Measuring Overtourism

Subjects: Others

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The tourism debate prior to the COVID-19 pandemic was dominated by the problems inherent in overtourism, reflecting an inadequate land management. Although publications on overtourism have grown exponentially in recent years, its scientific study still has major shortcomings, particularly with regard to measurement. With the aim of overcoming this insufficiency, we have carried out a review of the literature (using the mapping review method) and, based on its conclusions, we have drawn up a proposal to systematise the measurement of overtourism by combining several tools: indicators, surveys, interviews, and other tools linked to the Internet and social networks. The results of the research make a contribution to the expansion of the literature on the topic and may have important practical implications in formulating effective land-use policies by guiding policy makers in the management of overtourism. They could be of use in both the early detection of overtourism and the design of policies that prevent and/or detect situations of risk and that correct existing problems. This is especially relevant in the current international context to implement the effective transition to a responsible tourism model post-COVID-19.

overtourism indicators land planning

1. Introduction

Overtourism is a recent term used by academics, industry professionals, and policy makers to cover some of the problems of the pre-COVID-19 tourism model suffered by many destinations, especially in urban contexts [1][2]. In recent decades, the rapid development of ICT and globalisation have changed both ways of travelling and business models. Tourist numbers have grown exponentially, converging in certain places at certain times; this has generated land-use conflicts and situations of overcrowding which are damaging both the quality of life of the local residents and the satisfaction of tourists, as well as the environment in which it takes place [3]. UNWTO defines overtourism as “the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitors’ experiences in a negative way. It is the opposite of Responsible Tourism, which is about using tourism to make better places to live in and better places to visit” [1] (p. 4).

Although, in recent years, overtourism has become a buzzword [4], with a major growth in publications analysing it, its scientific study still suffers from some relevant shortcomings, mainly in terms of measurement [2][5][6]. Overtourism, literally an excess of tourism, has implicit quantitative aspects in its definition which should be measured in order to carry out rigorous analyses. However, most of the literature either do not include any element of measurement, or do so only partially and indirectly [7][8]. There are no widely accepted methodologies for the measurement of overtourism that allow diagnoses or comparisons between different destinations. Thus, the

following questions still remain open: What factors should be measured to approximate the existence of overtourism? What are the most appropriate tools to measure each of these factors? Is it possible to calculate limits or thresholds from which the existence of overtourism can be stated? If the factors and/or tools chosen are not adequate, mistaken conclusions could be reached. Let's observe it through an example of two of the most visited tourist cities in Spain: Madrid and Barcelona, for 2019 (2019 data are used in order to avoid distortions that COVID-19 has generated in tourism data of 2020) [9]). Considering only the number of visitors in hotel establishments, the situation in Madrid seems more serious than in Barcelona (10 and 8.5 million annual visitors, respectively). However, if these data are relativised considering the population of each city, the results change completely: the ratio of visitors per inhabitant is 5.21 in Barcelona, while, in Madrid, it is 3.05. This explains why Barcelona is one of the most cited examples of overtourism in the literature [7][8], and that there is a growing number of anti-tourist movements in the city [10]. Thus, the opinion of 61.3% of residents in Barcelona is that the admissible limit of tourists has been reached (this percentage increases to 84.1% in the most touristy neighbourhoods) [11].

This paper deals with the measurement of overtourism. In order to overcome the above-mentioned shortfall, we have set ourselves the objective of making a proposal for the systematisation of the measurement of overtourism that will be able to guide both future research work and the formulation of spatial planning policies.

In order to assess the progress made in this topic, we have carried out a review of the scientific literature using the mapping review method to determine the sources used to measure overtourism and to extract the main weaknesses and strengths of current overtourism measurement. Based on the conclusions of this review, we developed a measurement proposal to guide us along the road ahead.

Thus, a double contribution is made. Firstly, it enriches the previous literature by helping to overcome the existing shortfall in the measurement of overtourism. As far as we know, there are no works that have exhaustively analysed how overtourism has been measured or that systematise a complete proposal to measure the different dimensions of overtourism. Secondly, the conclusions of this work may have important practical implications in formulating effective land-use policies by guiding policy makers in the management of overtourism. They will be able to contribute to both the early detection of the symptoms of overtourism and the design of policies that prevent and/or detect situations of risk and that correct existing problems. All of the above are especially relevant in the current international context. The crisis caused by COVID-19 has dealt a major blow to tourism. However, the "halt" in activity and the changes in the attitudes and behaviour of tourists, stakeholders, and governments can and should be used to rethink the tourism model that is pursued in the future, avoiding the pitfalls of the past [12]. The real challenge for the post-COVID-19 era is not when tourism will return, but how it will return. Nowadays, the transition towards a responsible tourism model is no longer an option, but has become a necessity [6]. In this respect, having the right measurement tools can be decisive. Tourism research has, today more than ever, the mission of guiding this transition.

2. A Proposal for Measuring Overtourism

It can be concluded from the review carried out that the measurement of overtourism is a complex issue that has not yet been resolved in the scientific literature. However, it is an issue that cannot be ignored, since it is inherent to the term itself. Its definition implies the quantification of various aspects of tourist activity: tourists received at a destination, its growth rate and spatial–temporal distribution, impacts on residents' quality of life, and impacts on tourist satisfaction.

Given that overtourism is a complex and multi-faceted phenomenon [8], it is not possible to assess its existence or scope using a single measurement tool. Starting from the key elements of the concept of overtourism and based on the conclusions of the literature review carried out, in **Figure 1**, we propose the most appropriate type of measurement tool for the quantification of each element.

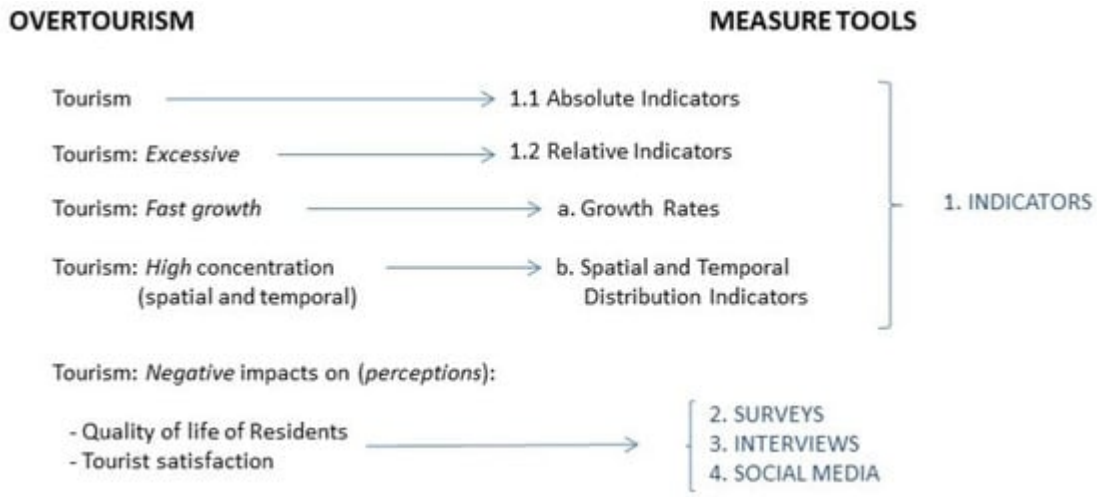

Figure 1. Key elements of overtourism and their measurement tools.

A wide range of tourism indicators can be analysed to quantify the amount of tourism a destination receives, its growth, spatial–temporal concentration, and to establish reference points with which to determine whether it is excessive. Measuring the impact on the quality of life of residents and on tourist satisfaction requires measurement tools that also allow for the quantification of subjective assessments: surveys, interviews, and tools linked to the Internet and social networks. Based on the above, we have drawn up a proposal in four phases to guide the measurement of overtourism in a particular destination (**Figure 2**).

Figure 2. Phases of overtourism measurement.

2.1. Phase 1. Quantification and Categorisation of Tourist Activity

There is a wide range of tourism indicators which, although not specifically created for the measurement of overtourism, can be used to explore some of the key aspects of this phenomenon. To this end, many institutions have created systems of tourism indicators that they publish periodically, and have produced guidance for tourist destinations in order to monitor sustainable tourism [13][14]. However, although they are a starting point, they are not sufficient to quantify the new nuances that the term overtourism implies.

Absolute tourism indicators are useful for defining and scaling the activity, but this is only the first step in order to assess whether tourism in a destination is excessive. First, a set of absolute indicators must be selected to ascertain both tourism demand and supply, as well as the basic economic macroaggregates of the activity in the destination. Given that one of the possible causes of overtourism is the rapid increase in tourists at a given time and place, it is necessary to calculate the growth rates of the absolute indicators selected and to disaggregate the data temporally and spatially. The latter is one of the main shortcomings which we have detected in the review of the literature, since most studies use only average annual data for the whole of the territory under consideration. In order to measure overtourism, seasonality must be quantified since, although the annual figures appear to be sustainable, this may not be the case if the influx of tourists is concentrated in specific periods. Similarly, although, for the territory as a whole, the data do not seem excessive, they may be so if tourists are concentrated in certain areas. Thus, it is essential to have the maximum level of spatial disaggregation in the indicators. In addition, to assess the above figures, it is necessary to break down the data by tourist typology, since the pressure that tourists can exert on the territory and the host society is very different depending on their behaviour. Tourism associated with nightlife tends to impact more negatively on the quality of life of residents than other types of tourism [15].

Nevertheless, it is not possible to establish thresholds with absolute indicators to determine the existence of overtourism, since the amount of tourism that a destination can sustain depends, among other factors, on the size and characteristics of the territory, society, and economy in which it occurs. In this way, in 2019, Bruges received a third of the tourists that arrived in Brussels, but, if these data are relativised taking into account the resident population, Bruges received 11 tourists per resident, while Brussels only three [16][17].

2.2. Phase 2. Assessment of Excess Tourism

To assess whether tourism is excessive for a particular destination, absolute tourism indicators must be related to general variables of the territory, society, and economy, i.e., the second step must be to calculate and analyse relative tourism indicators.

Relative indicators can be those of demand, supply, or economic factors, depending on the type of absolute indicator under consideration. the most frequent relative indicators for the measurement of excess tourism were classified with the aim of offering a guide with which to select the most appropriate indicators for each destination. Although there are different possibilities for relativising the absolute indicators of demand and supply, variables related to the size of the resident population or the size of the geographical area where the tourist activity takes place are most commonly used. The former refer to indicators of tourism intensity, which make it possible to approximate the pressure of tourism on the population. The latter are indicators of tourism density, which are mainly used to ascertain the pressure on the territory. The absolute economic indicators are usually relativised

using the same indicator applied to the general economy, which is useful in assessing the dependence of the economy of the area on tourism. As with absolute indicators, it is also necessary to calculate the spatial–temporal disaggregation of relative indicators. Assessing the existence of excessive tourism requires the calculation and combined analysis of relative demand, supply, and economic indicators at their different levels of disaggregation.

While establishing thresholds for relative indicators can be useful in guiding the early diagnosis of overtourism, there is no consensus on specific figures. At a theoretical level, much literature has been published on the level of tourism that a destination can withstand, most of it based on the seminal papers by Butler [18] and Doxey [19], but this has not been translated into a set of widely accepted reference points for each of the indicators mentioned. As a starting point, the risk levels estimated by McKinsey and WTTC [7] or by Peeters et al. [8] could be used, but they should be recalculated for each destination and specific situation, taking into account its spatial scales, type of tourism, and the fragility of its environment.

2.3. Phase 3. Measurement of Perceived Impacts and Attitudes towards Tourist Activity

In addition to establishing thresholds for relative indicators, it is necessary to ascertain the impact of the activity on the quality of life of residents and on tourist satisfaction. The measurement of these impacts requires different tools, as they involve subjective assessments which are not directly perceptible using the abovementioned indicators. Gössling et al. [20] advocate a sociopsychological approach to overtourism.

Although there is extensive literature on the impacts of tourist activity on quality of life (see the Uysal et al. [21] review), quantifying them and assessing the existence of overtourism from them is a complex task. In accordance with social exchange theory [22], the attitudes of residents and tourists towards the sector, and therefore their appreciation of overtourism, are influenced by their perception of the benefits and costs they derive from it. Therefore, once tourism activity in a destination has been quantified and categorised through indicators, it is necessary to ascertain the perceptions of the stakeholders in relation to these impacts, and how these can affect the objective and subjective well-being of residents and the satisfaction of tourists. The review of the literature leads us to propose as the main tools for measuring perceived impacts: surveys, interviews, and tools linked to the Internet and social networks. **Figure 3** shows a flow chart in which we have summarised the elements to be considered in order to measure the impacts perceived by residents and tourists and their attitude towards the future of the sector. These elements can be used to guide the design of measurement tools and their adaptation to specific destinations and situations.

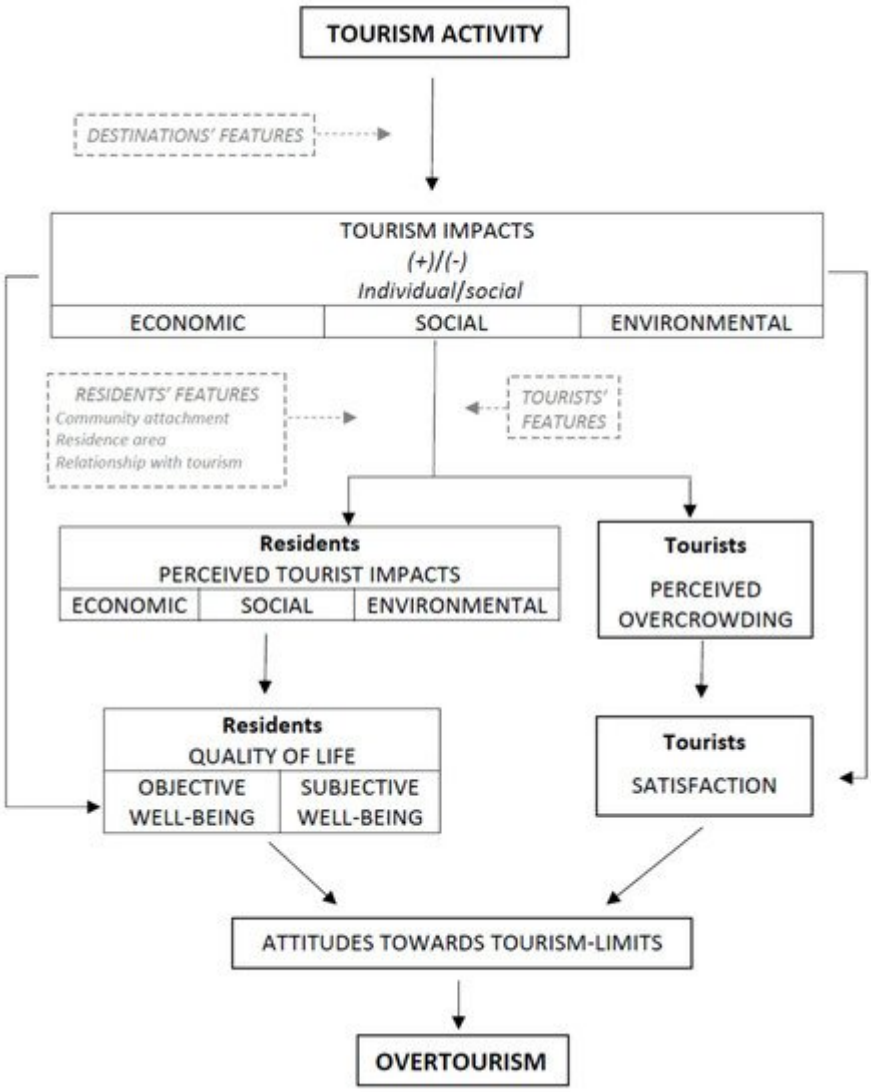

Figure 3. Measuring overtourism: perceived impacts and attitude towards the future of the sector.

If the size and composition of the sample and the questionnaire are appropriate, the surveys will provide sufficient quantitative information to identify perceptions and attitudes and to serve as an early warning mechanism for overtourism. To this end, the questionnaire must combine items on perceptions, attitudes, and opinions. We group the most frequent items to measure these aspects and include references to the studies that have used them. The items which best approximate levels of overtourism are those included in the section on attitudes and behaviour, specifically those which measure: attitudes towards future tourist development (whether or not the desirable limit has been reached and whether or not there is room for further growth), feelings towards tourism (level of annoyance or irritation), and responses (acceptance, avoidance, changes in habits).

One option is to conduct preliminary stakeholder interviews [23][24]. In addition, as social exchange theory requires, the results of the surveys of residents should be segmented according to the factors that determine the level of benefits and costs they obtain from the sector: community attachment, proximity of the place of residence to the tourist centres, or the relationship with this activity. Thus, for instance, in Barcelona, the opinion of 61.3% of residents is that the admissible limit of tourists has been reached, while this percentage increases to 84.1% in the

most touristy neighbourhoods [11]. Likewise, following Namberger et al. [25], we recommend including a section linked to possible fields of conflict in order to detect the specific aspects of tourist activity which cause negative impacts.

Additionally, measurement tools linked to the Internet and social networks allow a large amount of information to be easily collected, often in real time and for very specific locations. A larger sample can be covered and information compiled at different points in time. Therefore, it could become an effective source for periodically monitoring the development of the perception of the impacts of tourism by both tourists and residents. The main problem to date has been the processing of such voluminous information, but specific software and Big Data analysis tools are increasingly being developed to make this possible. In addition to the creation of tools linked to the Internet and specific social networks for each destination, general networks, such as TripAdvisor, Booking, or Google Trends, can be used to ascertain both tourist satisfaction and residents' attitudes. From portals such as TripAdvisor or Booking, in which the client leaves their quantitative and qualitative assessments, tourist satisfaction indicators can be obtained. From Google Trends, statistics on the most searched-for terms can be monitored, and problems detected by tourists and/or residents can be identified. The analysis of comments on Facebook, Twitter, or Instagram [26] can also be used.

2.4. Phase 4. Analysis of Results and Assessment of the Overtourism Situation

Finally, to assess the existence and scope of overtourism, once the measurement tools have been adapted, they must be analysed. Although the establishment of thresholds for indicators may be useful, it is not sufficient. Each situation is unique and, therefore, the assessment of overtourism requires detailed knowledge of each destination. In this sense, the key lies in the combination of quantitative tools with others of a qualitative nature.

Interviews allow in-depth and qualified information to be obtained about the opinion of the most significant stakeholders in a particular territory. Therefore, it is advisable to use their assessments, both to adapt the quantitative tools to the particularities of each destination and to interpret the information obtained from them. To this end, individual interviews and discussion groups can be a useful tool for reaching a consensus on the limits of tourism activity. Interviews should be carried out based on a validated protocol; the one used in Koens et al. [2] could serve as a guide. As Akbulut and Ekin [27] suggest, it may be relevant to include in the interviews and/or surveys a final question in which the participant assesses the overall situation of the tourist activity. These authors have designed a seven-point scale spectrum ranging from sustainable tourism to overtourism. In **Figure 4**, we adapted the scale to include responsible, rather than sustainable, tourism. The concept of responsible tourism is broader than the idea of sustainable tourism, as it focuses not only on the pillars of sustainability, but also on its practical implementation [6][28]. In fact, the existence of overtourism reflects the incorrect practical implementation of the ideas of sustainable tourism, so it is more accurate to consider responsible tourism at the opposite end of the spectrum.

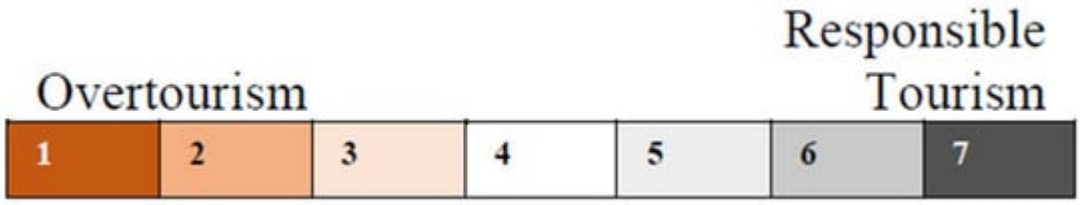

Figure 4. Holistic tourism development spectrum. *Source*: Adapted from Akbulut and Ekin [27].

Proper management of overtourism requires that all the aforementioned be periodically monitored and included in the new governance models of tourist destinations since tourism is an economic activity that can promote institutional quality [29]. Therefore, it would be advisable to establish links between the proposed model for measuring overtourism and smart cities [30].

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