness and tourism crowding affect visitors' satisfaction?. *Behavioral Sciences*, 13(2), 112.
- Ohrid SOS. (2019). *World heritage on the edge – Part II: Engine of neglect*. Unpublished report. <https://ohridsos.org/ohrid-sos-self-authored-documents/>
- Petrevska, B. (2015). Effects of tourism seasonality at local level, *Scientific Annals of the “Alexandru Ioan Cuza” University of Iasy, Economic Sciences Series*, 62(2), 241-250.
- Petrevska, B. (2022). Coping with seasonality: Exploratory study of tourism in Ohrid. Fifth International Scientific Conference “Challenges of Tourism and Business Logistics in the 21<sup>st</sup> century” ISCTBL 2022, 30.4.2022, Stip, North Macedonia, 5(1), 159-167.
- Petrevska, B., & Collins-Kreiner, N. (2017). Double Life Cycle: Determining Tourism Development in Macedonia. *Journal of Tourism and Cultural Change* 15(4): 319–338.
- Petrevska, B., & Collins-Kreiner, N. (2019). From a town to an attraction: the transformation of Ohrid, North Macedonia. *Boletín de la Asociación de Geógrafos Españoles* 83(2808): 1–30.
- Petrevska, B. & Collins-Kreiner, N. (2020). Tourism development of Ohrid (North Macedonia). Conference proceedings from the 6<sup>th</sup> International conference “Geobalkanica 2020”, 12-13.05.2020, Ohrid, North Macedonia, 611-618.
- Petrevska, B., & Martinoska, S. (2024). Event (over)tourism in Ohrid (North Macedonia); Critical thinking. *UTMS Journal of Economics*, 15(2), 172-186.
- Petrevska, B., Mihalič, T., & Andreeski, C. (2023). Tourism Sustainability Model for a World Heritage Destination: The Case of Residents' Perception of Ohrid. *European Journal of Tourism Research* 34: 3408. <https://doi.org/10.54055/ejtr.v34i.2783>
- Petrevska, B., & Nikolovski, B. (2018). Level of seasonality in Macedonian tourism and strategies and policies for coping with it. 3<sup>rd</sup> International Thematic Monograph: “Modern Management Tools and Economy of Tourism Sector in Present Era”, Association of Economists and Managers of the Balkans (Belgrade, Serbia) & Faculty of Tourism and Hospitality – Ohrid, Macedonia, 17-29.
- Romão, J., Guerreiro, J. & Rodrigues, P. (2013). Regional tourism development: culture, nature, life cycle and attractiveness. *Current Issues in Tourism*, 16(6), 517-534.
- Rosenow, J. E., & Pulsipher, G. L. (1979). *Tourism the Good, the Bad, and the Ugly*. Media Productions & Marketing: Lincoln, NE, USA.



Seraphin, H., Sheeran, P. & Pilato, M. (2018). Over-tourism and the fall of Venice as a destination. *Journal of Destination Marketing & Management*, 9, 374-376.

State Statistical Office. (online). <https://stat.gov.mk> (online statistical data).

Stokols, D. (1972a). A social-psychological model of human crowding phenomena. *Journal of the American Planning Association*, 38(2), 72–83. <https://doi.org/10.1080/01944367208977409>

UNESCO. (1979). *Convention concerning the protection of the World cultural and natural heritage*, (Doc CC/-79CONF.003/13). Third session, Cairo and Luxor 22-26 October, 1979. Paris: UNESCO World Heritage Committee.

UNESCO. (1980). *Convention concerning the protection of the World cultural and natural heritage*, (Doc CC/-80CONF.016/10). Fourth session, Paris 1-5 September, 1980. Paris: UNESCO World Heritage Committee.

UNESCO. (2019). *Convention concerning the protection of the World cultural and natural heritage*, (Doc WHC/19/43.COM/18). Paris: UNESCO World Heritage Committee.

Xu, K. (2003). *How has the Literature on Gini's Index Evolved in the Past 80 Years?*, Halifax: Dalhousie University.

Zhang, C., Cheng, W., & Zhang, W. (2023). Does world heritage inscription promote regional tourism? Evidence from China. *Tourism Economics*, 29(4), 929-951.

Zhao, G., Deng, Z., Shen, J., Ryan, C., & Gong, J. (2018). Carrying capacity and its implications in a Chinese ancient village: The case of Hongcun. *Asia Pacific Journal of Tourism Research*, 23(3), 260–280. <https://doi.org/10.1080/10941665.2017.1421566>