

# **ANALYSIS OF TOURISM CAPACITY IN HISTORIC CENTRES**

The Case of Porto

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Aos meus pais que sempre me incentivaram incondicionalmente.  
Ao meu irmão que sempre esteve e estará comigo.  
Aos amigos feitos nesse mestrado que prometo levar para vida.



## **RESUMO**

O turismo é um dos setores que mais cresce no mundo sendo um dos principais motivadores para a regeneração urbana. Através dele, muitos empregos e oportunidades económicas são criadas, além das trocas culturais, igualmente importantes. Contudo, nos últimos anos é possível perceber uma concentração desse setor em apenas alguns lugares, em particular os centros históricos. Assiste-se assim a um crescente equilíbrio instável, já que se verifica um aumento no consumo de recursos e na poluição, além da criação de novas pressões imobiliárias nos imóveis comerciais e residenciais, agravando a gentrificação e, por consequência, a “turismofobia”. Por mais que haja ónus e bônus, o sistema só consegue absorver e beneficiar de tais investimentos até um certo ponto a partir daí, há uma rotura no equilíbrio. Assim, para estudar esse fenómeno é feita uma revisão de bibliografia dos três conceitos mais utilizados quando se trata da pressão turística: Capacidade de Carga Turística, Turismo Sustentável e Turismo Excessivo. Para além disso, também são revistos os principais instrumentos de planeamento urbano utilizados para o controlo do setor, além da sua aplicação prática em quatro cidades europeias (Veneza, Barcelona, Amsterdam e Berlim). Por fim, analisou-se o caso da cidade do Porto, Portugal, mais concretamente a área do centro histórico, visto ter-se verificado um grande aumento dos seus índices turísticos na última década. Deste modo, estuda-se um possível desequilíbrio futuro nesta área histórica, e apontam-se possíveis estratégias e novos instrumentos de planeamento para que tal fato seja mitigado ou mesmo evitado.

**PALAVRAS-CHAVE:** Turismo Excessivo, Capacidade Turística, Centros Históricos, Instrumentos de Planeamento Urbano, Porto.





## **ABSTRACT**

Tourism is one of the fastest-growing sectors globally and is one of the main motivators of urban regeneration. Through it, many jobs and economic opportunities are created, in addition to cultural exchanges, equally important. However, in recent years, it is possible to see a concentration of this sector in just few places, namely historical centres. Thus, there is an increasingly unstable balance, as there is an increase in the consumption of resources, in pollution, and in real estate pressures of commercial and residential properties, aggravating gentrification and, consequently, "tourismphobia". Still, the system can only absorb and benefit from such investments up to a certain point, from then on, there is a rupture in the balance. Thus, to study this phenomenon, a literature review of the three most used concepts regarding tourism pressure is carried out: Tourist Load Capacity, Sustainable Tourism and Overtourism. Furthermore, the main urban planning instruments used to control the sector are also reviewed as well as their practical application in four European cities (Venice, Barcelona, Amsterdam and Berlin). Finally, the case of the city of Porto, Portugal, more specifically the area of the historical centre, was analysed, since there has been a great increase in its tourist indices in the last decade. In this way, a possible future imbalance in this historical area is studied, and possible strategies and new planning instruments are pointed out so that such a fact can be mitigated or even avoided.

**KEYWORDS:** Overtourism, Tourism Capacity, Historic Centres, Urban Planning Instruments, Porto.



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## **SÍMBOLOS, ACRÓNIMOS E ABREVIATURAS**

AL - Alojamento Local (*Local Accommodation*)

CMP - Câmara Municipal do Porto (*Porto City Council*)

CRUARB - Comissariado para a Renovação Urbana da Área de Ribeira/Barredo (*Commission for Urban Renewal of the Ribeira/Barredo Area*)

DGT - Direção-Geral do Território (*Directorate-General for the Territory*)

GDP - Gross Domestic Product

INE - Instituto Nacional de Estatística (*National Institute of Statistics*)

JST - Journal of Sustainable Tourism

LAC - Limits of Acceptable Change

NUTS - Nomenclatura das Unidades Territoriais para Fins Estatísticos (*Nomenclature of territorial units for statistical purposes*)

P2P - Peer-to-peer

PEUAT - Plan Especial Urbanístico de Alojamiento Turístico (*Special Urban Development Plan for Tourist Accommodation*)

SIGTUR - Sistema de Informação Geográfica do Turismo (*Tourism Geographic Information System*)

SRU Porto-Vivo - Sociedade de Reabilitação Urbana do Porto (*Porto Urban Rehabilitation Society*)

TALC - Tourist Are Life Cycle

TCC - Tourism Carrying Capacity

TDR - Tourism Density Rate

TPR - Tourism Penetration Rate

UNEP - The United Nations Environment Programme

UNESCO - The United Nations Educational, Scientific and Cultural Organization

UNTWO - United Nations World Tourism Organizations

VERP - Visitor Experience and Resource Protection

VIM - Visitor Impact Management

WTO - World Tourism Organization



# 1

## INTRODUCTION

### 1.1. CONTEXT

Any system has a breaking point, and urban systems are no exception. In recent years, the growth of the tourism sector has caused significant impacts in urban environments, especially in historical centres, due to the popularisation of low-cost travel, dissemination in social networks, creation of online platforms with competitive prices, increase in the percentage of the middle class, among other reasons that will be explored throughout this thesis.

In this way, some cities and places have been suffering from tourist congestion affecting residents' quality of life and requiring local intervention at the level of land regulation and urban management instruments. An increasingly unstable equilibrium is perceived, like pollution and resource consumption increases, in addition to the creation of new real estate pressures on commercial and residential properties, aggravating gentrification and, consequently, "tourismphobia". However, it is undeniable that the sector has numerous advantages, such as the development from an economic, urbanistic, and social perspective. Nevertheless, the system can only absorb and benefit from such investments up to a certain point or under certain conditions, from then on, there is an imminent imbalance.

This thesis aims to analyse the tourist capacity in historical centres that already have high tourist pressure. Additionally, the study revise how municipal urban strategies deal with these pressures and how they balance residents *versus* visitors/tourists interests. Finally, the moment when this thesis was written will also be considered, that is, during the pandemic of COVID-19 that directly affected the tourism market as there were immense restrictions on national and international traveling. Thus, even though it is not the main objective, it must be considered as a factor that forced tourism to reach the lowest levels in recent years, and that still brings much uncertainty for the future because it is not known when it will end.

### 1.2. OBJECTIVES

This research aims to investigate on the impact of tourism in historic centres, namely by confronting the opportunities and disadvantages of both residents and tourists when living and experiencing the city. In particular, it explores the wellbeing of the residents from a social, as well as from an economic perspective. The study focus on the historical center of the city of Porto, using a comparative approach with four other European cities. To this end, an analysis of parameters will be carried out to explore the

state of saturation of certain urban areas, its main weaknesses and opportunities. An investigation of the strategies already used by the municipality will be made allowing for the consideration of potential new planning instruments that would be appropriate for such a reality. Finally, unlike some authors in the literature review, who use quantitative studies to arrive at a formula that defines the tourist capacity, this thesis aims at a qualitative research of only one city. Thus, the main output is a method capable of accessing tourist impacts and adaptive capacities of urban areas, rather than a single formula to determine tourist capacity. This method can be applied in other future case studies.

### **1.3. METHODOLOGY**

To achieve these objectives a bibliographic review of the principal terms used in the literature will be made, when the topic is addressed, namely the concepts of *Tourism Carrying Capacity*, *Sustainable Tourism and Overtourism*. Then, the analysis of the context in which they arose, where they are most used, their main points and whether they are still relevant to the current scenario. In addition, there will be a mention of some concepts less analyzed due to the time in which they have already been launched, however, they are still highly cited by the authors, such as Doxey's Irritation Index and Butler's Tourism Area Life Cycle. In this way, it will be possible to perceive urban planning strategies' evolution and how the tourism sector has been treated over the years, either driving or controlling it. Concluding on the leading causes of tourism saturation, it is possible to propose targeted solutions to minimize the already established or foreseen consequences. Thus, from this review, there will be an analysis of selected case studies among those papers so that practices and planning tools can be perceived, in addition to the indexes and parameters used for the investigation.

Finally, from collecting these data, a study will be made in Porto, a city that experiences a significant increase in its tourism rates in the last years. To this end, specific statistical parameters of tourism and its population will be examined, in addition to the analysis of subjective parameters on the change of the resident's life. Finally, a graph will be produced in which it demonstrates the main weaknesses versus opportunities and its adequate planning instruments to maintain the balance. This content is structured in six chapters, which thematically separate the subjects. The first, which closes here, shows the general parameters of the thesis. After that, based on a bibliographical review, the second chapter will expose the main concepts to discuss this subject, while the third chapter will expose the main instruments. In the fourth chapter, four European case studies will be reviewed and compared, through their indicators, which will serve as a basis for the preparation of the original case study in Porto, in the fifth chapter. Finally, the sixth chapter aims to draw the final conclusions based on the comparison of the cities studied and on the reflection on the future of tourism after the pandemic.

# 2

## THEORETICAL FRAMEWORK

### 2.1. INTRODUCTION

For many years, the tourism industry was seen as highly relevant and profitable by municipalities since it generated economic growth, internal investment and a large number of jobs, a fact that exempted it from thinking about its possible consequences (Jordan et al., 2018). However, with the beginning of mass tourism in the 1960s, a rapid growth in the number of arrivals was noticed, which led some places to control such numbers. (Oklevik et al., 2019). In recent years, this growth has been exponential and one of the fastest-growing sectors globally, which is still seen as one of the primary sources of income, especially in developing countries (Mai & Smith, 2015). However, at the same time, tourism saturation has generated several opposing social movements since the mid-1990s coming from residents and local groups, who question the extent to which the social and environmental impacts is worthwhile (Milano, 2017) given that its benefits and costs are unevenly distributed (Perkumienė & Pranskūnienė, 2019). In addition to the vast growth in arrivals in recent years, 166 million in 1970 to 1.4 billion in 2018 (UNTWO, 2018, as in Maxwell, 2020), there is a concentration of where these are located. In 2016, the first 20 most visited countries accounted for two-thirds of all world arrivals and, in 2020, there was an estimate (before the pandemic) that they would add more visitors than the rest of the world combined (Euromonitor, 2017, as in McKinsey & Company & World and Travel & Tourism Council, 2017).

Consequently, the discussion on tourism saturation is essential for the coming years, therefore, for this study, three of the most used concepts in the literature on this subject were chosen: *Tourist Carrying Capacity (TCC)*, *Sustainable Tourism* and *Overtourism*. In Figure 1, we can see when they appeared and the number of scientific publications so far on the Scopus platform. Besides, even though the TCC was one of the first approaches to the debate of the problem of exacerbated tourism, today Sustainable Tourism continues with the most significant number of documents among those analyzed, with 1.589 in 2020, totalizing 12.846 since 1987. It is essential to mention the increase of popularity of the term Overtourism, which, although recent, has been gaining more and more prominence, both in grey and scientific literature. All three concepts mentioned above will be better explained in the following topic. However, two other theories also deserve attention, namely the Doxey's Irritation Index and the Tourist Area Life Cycle (TALC), which are cited in several articles in this literature review.

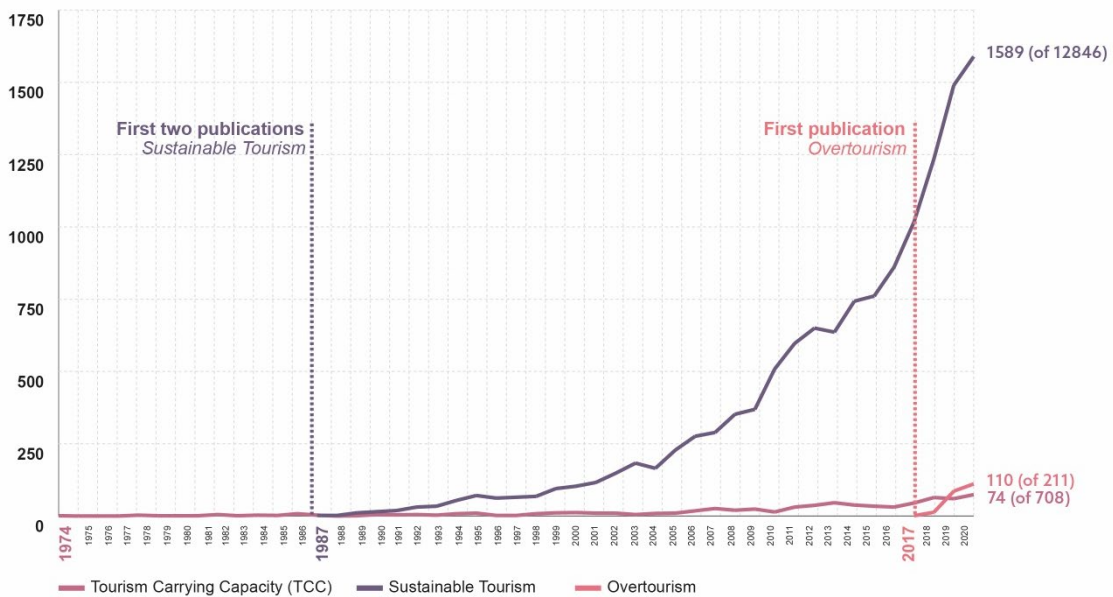


Figure 1: Incidence of Tourist Carrying Capacity, Sustainable Tourism and Overtourism in the Scopus Platform on 07/11/2020. (Elaboration by the Author).

In summary, the Doxey’s Irritation Index (Figure 2), developed by Doxey in 1975, aims to characterize the change in behaviour of residents and locals, over time, due to the growth in the number of tourists in four distinct stages: euphoria (demonstrates enthusiasm for economic prosperity); apathy (the sector grows and the relationship is less enthusiastic); irritation (tourist saturation is occurring and impacts are starting to be negative); and, finally, the antagonism (residents are opposed and see tourists as the cause of the problems) (Milano, 2017; Szromek et al., 2019). The Tourism Area Life Cycle (Figure 3) was created by Butler in 1980 and is divided into six phases that follow the development of tourism in a given area, based on the number of tourists, which, if not treated proactively, lead to stagnation and decline, as can be perceived in the graph (Fletcher et al., 2019; Milano, 2017; Szromek et al., 2019).

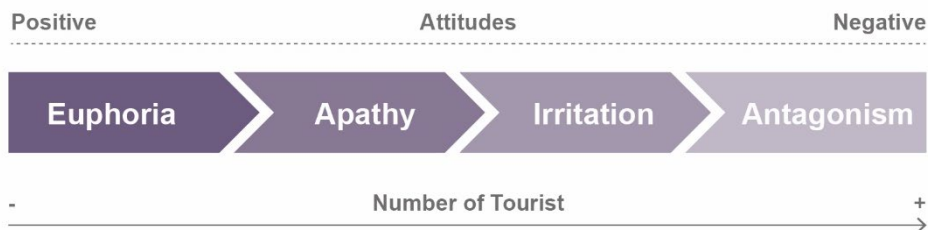


Figure 2: Diagram of Doxey’s Irritation Index. Adaptation of Doxey, 1975, as in Szromek et al., 2019.



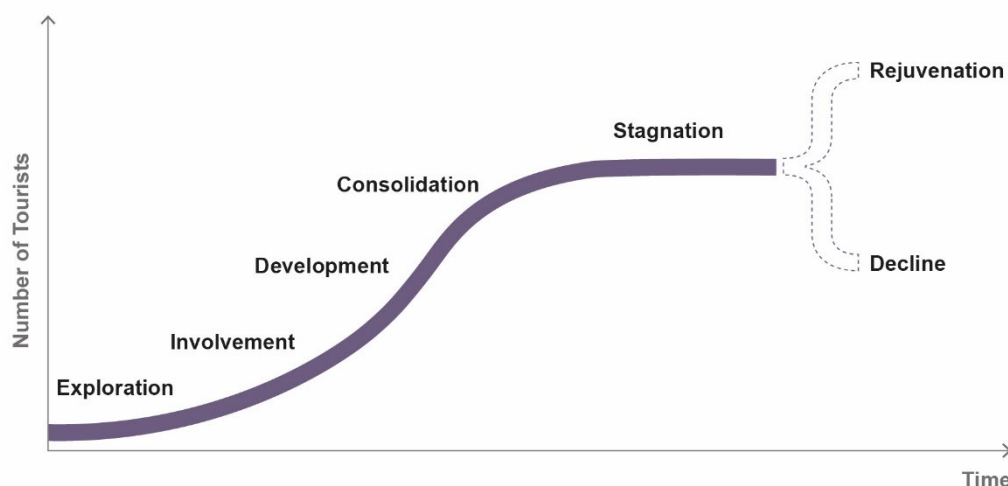


Figure 3: Diagram of Tourism Area Life Cycle. Adaptation of Butler, 1980, as in Szromek et al., 2019.

However, for a better understanding of the context in which these terms were created, it is worth mentioning that between the 1960s and 80s, there was a predominance of the rational model among urban planners, who considered planning a predictable science, understood through hypothesis testing and data collection (Innes & Booher, 2015). Thus, there was no intense interaction with people and users in the process, as they only made small contributions (Innes & Booher, 2015). Finally, as the authors (2015) point out, planners became neutral and distant from local difficulties, applying similar solutions to different problems. This type of traditional planning is often seen as extraordinarily regulatory and static with a top-down logic (Ghilardi, 2001).

Besides, according to Acierno (2013), this type of planning failed to modernize the urban structure in the context of deindustrialization, which generated incomplete works in the city and many abandoned areas. Additionally, the economic crisis of the 1970s made planning linked to private sector investment in the 1980s, something that the literature calls market-led planning (Acierno, 2013). After the 2008 financial crisis, this type of planning appears again because of a change in urban paradigms and policies led by the austerity strategies (Ferreira, 2020). For this reason, many governments have allied themselves with these kinds of private investments that aim to generate more capital and development for specific locations (Ferreira, 2020; Lum et al., 2004). In this way, local authorities have created planning instruments to make urban areas more attractive to market needs, i.e., more likely to be financed (Lum et al., 2004). But, Kunzmann, 2016) argues that many governments lose decision-making power to private stakeholders, since in many localities, the market are planning the city.

At the beginning of the 90s, a new aspect called cultural planning emerged (Kovacs, 2011), which is not applied equally in all contexts and, therefore, it is difficult to present a single definition (Vojtíšková et al., 2016). However, as much as the designation 'cultural' takes the concept to understand that it would be planning the arts and heritage, this is a standard error of understanding (Sirayi, 2008). Since the term is not limited to just these aspects but also: “local traditions, dialects, festivals and rituals; the diversity and quality of leisure; cultural, drinking and eating and entertainment facilities; the cultures of youth, ethnic minorities and communities of interest; and the repertoire of local products and skills in the crafts, manufacturing and service sectors” (Ghilardi, 2001, p. 6). In this way, this form of planning becomes

more dynamic and able to adapt to new changes (Vojtíšková et al., 2016), something that Ghilardi (2001) refers as fundamental for the creation of solutions fitter to the place in question and, consequently, more democratically and fairly.

Finally, as much as the literature review does not make it so explicit, we can relate tourism to cultural planning and market-led planning, especially in historical centres. Bearing in mind that while the first deals with the heritage connected with different aspects of urban life, to integrate better and, consequently, become more dynamic and adaptable, something vital to an activity that changes continuously. The second is unavoidable because tourism is the fastest-growing sector in the world, thus, it will have a significant influence on planning as it gives more excellent opportunities in specific areas that, without this investment, would be forgotten and abandoned. As a result, it is up to the governments to balance the two approaches' positive and negative points.

## **2.2. THEORETICAL FRAMEWORK**

### **2.2.1. TOURIST CARRYING CAPACITY**

The carrying capacity is a concept studied for many years in several areas, however, it was in the 1970s that it gained a correspondence with the scope of tourism, being called the TCC, which aimed at the development of methodologies and studies for the definition of a maximum capacity of tourists in an area without promoting irreversible damage (Pires, 2005). However, Sowman (1987) does not use the term tourist but rather Recreational Carrying Capacity and states that there has been academic studies of this concept since the 1940s. On the other hand, according to the author (1987), its essence has not changed over the years, affirming that all definitions have been based on the maintenance of the original resources and the quality of the visit for the tourist. Nevertheless, Pires (2005) finds changes in TCC approaches over time, mainly in the sum of new concerns of subjects that were being debated at the time. So, in this way, in the 70s, there is an extensive application in controlled natural environments with the two aspects already mentioned here by Sowman (1987), something that can also be seen in the first article on the Scopus platform (Figure 1), entitled “Changing scenic values and tourist carrying capacity of national parks” written by Ovington et al. (1974). In the 1980s, there is no change in its concept, though, the definition most adopted in this literature review is established: “the maximum number of people that could visit a location within a given period, such that local environmental, physical, economic, and socio-cultural characteristics are not compromised, and without reducing tourist satisfaction” (WTO, 1981, as in Milano, 2017, p. 35). Nonetheless, in the 90s, with the influence of the debate on sustainable development, driven mainly by Rio-92, the socio-cultural and economic issues began to be added, taking into account the local populations (Pires, 2005). Besides that, it's essential to notice that the TCC was the first attempt to control tourism growth (Saarinen, 2014).

Yet, the concept goes beyond just the definitions mentioned above. According to González-Guerrero et al. (2016), TCC is a methodology used to minimize tourist saturation impacts as it provides planners with the necessary tools for decision making, not just a simple number, as some authors criticize. López Bonilla & López Bonilla (2008) emphasizes that TCC, combined with environmental impact studies, is one of the most explored ways of studying this problem, nevertheless, there is still no systematic and universal approach among the authors. In this way, some of them have divided it into components to be better studied. Prato (2009) speaks only of two main divisions (biological/ecological and social/user carrying capacity), while Pires (2005) systematizes the most cited elements in the literature:

1. Carrying Capacity: Relates to the number of visitors who, when exceeding a specific limit, bring irreversible damage to the area in question.

2. Perceptual / Psychological / Social Capacity: It relates to the visitor's quality of the tourist experience.
3. Landscape Capacity: It relates to the capacity of a particular area to visually absorb tourists.
4. Material Capacity: It relates to a place's physical characteristics so that only specialized tourism with such properties can occur safely.
5. Physical capacity: It relates to the number of units of use that the area can absorb.
6. Economic Capacity: Relates to resources used, at the same time, for leisure and economic activities and their consequent balance.
7. Environmental Capacity: It relates to the maximum tourist use level that visitors accept before choosing another destination.

Though, to reach these types of capacity, there are different methods of analysis, so, according to Prato (2009), the three most common are Limits of Acceptable Change (LAC), Visitor Impact Management (VIM) and Visitor Experience and Resource Protection (VERP). However, one of the most cited methods in the literature is the one developed by Cifuentes, which establishes a number based on parameters of physical, real and effective capacity through mathematical formulas (Cifuentes et al., 1996). Finally, the Author (1996) concludes that the carrying capacity cannot be applied in another locality since each has specific characteristics.

But, over the years, the TCC has suffered several negative criticisms, mainly in the last years, for being a complicated and unclear method (McKinsey & Company & World and Travel & Tourism Council, 2017) besides being the search for a 'magic number' that can solve the problems of tourist saturation (Koens et al., 2018). Thus, Milano (2017) adds that many authors cite its limited practical application since tourist destinations are dynamically complex and unstable, and cannot be considered constant, yet, it remains widely used to calculate tourist pressure. In contrast, some authors still advocate it, as is the case of González-Guerrero et al. (2016), who states that the TCC has a linear, direct process and does not involve many people to perform it, in addition to the information being specific, readily available and non-technical, a fact that makes it applicable in areas with limited resources. For López Bonilla & López Bonilla (2008), the TCC provides a quantitative perspective that, if combined with other qualitative ones, can generate very satisfactory results in particular when applied in controlled spaces, such as historical areas and natural parks, due to the information available.

In this way, it is worth mentioning that Tourist Carrying Capacity is mostly related to physically delimited areas, such as beaches, nature reserves, parks, and, sometimes, historical centres in this brief bibliographic review. However, the last one is not as usual as the first one. Sowman (1987), in the late 1980s, calls attention to the importance of coastal areas since, due to their high recreational value, they tend to have more significant pressure from tourism. So, if we look again at Scopus about TCC, we can see that the articles from 2020 continue to deal primarily with case studies on beaches, islands, resorts and natural parks, occasionally appearing articles on historical sites classified as World Heritage as is the case of the research by Sánchez-Martín et al. (2020) done in Extremadura. In Figure 4, we can see the country's distribution when the term is searched on the Scopus platform. Only the first fifteen are highlighted considering the large number of locations that have already launched studies on the topic. In the first place, with 137 papers, China has a significant focus on case studies referring to marine parks, beaches, islands and coastal areas in general. Something in common that can be noticed with the other 14 countries since they have extensive maritime regions and a strong presence of natural parks, as

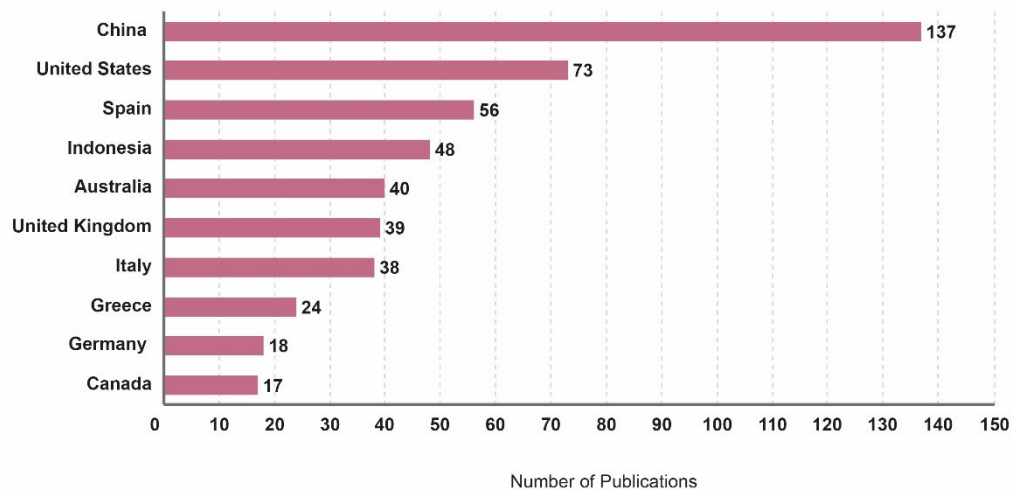


Figure 4: Documents with Tourist Carrying Capacity distributed by country on the Scopus Platform. Adaptation from Scopus. Accessed in 23/11/2020.

is the case of the United States, Australia and Canada. Finally, about its acceptance, since 2005, the term has had an upward curve of use in the academic literature, though it is still the least used among the three concepts studied in this work (Figure 1). This fact may be related to the trend mentioned above, which makes the concept more difficult to apply. In the overall searches, we can see a downward curve, which had its peak of interest in research in 2004, with some relevance until 2009, and as of that date, few searches on Google (Figure 5). This fact may be related to the emergence of other concepts.

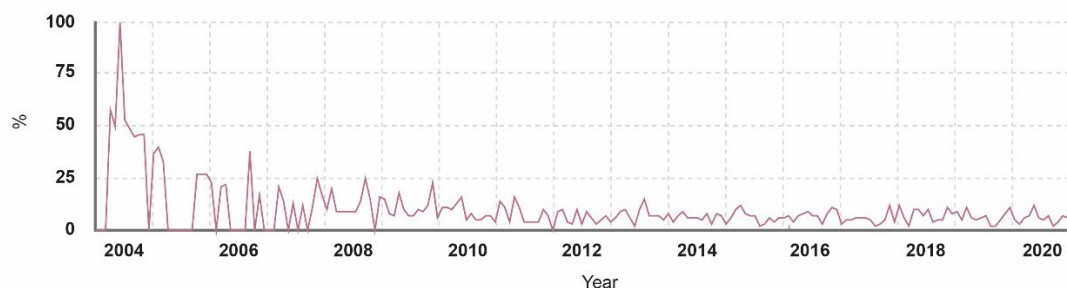


Figure 5: Interest over time for searches with the term 'Tourism Carrying Capacity', worldwide since 2004. Adaptation from Google Trends, 2020. Accessed in 23/11/2020.

In conclusion, a small comparative table was prepared between several authors who wrote about TCC. Once again, an alignment of the term with themes related to protected, coastal and natural areas can be perceived. Besides, it is still possible to understand the indexes used for analysis, being that of Cifuentes et al. (1990), the most cited in the literature, which produced several studies using this method, but always with the same strand of natural parks. It is also worth mentioning that the analysis is more complex than it is presented here. For example, in Cifuentes et al. (1990) and Prato (2009), from the data collection, numerous complex mathematical formulas are used to define TCC. Table 1 intends to compare and briefly present how some authors explored the case studies.

Table 1: Comparative table on the different approaches in the study of TCC. Elaboration by the Author.

Authors	Dimension	Variables / Indices		Case Study
Sowman, 1987  *Sowman & Fuggle, 1987	<b>Coastal Resort Areas</b>	(1) Carrying Capacity; (2) Social Capacity; (3) Physical Capacity; (4) Economic Capacity.	(1) Site information: <ul style="list-style-type: none"> <li>• Number of residential áreas;</li> <li>• % of developed áreas;</li> <li>• Possible number of visitors accommodated;</li> <li>• Existing infrastructure.</li> </ul> (2) Information about users (through surveys): <ul style="list-style-type: none"> <li>• Frequency of visits;</li> <li>• Time of stay;</li> <li>• Reason for travel;</li> <li>• Entertainment preferences;</li> <li>• Socioeconomic characteristics.</li> </ul>	Kromme River Estuary, South Africa*
Cifuentes et al., 1990  Cifuentes et al., 1996	<b>Natural Parks/ Protected Areas</b>	(1) Physical Carrying Capacity <ul style="list-style-type: none"> <li>• Space occupied by each visitor (m<sup>2</sup>);</li> <li>• Types of visits (number of visitors per group, the distance between groups, time required for a visit);</li> <li>• Space available in the area.</li> </ul> (2) Real Carrying Capacity <ul style="list-style-type: none"> <li>• After determining the Physical Carrying Capacity, the environmental and ecological factors that may alter such results should be analyzed.</li> </ul> (3) Effective Carrying Capacity <ul style="list-style-type: none"> <li>• It is related to subjective factors between carrying capacity and management capacity by the area's tourism managers.</li> </ul>		Reserva Biologica Carara (1990)  Parque Nacional Galápos (1996)
Prato, 2009	<b>Protected Areas</b>	(1) Ecological Carrying Capacity; (2) Social Carrying Capacity.	There are no universal indicators: User satisfaction and conservation of threatened and endangered (T&E) species should be considered.	Hypothetical Cascadia National Park
Cerro, 1993; Chávez e Cid, 1991; as in Pires, 2005	<b>Protected Areas</b>		<ul style="list-style-type: none"> <li>• Maximum user density in coastal areas/m<sup>2</sup>;</li> <li>• Density by activity type (depending on the activity will be used different types of metric)</li> <li>• Density by area type/hectare (takes into account the biome and its respective capacity);</li> <li>• Density by zone type in protected natural areas (extensive or intensive use)</li> </ul>	None

### 2.2.2. SUSTAINABLE TOURISM

By the end of the 20th century, there is a worldwide tendency to debate sustainability as a way to achieve present objectives without disturbing future generations (Fainstein, 2020). This is when the concept of tourism is tied to ecological practices, which originated the emergence of the term sustainable tourism. Thus, as Saarinen (2014) stresses, at that time, the world was focused on post-Fordist production practices, which aimed at more ecological and conscious solutions that were taken to the tourism sector. In this way, ecotourism and ecologically responsible tourism practices were developed (Saarinen, 2014). So, when the concept is created, it is very noticeable a solid connection with environmentalism (Guo et al., 2019). However, in recent years, it is already possible to notice a change in its essence since it seeks a balance between environmental, social and economic development (Brito, 2012; Guo et al., 2019). Paradigm, in which “sustainable” comes to refer to more conscious consumption within the scope of ethics and social justice, something that the authors today call responsible tourism that:

*“It aims to minimize the negative and maximize the positive social, economic and environmental impacts of tourism in destination communities and environments by promoting ethical consumption and production among all stakeholders” (Saarinen, 2014, p. 2).*

Equally, it can be concluded that sustainable tourism, in the current perception, is the balance that requires integration in the natural, cultural and human environment (Brito, 2012). This type of tourism can also receive tourist activities without compromising the natural and cultural resources present in the area and generates a better distribution of opportunities in different regions (Guo et al., 2019). However, there is still no concise and systematized definition of Sustainable Tourism (Mellon & Bramwell, 2016). Consequently, according to Saarinen (2014), the concept is vague, complex and challenging to be put into practice. Yet, the most frequently used definition is the one from the World Tourism Organization (WTO) and the United Nations Environment Programme (UNEP) that states: “Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (UNEP, 2005, p. 12).

Nevertheless, the importance of the concept is undeniable, as can be seen in Table 01 with an intense production of works by the academy in recent years (Qian et al., 2018). In 1993, a journal specialized on this research area, the Journal of Sustainable Tourism (JST), was created in the United Kingdom (Guo et al., 2019). Such publication has a multidimensional and comprehensive research as the primary purpose, taking into account that tourism is a field that involves several areas, such as economic, social, and culture (Qian et al., 2018). Besides, within the newspaper, it is possible to perceive six categories of study: “climate change, behavioural studies, poverty reduction, volunteer tourism, policy instrument, and indigenous tourism” (Qian et al., 2018, p. 9).

In addition to the definition of Sustainable Tourism, Brito (2012) emphasizes that it is crucial to design a system for monitoring and evaluating such practices, in which it is possible to insert continuous feedback so that the goals, objectives and expectations are readjusted as it is required. However, according to the same author, there are few practical examples of monitoring tourism sustainability, as this occurs typically with conventional indicators used for many years by planners, such as the number of arrivals, length of stay and income. Nonetheless, there is a need to establish new indicators focused on sustainability to be analyzed and, later, manage visitors and their impacts that disturb the balance (Brito, 2012; González-Guerrero et al., 2016; Zelenka & Kacetyl, 2013). With this in mind, Brito (2012) proposes a methodology based on good practices already established with indicators made by the WTO in 1996, such as nature protection, pressure, intensity of land use, social impact, waste management, among others. Brito (2012) states that, in this way, it will be possible to measure the effectiveness of tourism sustainability through its three interdependent aspects: commercial and economic success;

containment, preservation and environmental development; and responsibility for society and its cultural values. Finally, UNEP (2005), in its extensive document-oriented to urban planners, states that for sustainable tourism to be achieved, a government partnership with local entities is needed, through participatory processes with the community and private entities, mainly to monitor and adapt the implemented practices.

Sustainable Tourism has not diminished its popularity in academic papers. Still, since its creation, it has undergone strong criticisms claiming it is conceptually vague and its practical application differs significantly from theory, which many authors argue may become a modern utopia (Saarinen, 2014). Nevertheless, there are other criticisms in the literature, in which UNEP (2005) draws attention to, like authors complaining the concept is biased, oriented to a specific market, usually on a small scale. But this would be a mistake since sustainable tourism would relate to sustainable development and, therefore, the term refers to a condition of tourism, not a category (UNEP, 2005). In recent years, a connection of the word with luxury tourism can be perceived. If tourism is distributed more evenly in the territory, it will reach remote destinations, thus raising the concern with the sustainability and ecosystems of such places (Maxwell, 2020). On the other hand, some stakeholders see this practice as an ideal solution since, as travel costs are high, fewer people will go, making it easier to control visitors (Maxwell, 2020).

As for the case studies, even though UNEP (2005) refers to three types of category as the most vulnerable to tourist pressure, namely, Marine and Coastal Environments; Historic Cities and Cultural Heritage Sites; and, Fragile Natural Environments, we continue to notice a strong connection between the concept and physically delimited areas, especially those linked to ecological tourism, such as islands, beaches and natural parks, the same way as TCC. When we search in the Scopus platform for sustainable tourism + historic centres (following this dissertation's objective), the result is 352 out of 12,846 documents.

Although the majority does not enter into practical terms, it is still worth mentioning the articles that analyze the existing good practices through indicators and parameters, as is the case of Fernández-Tabales et al. (2017) that created an analysis system (SITEGO) based on 43 indicators, within five thematic categories. Castellani & Sala (2010) assesses sustainable tourism's impacts in the short and long term through 20 categories summarized in mathematical formulas. UNEP (2005) uses as a basis the indicators formulated by the WTO in 2004, choosing only the 29 found in most case studies. In 1996, the WTO (1996) developed the smallest framework found in this literature review, with only 11 indicators. In comparison, these variables can be found in Table 02, which does not show the indicators because they are numerous; but, it should be emphasized that all methods are extensive, complex, and often with subjective indices.

Table 2: Comparative table on the different approaches in the study of Sustainable Tourism. Elaboration by the Author.

<b>Authors</b>	<b>Dimension</b>	<b>Variables</b>	<b>Case Study</b>
UNEP, 2005	<b>Coastal Environments; Historic Cities and Cultural Heritage Sites; Fragile Natural Environments.</b>	29 indicators divided into four categories: (1) Environmental influence (2) Socioeconomic influence (3) Tourism supply and demand (4) Urban growth	Kaikoura, New Zealand; Calvià, Spain;
Castellani & Sala, 2010	<b>Protected Areas</b>	20 indicators divided into five categories: (1) Population (2) Housing (3) Services (4) Economy and labour (4) Environment (5) Tourism	Alpi Lepontine Mountain Community, Italy
Fernández-Tabales et al., 2017	<b>Delimited area; Coastal Area</b>	Development of the System of Territorial Governance Indicators for Tourist Destinations (SITEGO) with 43 indicators divided into 5 blocks: (1) Quality of involvement practices (2) Successful policy instruments and planning instruments (3) Faith in regional administration (4) Tourism industry network (5) Development management and urbanism	Conil de la Frontera, Spain
WTO, 1996	<b>All types of Tourism Destinations</b>	(1) Site Protection (2) Pressure (3) Use Concentration (4) Social Influence (5) Growth Control (6) Trash Management (7) Development Process (8) Key Ecosystems (9) User Satisfaction (10) Community Satisfaction (11) Tourism Impact to Local Market	Prince Edward Island, Canada; Los Tuxtlas, Mexico; Florida Keys National Marine Sanctuary, USA; Peninsula Valdes, Argentina; Villa Gesell, Argentina.



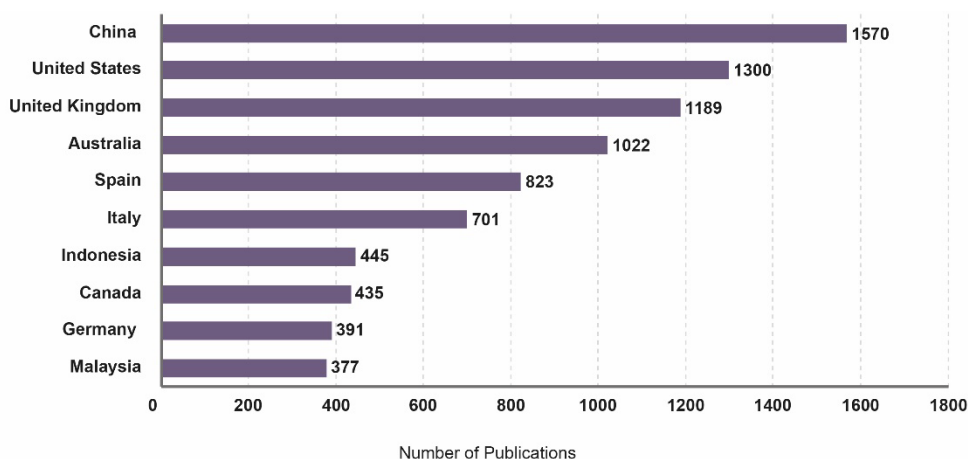


Figure 6: Documents with Sustainable Tourism distributed by country on the Scopus Platform. Adaptation from Scopus. Accessed in 23/11/2020.

Finally, in Figure 6, we can again see a large production of academic texts originating in China, but this time, without such a significant difference with the other countries such as the United States and the United Kingdom. Nevertheless, the fifteen most productive countries on the subject have several maritime areas and ecologically protected areas, which can stimulate production in this topic. In the grey literature (Figure 7), a great interest in research from 2004 to 2007 is noticeable, and from that moment on, there was a stabilization up to the present day, in the amount of 25%, compared to the year 2004. Even though it is stabilized, it is worth mentioning that it remains relevant today even with new terms, such as Overtourism, which will be studied in the next topic.

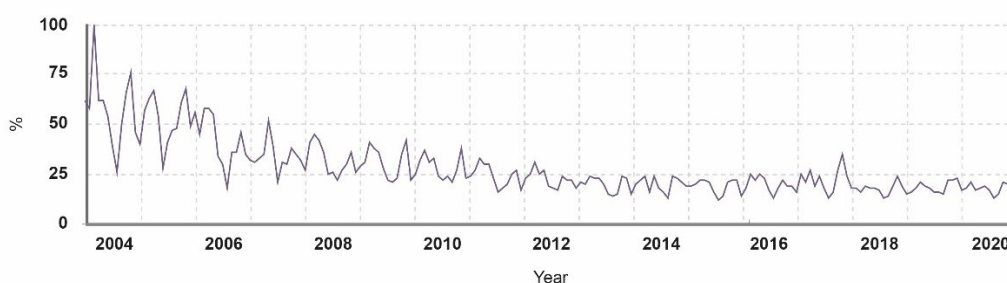


Figure 7: Interest over time for searches with the term 'Sustainable Tourism', worldwide since 2004. Adaptation from Google Trends, 2020. Accessed in 23/11/2020.

### 2.2.3. OVERTOURISM

The “Overtourism” arose in the non-academic debate in an article of a Spanish newspaper on turismophobia in 2016, gained projection, being published four scientific papers and three books with this concept the following year (Koens et al., 2018). However, many authors claim that the term is only a new designation for an old problem because, for several years, there have been studies relating tourist agglomeration and its respective effects on residents and the environment (Peeters et al., 2018).

Nevertheless, this new term's application is justifiable as it covers a much more comprehensive range of destinations with a higher level of research complexity (Phi, 2020). For Capocchi et al. (2019), what the concept brings about innovation is the level of awareness of the devastating effects that excessive tourism can get on the places in question. Finally, Szromek et al. (2019) state that the word emerged as

a way of describing the disturbing effects of uncontrolled tourism development in recent years, so that prevention can be proposed to control such consequences and causes. It should be noticed that, unlike the two other concepts explained in the previous sections, overtourism starts from a negative assumption of the impacts of tourism saturation, while the others describe and try to measure the phenomenon.

It is noteworthy that the academic research on this term, even though it has experienced significant growth, as can be seen in Figure 1, is still in its initial stage and needs a greater number of publications and case studies (Zemła, 2020). Nonetheless, the term is used extensively in non-academic media. In this way, Phi (2020) analyzed 202 articles written in English and concludes that the causes of overtourism are usually not discussed, emphasizing only the consequences, such as the number of tourists and negative impacts on the place. Thus, when we search on Google Trends (Figure 8), we can notice a rapid growth of interest right after the first publications in 2017, with almost 60,000 publications on the Google platform in 2020.

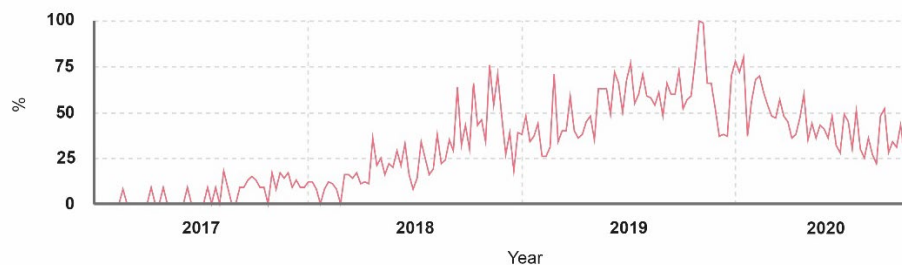


Figure 8: Interest over time for searches with the term 'Overtourism', worldwide since 2017. Adaptation from Google Trends, 2020. Accessed in 23/11/2020.

Even though it is a new term, according to Peeters et al. (2018), there is still no clear and unified definition. For Zemła (2020), this makes it possible to interpret this in several ways since it does not describe just one phenomenon but a combination of several factors in a region. Table 3 shows the definitions found in the literature review, the most cited by other authors being those from UNWTO, 2018; Peeters et al., 2018 and Milano, 2017. Yet, as much as there is no consensus, the essence of the problem remains practically the same between them: overtourism is related to the rapid growth and unsustainable evolution of tourism and its consequent negative impact on the place (Milano, 2017). In summary: “Overtourism is ultimately a result of tourism strategies focused on volume growth, as currently pursued throughout the world, and it mostly reflects residents’ perspectives on tourism” (Peeters et al., 2018, p. 24). Veríssimo et al. (2020) says the term relates directly to residents and tourists, as it covers the quality of visiting and living.

Table 3: Definitions of Overtourism found in the literature. \*Definitions most cited by other authors.

<b>(Milano, 2017) *</b>	The excessive growth of visitors leads to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourist peaks, which have caused permanent changes in their lifestyles, denied access to amenities and disturbed their overall well-being.
<b>(UNWTO, 2018) *</b>	Situation in which the impact of tourism on a destination, or parts of it, excessively influences the perceived quality of life of citizens and/ or visitors in a negative way.
<b>(Peeters et al., 2018) *</b>	Overtourism describes the situation in which the impact of tourism, at certain times and in certain places, exceeds the limits of physical, ecological, social, economic, psychological and/or political capacity.
<b>(Higgins-Desbiolles et al., 2019)</b>	Overtourism describes a situation in which a tourist destination exceeds its load capacity - in physical and /or psychological terms.
<b>(Perkumienė &amp; Pranskūnienė, 2019)</b>	Overtourism is characterized by a disproportionate number of visitors, which affects the quality of the region.

It is also worth mentioning that this phenomenon does not only refer to cities and to homogeneous urban areas, but can rather occur at different scales and through different characteristics. For example, it can be globally located in the town, but it can also happen in specific places such as a museum, square, tourist spot or natural areas, such as national parks, reserves and mountains (McKinsey & Company & World and Travel & Tourism Council, 2017; Szromek et al., 2019). Lastly, the term overtourism is often used as a proper substitute for overcrowding, something that is not necessarily interconnected because larger cities such as London and Paris have a greater capacity to deal with big masses due to their high number of residents and infrastructure, capable of absorbing this temporary flow of users (Stanchev, 2018). A fact that does not happen in cities which have a large influx of cruises, since more tourists than residents land at once. In these cases, tourists have their meals and accommodation on board, and instead of generating income in the city, they merely use and overcrowd the urban spaces and infrastructures (Milano, 2017; Milano et al., 2019; Postma & Schmuecker, 2017).

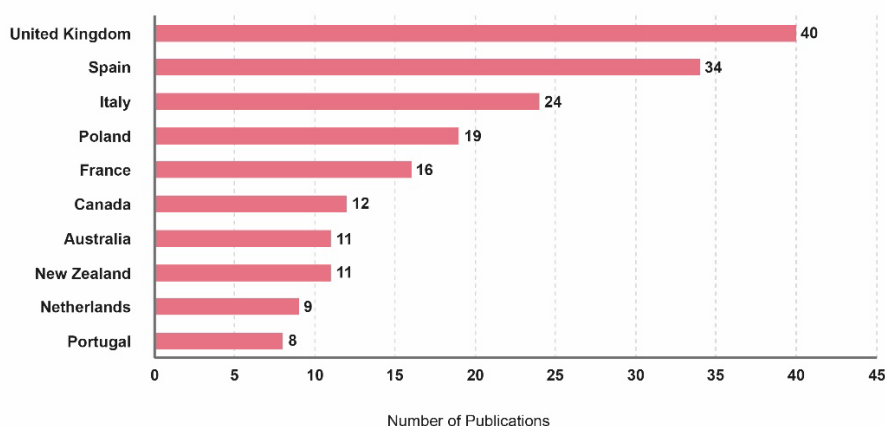


Figure 9: Documents with Overtourism distributed by country on the Scopus Platform. Adaptation from Scopus. Accessed in 23/11/2020.

In Figure 9, we can see the distribution of papers on Overtourism in the fifteen most productive countries on the subject. It is noticeable a concentration in European countries in addition to an extensive literature in Spain, the original country of the term in grey literature. The circumstance can justify that the word is often associated with urban areas and its case studies, usually located in Europe (Veríssimo et al., 2020). This author also points out that only a few studies focus on proposing solutions, while the majority analyzes the impacts of tourism in urban centres through gentrification, loss of quality of life in places and accentuating inequality, thus needing new analysis methodologies that consider more than one approach. Lastly, similarly to the previous topics, in Table 04, we can perceive different methods to the study of Overtourism and their respective indicators for analysis. Compared to TCC and Sustainable Tourism, it is possible to perceive the indices' simplification, decreased variables, and greater objectivity. This makes the study less subjective and complex, something that McKinsey & Company & World & Travel & Tourism Council (2017) makes clear when proposing its method. Also, there is a noticeable change in the case studies' dimension, which move from protected areas to urban and coastal areas.

Table 1: Comparative table on the different approaches in the study of Overtourism. Elaboration by the Author.

<b>Authors</b>	<b>Dimension</b>	<b>Variables</b>	<b>Case Study</b>
McKinsey & Company & World and Travel & Tourism Council, 2017	<b>Urban</b>	(1) Importance of Tourism; (2) Growth of arrivals; (3) Tourist density; (4) Tourist intensity; (5) TripAdvisor negative reviews; (6) Seasonality of arrival; (7) Concentration of arrivals; (8) Air pollution; (9) Historical prevalence of the site.	Barcelona, Chongqing, New York, Buenos Aires
Milano, 2017	<b>Urban and Coastal</b>	(1) Number of tourists who spend the night; (2) Historical value of residences (rent and purchase); (3) Map with location of Airbnb offer.	Venice, Berlin and Barcelona
Stanchev, 2018	<b>Urban and Coastal</b>	(1) Visitor numbers over the years; (2) Amount of listing on Airbnb; (3) Feeling of belonging; (4) Research carried out by the local authority.	Venice, Barcelona, Prague, Santorini, Amsterdam, Dubrovnik, Mallorca
Peeters et al., 2018	<b>Rural; Urban; Coastal and islands; Heritage and attractions</b>	(1) Tourist density (beds per night per km <sup>2</sup> ) and intensity (beds per night per resident); (2) Ability to Airbnb beds with booking.com; (3) Participation of tourism in regional Gross Domestic Product (GDP); (4) Intensity of air travel (arrivals by air divided by the number of residents); (5) Proximity to the airport, cruise ports and UNESCO World Heritage sites	41 case studies

## **2.3. IMPACTS OF TOURISM PRESSURE**

As seen in the previous sections, the concept that most resembles this research's proposal is Overtourism, since the case studies are done in urban environments. This is why the greater focus is on the causes and consequences of tourist pressure by reviewing articles of this dimension; however, both Sustainable Tourism and Tourism Carrying Capacity will still be considered for this analysis.

### **2.3.1. THE START OF TOURISM PRESSURE**

The causes for tourism congestion go far beyond the rapid intensification of the number of visitors at specific locations in recent years with the introduction of low-cost airlines (Butler and Dodds, 2019, as is Zemła, 2020), or new hosting modalities, such as couch surfing or other P2P platforms (Gutiérrez-Taño et al., 2019). Thus, in this literature review, many authors looked at what else could stimulate this growth and noticed, on the part of the visitor, a change in behaviour that now feel the need to experience a 'local' life, having an immersive and authentic experience of the residents' lifestyle (Milano et al., 2018). Something that Zemła (2020) describes as a transformation from 3S tourism (Sea, Sun and Sand) to 3E (Education, Experience and Entertainment), meaning visitors no longer expect just visually beautiful places such as resorts, but a 'genuinely' local experience. But the role of social media and digital platforms should be emphasized. According to Peeters et al. (2018), due to a lack of reliable data, it is impossible to make a detailed analysis, but it is undeniable their participation in the growth of tourists. So much so that, Alonso-Almeida et al. (2019) produces an article focused on how social media drives such saturation and concludes that, now, visitors participate in the production and consumption of their travel experiences. Through blogs, social networks and social media platforms evaluation, tourists can give sincere feedback and opinions without external interference. Still, according to the author (2019), the consumer of travel is influenced to visit an unknown location through favourable comments and a positive image, which can be characterized as the electronic word-of-mouth that led to the "so-called effect" of social media on specific destinations that creates the desire to travel. Gurran & Phibbs (2017) present a study based on P2P accommodation platforms, namely Airbnb, and how this contributes to the tourist's new will to 'live like a local'. This feeling was reinforced by advertising campaigns on the platform itself, as the accommodations are the residents' own homes in residential neighbourhoods (Zemła, 2020). In this way, while contributing to the sharing economy, since they are using spare capacity, it increases real estate pressure (Gurran & Phibbs, 2017).

But, there are also behaviours on the part of local authorities that contribute to tourist saturation. Butler and Dodds (2019, as in Zemła, 2020) cite the focus on the growth of visitors, especially in the short term, without thinking about the consequences, not including any limit or control. Jordan et al. (2018) point out the lack of regulation for P2P accommodation platforms that, as stated above, distribute tourists in the territory, making urban planning measures and instruments more challenging to implement. Lastly, Zemła (2020) highlights the advertising campaigns in recent years from the governments themselves to encourage new tourists' arrival. In Table 5, we can see the various elements that the authors mention as causes of tourism congestion. Despite having some differences, they cite the problems already exposed here, except for Stanchev (2018), which discusses the financial accessibility of travel through the appreciation of the local economy.

Table 2: Causes for tourist saturation found in the literature review. Elaboration by the Author.

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<b>(Jordan et al., 2018)</b>	(1) The affordability of travel offers and prices, (2) the traditional policy focused on volume promotion, (3) An increase in international arrivals, (4) The pressure of urbanization, (5) Gentrification and the increase in prices in city centres and new neighbourhoods, (6) The proliferation of unregulated tourist accommodation, and (7) The concentration of large groups of tourists.
<b>(Stanchev, 2018)</b>	(1) In the last 10-15 years travelling around Europe has become much more accessible to Europeans, which has not only led to the emergence of new destinations but has also increased opportunities for well-established destinations; (2) For Americans, travel to Europe has been favoured by the strong appreciation of the dollar against the euro; (3) For countries in Asia, the Middle East and Latin America, travelling to Europe has become accessible because they are emerging markets.
<b>(Butler and Dodds, 2019, as in Zemła, 2020)</b>	(1) Higher number of tourists; (2) Travel has become more accessible; (3) New groups of tourists; (4) Mastery of the growth-focused mindset; (5) Short-term focus; (6) Competition for space and services; (7) Broader access to news; (8) Destinations have no control over the number of tourists; (9) Power imbalance between stakeholders; (10) Those interested in tourism are fragmented and at odds.
<b>(Zemła, 2020)</b>	Cites Butler and Dodds (2019) and adds (1) New business solutions based on information technologies, such as P2P platforms; (2) Increase in urban tourism; (3) Change of tourism from 3S (Sea, Sun and Sand) to 3E (Education, Experience and Entertainment); (4) Response to the massive advertising campaigns that municipalities have carried out in other years.

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### 2.3.2. THE RESULT OF TOURISM PRESSURE

Similarly, the causes go beyond the increase in the number of arrivals. The consequences are also more than just congestion in public spaces, even though this cannot be ignored, since many times it is the most easily noticeable effect. So much so that, in 2019 a survey was carried out in which 60% of American travellers would consider overcrowding when choosing their next destination (Maxwell, 2020). Also, when looking for the local lifestyle, visitors resort to P2P accommodation platforms, which creates increasingly recurrent tensions and conflicts between residents and tourists, as they do not stay only in areas intended for tourism (Koens et al., 2018). This brings overcrowding, noise pollution and pressure on infrastructure in residential neighbourhoods (Jordan et al., 2018). In this way, places that previously had their own identity, see them being exchanged for souvenir shops, crowds and tourist buses (Milano, 2018). Gutiérrez-Taño et al. (2019) stress that the deployment of these platforms is not stable, and there is always a discussion about its legitimacy and legality regarding competition with traditional hosting sectors. Also, sites like Airbnb move permanent accommodations to locations far from city centres, increasing real estate pressure and gentrification, especially for vulnerable low-income groups (Gurran & Phibbs, 2017) and making infrastructure investments more expensive.

Besides the congestion, the pressure and growth on infrastructure (some places already experience supply shortages in water and energy in peak seasons) (Jordan et al., 2018) bring the discontent and even refusal of tourism by residents. This can be seen in demonstrations in recent years in cities, such as Barcelona, Paris, London and Venice (Alonso-Almeida et al., 2019). In this way, the concept of tourist saturation is often linked directly with anti-tourism movements or with tourismphobia (Milano, 2017)

because the more the industry thrives, the more expensive it gets for residents, either in the cost of renting or in the lack of commerce of first needs near their residence (Milano et al., 2018). However, it is not just for residents that there is a negative consequence of such a phenomenon. For tourists, the more pressure a place has, the more its own experience will be degraded (McKinsey & Company & World and Travel & Tourism Council, 2017). For this reason, Namberger et al. (2019) explain that specific structures of use not related to tourism must be maintained in urban environments so that it does not become just a museum intended for tourists. This can be perceived in Dubrovnik because its popularization through a successful television show (Game of Thrones) received a wave of tourists that the city was not prepared for (Stanchev, 2018). If this continues to grow and has no control, the characteristics that have made that environment so popular, may disappear (Jordan et al., 2018; Stanchev, 2018). This particular case was further aggravated by a recurring situation in coastal cities such as Venice by the arrival of many cruises at once (Stanchev, 2018). This fact occurs because, in a single time, more tourists than residents disembark, in addition to having their accommodation and meals onboard, not bringing economic benefits to the city, only congestion. (Capocchi et al., 2019; Milano, 2017; Stanchev, 2018; Zemła, 2020). Briefly, we can see in Table 6 some of the reasons found in the literature review for the cause of tourism congestion.

Table 3: Consequences for tourist saturation found in the literature review. Elaboration by the Author.

<b>(UNEP, 2005)</b>	<p>Positive Impacts: (1) Increases opportunities in trade, and job creation (2) Brings economic value to cultural and natural resources (3) Promotes cultural exchange</p> <p>Adverse Impacts: (1) Greater pressure on infrastructure (2) Promotes the relocation of residents (3) Increases competition from natural resources (4) Increases pollution (5) It is not a stable source of income.</p>
<b>(Milano, 2017)</b>	<p>1) Congestion of public spaces in city centres. (2) Privatization of public spaces. (3) Increase in real estate prices. (4) Increase in cruise ships and large numbers of cruise passengers in a short period. (5) Loss of residents' purchasing power. (6) Unbalanced number of inhabitants concerning visitors. (7) Commercial gentrification. (8) Environmental deterioration, including waste, noise, air quality and water quality problems.</p>
<b>(McKinsey &amp; Company &amp; World and Travel &amp; Tourism Council, 2017)</b>	<p>(1) Alienated residents, (2) Degraded tourism experience, (3) Overloaded infrastructure, (4) Damage to nature, (5) Threats to culture and heritage.</p>
<b>(Jordan et al., 2018)</b>	<p>1) Increased congestion, (2) Pressure on infrastructure, (3) growing demand for energy and water, (4) pollution, (5) visitor behaviour, (6) environmental degradation, (7) damage to historic sites and monuments, (8) the loss of identity and authenticity, (9) the rising cost of living for residents, and (10) the increasing inequality between residents.</p>

However, as the result of tourist pressure is being discussed on this topic, not only the negative results should be mentioned. The positive consequences are usually only briefly presented. In this respect, the sector's contribution to job creation and economic development must be highlighted (Jordan et al., 2018), even in remote locations, which otherwise would not have this opportunity (UNEP, 2005). In addition

to the economic value, there is still a great cultural exchange between residents and tourists (UNEP, 2005), which initially brings excellent euphoria and enthusiasm, as shown in Doxey's Irritation Index (Szromek et al., 2019) in Figure 2. Lastly, the UNWTO (2018) draws attention that well-balanced tourism between positive and negative impacts can bring more resilience, security and sustainability, key issues included in the New Urban Agenda and 17 Sustainable Development Goals.

#### **2.4. FINAL REMARKS**

In conclusion, in reviewing the three most used concepts when tourist congestion is addressed, namely, Tourist Carrying Capacity, Sustainable Tourism and Overtourism, it is possible to notice a different approach between them. While the first deals with a mathematical formula, which some authors criticize, saying that it is the search for a magic number; the second seeks a balance between the presence of visitors and sustainability of places, not necessarily related to ecology; and the third, focuses on negative impacts of exponential growth in tourism and ways to control it. Another significant distinction refers to the location of case studies. Being the first two related to more natural environments, such as coastal areas and natural parks, and the last, to urban environments. Thus, considering this thesis's purpose (to study the tourist capacity in historical centres), the most resembling concept is Overtourism because it deals with the tourism impact on urban settlements.

Finally, taking into account that the tourism industry is the fastest-growing sector in the world and, if managed correctly, brings benefits, studies in this area are extremely important and, as Zemła (2020) highlights, these new investigations need to be focused on cities, as the theories that still prevail (created 20 years ago) were based on resort cities.



# 3

## URBAN PLANNING INSTRUMENTS

### 3.1. INTRODUCTION

After defining concepts capable of measuring and identifying the causes and consequences of the problems addressed in the previous topic, it is equally important to think in practical terms how local governments can deal with this new reality. Thus, this chapter aims to: investigate the capacity and limits of urban planning to regulate the market; consider potential strategies; and analyse tools and instruments that can be applied in each dimension (social, environmental or economic) and scale. With this in mind, there will be a continuation of the literature review with articles that propose tools and measures to tackle tourist saturation, more specifically in urban centres.

To begin this study, it is essential to refer to the origins of tourism policy research, which, according to Guo et al. (2019), started in 1975 and grew progressively every year. In the same way, as in other concepts, tourism policy does not have a single definition accepted by the authors. However, the Guo et al. (2019) mentions two authors: Sessa (1976) that defines it in the actions of several entities to achieve tourism development; and Hall and Jenkins (1995), who approach it in another way, explaining that it embraces all kinds of action taken by the government concerning tourism. However, as Soshiroda (2005) points out, the first studies on this type of policy, were extremely focused on the economic aspect and its cost-benefit. Nientied & Toto (2020) adds that this type of measures is only centred in economic development combined with the market, without balancing environmental and social issues to reduce the tourism sector impacts. Something that is changing in recent years as more and more scholars are researching this subject combined with sustainable tourism (Guo et al., 2019).

The vital role of tourism policy in defining what local tourism will be like is undeniable. According to Sheppard & Fennell (2019), it makes it possible to draw the impacts and benefits of the socio-cultural, economic and ecological sectors taking into account particular factors of the place. Besides, for Zahra (2010), the best way to make this type of measure more effective and cohesive is to take it to the local level of governance, protecting the population's rights. But tourism policy is intrinsically connected with the concept of “strategy” (Sheppard & Fennell, 2019) and can have two types of approach: regulatory or supportive (Zahra, 2010). Regulatory can be exemplified with land use policy, while supportive links with the endorsement of public-private partnerships (Zahra, 2010).

### **3.2. PRINCIPLES IN TOURISM MANAGEMENT**

Mitigating tourism saturation should be integrated in governments' strategies, both at the local and national scales, in order to make the most of the tourism sector while defending residents' rights. Nevertheless, it can be questioned to what extent can municipalities regulate the market and what would be the most adequate strategy? The answer to this question is not easy and not universal, as tourism is a highly changeable segment according to new trends or external factors, as was the case with the COVID-19 pandemic.

Some authors propose good practices in the management of tourism, since the approach of only considering the number of arrivals with the control of entries in specific places, has proved to be insufficient. McKinsey & Company & World and Travel & Tourism Council (2017, p. 29) presents four practices: “1. Build a comprehensive fact base and update it regularly; 2. Establish a sustainable growth strategy through rigorous, long-term planning; 3. Involve all sections of society—commercial, public, and social; 4. Find new sources of funding”. For each of these points, the Authors (2017) explain in detail more about how they can be implemented.

In summary, in the first point, all government levels must provide and produce reliable data on tourism, considering the expectations and needs of residents, through clear objectives and adapted to the local reality. It is also crucial that this information is exchanged with other players, such as hotels and P2P platforms. The second point calls for sustainable development of tourism, no longer based on the number of arrivals, but on placing the population's needs as a priority for this economic gain. The third argument points out that only with universal participation between stakeholders and the community, the previous two measures will work. However, for this to happen, there must be a political will with a clear 'top-down' vision and cooperation with private actors, including small-scale ones, such as non-governmental organizations. Finally, the fourth aspect depends on the implementation of all previous measures and, so, innovation in investments can be given through cofounding (Public-private partnerships; Matching Grants; Crowdfunding and Tourism Business Improvement Districts).

A report made by Tourism Sustainability Group (2007, as in Peeters et al., 2018) give general guidelines specifically for the reality of the European Union to achieve sustainable tourism and, Peeters et al. (2018) chooses nine principles that would be more efficient in combating tourist saturation. These selected principles are: 1. Consider all impacts, positive and negative, of tourism in planning; 2. Think about sustainable planning in the long run; 3. Adapt the pace of development to the location it is included in; 4. Include all players in the decision making; 5. Use and share information that already exists in the EU; 6. Include containment and repair measures in the plans if something does not go as planned; 7. Include “invisible” costs for society in the final price, considering pollution and costing of public areas, for example; 8. Define and respect the limits considering the Tourism Carrying Capacity; 9. Have constant monitoring through uninterrupted data collection that allows changes in the plan's approach. Even though it is more extensive than the four principles cited by McKinsey & Company & World and Travel & Tourism Council (2017), it is noticeable an alignment especially with regard to data collection, which must be broad and shared with a variety of stakeholders; in the inclusion of the most different layers of society; and, the search for a more sustainable development.

To approach this problem, many market players, governments, and even scholars are given a solution based on 5DS: Deseasonalization, Decongestion, Decentralization, Diversification and Deluxe Tourism (Milano, 2018; Milano et al., 2019). This type of action can even relieve tourism pressure for a period, however, over time, the same problem will most likely return (Milano, 2018). This type of proposal is what Maxwell (2020) calls Remote Tourism, indicated as an alternative for a more sustainable future in the sector with tourism-focused only on those who can afford a differentiated experience in remote,

exclusive and rugged places to access. Thus, according to the Maxwell (2020), fewer people would be able to afford travelling, so the demand for already consolidated places would decrease, while the supply of visitable places would increase. This is not an approach widely used by academics, being most cited among private agents. Nevertheless, Milano (2018) agrees on these five points as being somehow valid and increasingly sought after by governments. Yet, they rarely consider residents' needs.

Table 4 Strategies to address tourist saturation found in the literature review. Elaboration by the Author.

<b>(McKinsey &amp; Company &amp; World and Travel &amp; Tourism Council, 2017)</b>	(1) Distribute visitors beyond seasonality; (2) Distribute visitors elsewhere; (3) Adjust prices to balance supply and demand; (4) Regulate the provision of accommodation; (5) Limit access and activities.
<b>(Koens &amp; Postma, 2017)</b>	(1) Spreading visitor around the city; (2) Time-based rerouting; (3) Creating Itineraries; (4) Regulation; (5) Visitor Segmentation; (6) Make Residents benefit from the visitor economy; (7) Create city experiences that help both visitors and residents; (8) Improve city infrastructure and facilities; (9) Communicating with and involving visitors; (10) Communicating with and involving local stakeholders.
<b>(Stanchev, 2018)</b>	(1) Settling limits of visitors' arrivals (2) Spreading the visitors across; (3) Balancing supply and demand by adjusting the pricing (4) Regulating the accommodation supply (5) Other approaches 5a. Slow tourism 5b. Customize activities based on social media.
<b>(Peeters et al., 2018)</b>	(1) Spreading Visitors; (2) Time-based rerouting; (3) Dynamic visitor itineraries; (4) Financial regulations; (5) Uniform operational regulations; (6) Developing uniform traffic regulations; (7) Stimulate businesses actively tackling overtourism; (8) Diversified economy less dependent on tourism; (9) Use the "ladder of sustainable development"; (10) Visitor segmentation and target marketing; (11) Cross-border cooperation and alliances between destinations; (12) Make residents benefit from the visitor economy; (13) Destination experiences that help both visitors and residents; (14) Development of consistent infrastructure and facilities; (15) Communicate with and involve visitors; (16) Communicate with and involve local stakeholders; (17) Responsive measures in organization and planning; (18) Law directed at tourists; (19) Reducing seasonality.
<b>(UNWTO, 2018)</b>	(1) Promote the dispersal of visitors within the city and beyond; (2) Promote time-based dispersal of visitors; (3) Stimulate new visitor itineraries and attractions; (4) Review and adapt regulation; (5) Enhance visitors' segmentation; (6) Ensure local communities benefit from tourism; (7) Create city experiences that benefit both residents and visitors; (8) Improve city infrastructure and facilities; (9) Communicate with and engage local stakeholders; (10) Communicate with and engage visitors; (11) Set monitoring and response measures;

This lack of inclusion of residents is something that Zemła (2020) places as a priority: collecting data on how they perceive, how they are affected, and their opinion about tourism, besides the inclusion of such knowledge of the strategies. Studies must also analyze visitors and cities' needs, besides being developed according to their urban environments. But many governments tend to forget this and still apply measures that were created for resorts and are not properly suited to the each urban reality (Zemła, 2020). In Table 7, we can see some of the strategies proposed by diverse authors and the similarity of some approaches concerning seasonality, the distribution of visitors beyond the places that already

experience some pressure, and the importance of collecting data for suitable actions to be implemented and readjusted over time.

Finally, it is worth mentioning one aspect that is becoming popular among academics in the last decade: tourism's degrowth. This type of thinking is challenging to be considered in a capitalist system that aims above all economic growth based on GDP; however, it would promote a more sustainable development (Fletcher et al., 2019). Valdivielso & Moranta (2019) refer to many interpretations of degrowth in addition to sustainability since, in some cases, it can be translated as a tool for decongestion or a justification for more incisive regulatory policies. Blázquez-Salom et al. (2019) argue that the process of degrowing will only be complete, if there is a change in the political paradigm based on social and environmental justice and the city's autonomy. Higgins-Desbiolles et al. (2019, pp. 1938–1940) cite as strategy the Latouche approach: “Re-evaluate and shift values; Re-conceptualize entrenched capitalist concepts; Restructure production; Redistributions at the global, regional and local scale; Re-localize the economy; Reduction, re-use and recycling of resources”. Fletcher et al. (2019, p. 1755) present seven strategies for implementing tourism degrowing: “Tourism and sustainability as a political question; Distribution of costs and benefits within tourism development and management; The biophysical limits to tourism growth; Post-capitalist tourism in practice; Communing tourism and redistributing value; Tourism degrowth as de-touristification; and The right to metabolism”. As can be seen, the strategies coming from this concept are intrinsically connected with political engagement. Still, it is essential to emphasize that the government would regulate the market intensively in this proposal, bringing an idea more focused on citizens' needs and sustainability than economic prosperity. So, even though tourism is the most popular alternative to recover the economy after the 2008 crisis (Fletcher et al., 2019), new forms of tourism must be considered, which will be stimulated with new tourism policies and urban planning instruments.

### **3.3. URBAN PLANNING INSTRUMENTS**

For each strategy outlined by the authors in the previous topic, there is a set of instruments to be carry out. Considering the thesis's intention to study urban centres, the examples found in the literature were divided into six categories of approach so that the different theories could be equated and confronted. The groupings are as follows: (1) Limitation of Growth; (2) Distribution of Tourists Over Time; (3) Distribution of Tourist in the Territory; (4) Marketing Strategy; (5) Balancing Tourists and Residents and (6) Monitoring of Development. Here, a more synthetic treeing was chosen than some authors exemplified in Table 7, since the separation was often too specific (with few tools in each) or became redundant. Not all the tools cited were included in the summary made in Table 8, only the most alluded to and relevant to the subject.

#### **3.3.1. LIMITATION OF GROWTH**

The first category is related to limiting the growth of tourism with nine specific instruments for this task, as shown in Table 8. It is clear that they are all regulatory and therefore harder to accept for those who work with the industry, as they lose a part of their profit (McKinsey & Company & World and Travel & Tourism Council, 2017). According to the same authors, some stakeholders already realise that specific destinations need to have control in their growth in order to function well. In short, this category aims at the balance between the supply chain and the goods&services demands.

Therefore, as a possible solution, the establishment of arrival limits, the limitation of vehicle traffic in urban centres and the implementation of sector-specific charges can be used. Another tool cited, which

can be highly effective, is the regulation of accommodation, both P2P and ‘traditional’ hotels. While hotels can be easily regulated (as they are concentrated developments) through licensing and zoning, P2P platform properties are more difficult to regulate and enforce (McKinsey & Company & World and Travel & Tourism Council, 2017; Stanchev, 2018). Thus, according to the Author (2018), these can be controlled through specific fees in addition to limiting the number of days that can be rented, for example. Finally, another interesting instrument, only been mentioned by one author, is charging the ‘actual’ cost, based on maintenance, training and economic measures aimed at the sustainability of the site (McKinsey & Company & World and Travel & Tourism Council, 2017).

### 3.3.2. DISTRIBUTION OF TOURISTS OVER TIME

This category concerns the creation of a strategy for the distribution of tourism beyond the high seasons (Koens & Postma, 2017; Stanchev, 2018), days and weeks (McKinsey & Company & World and Travel & Tourism Council, 2017). Thus, four measures are cited to prevent congestion, with the implementation of variable prices being quoted by all the authors studied. This measure can be related to the type of visitor, for example, residents pay less (Stanchev, 2018); or to the day/time of entry to the attraction (Koens & Postma, 2017). This approach is quite common by private stakeholders to distribute visitors, such as theme parks like Disney, which charges less on weekday admissions outside the holiday period, and museums such as the Louvre, which does not run entrances near closing time. In short, it can be said that this category aims to soften the tourist pressure beyond seasonality.

### 3.3.3. DISTRIBUTION OF TOURISTS IN THE TERRITORY

Another strategy to address tourist congestion is the distribution of visitors in the territory, within the city itself and in its surroundings. According to Stanchev (2018), this is an easier tactic to implement with tourists who have visited the city before, as those visiting for the first time that want to see the main landmarks. However, for this spreading to occur, ten supportive measures are noted in Table 8, which are popular among this literature. The most popular one is the promotion of less-visited attractions, as often local governments, when planning marketing, use only the most famous sights (McKinsey & Company & World and Travel & Tourism Council, 2017). Other measures, such as creating new routes and itineraries, using new technological tools to track congestion in real-time, and improving transport systems accessible to tourists, are also referred as possible measures to be adopted. Finally, we must be careful, for not creating new pressures in other places with the dispersion.

### 3.3.4. MARKETING STRATEGY

This group presents six tools aimed at both visitors and residents, by increasing the awareness of the new reality coming from the tourism sector. One of the first measures is creating a target group of tourists who have personal objectives aligned with the city's strategy (McKinsey & Company & World and Travel & Tourism Council, 2017). According to Koens & Postma (2017), this enables tourism to grow at a pace beneficial to the area. In addition, communication with visitors allows for new experiences and context-appropriate behaviours to be created, while communication with residents allows them to have a more positive perception of the benefits when the disadvantages are honestly exposed to them (Koens & Postma, 2017).

### 3.3.5. BALANCING TOURISTS, RESIDENTS AND LOCAL STAKEHOLDERS

The fifth approach aims to reduce conflicts between tourists, residents and local stakeholders, which end up leading to social movements against tourism in the area, such as tourismphobia. To this end, five instruments are presented to make all three actors benefit equally from tourism. In this way, there is the elaboration of a strategy for residents to be included in the tourist economy, through direct employment (as in retail), the opening of small businesses or with the sharing economy (Koens & Postma, 2017). This diminishes the negative view of tourism impacts by residents (Koens & Postma, 2017). In addition, to achieve this objective, two other possible measures are: considering the visitor as a temporary resident and stimulating vulnerable areas forgotten by investors by creating a tourist attraction. Finally, it is worth noting that it is paramount to consider the resident to avoid animosity and allow for greater investment.

### 3.3.6. MONITORING OF DEVELOPMENT

The last tactic concerns the continuous monitoring of the previous strategies to be evaluated and readjusted according to the context, as tourism changes rapidly. The four instruments suggested are regulatory and are related to all dimensions (Social, Economic and Environmental), as they assess the global context of the situation and are crucial for the good functioning of the plan.

Table 5: Tools/Instruments of urban planning, collected in the literature, divided into six strategy categories proposed by this thesis. Elaboration by the Author.

Instruments	Type	Dimension	Author*	
1. Limitation of Growth (balance of supply and demand)				
1	Establish arrival limits	Regulatory	Economic/Environmental	(1) and (2).
2	Establish a ticketing system	Regulatory	Economic	(1) and (2).
3	Limiting traffic in centres	Regulatory	Environmental	(3) and (4).
4	Creation of pedestrian areas	Regulatory	Social/Environmental	(3) and (4).
5	Implement specific taxes and fees	Regulatory	Economic	(1) and (4).
6	Regulate lodging supply	Regulatory	Economic	(1) and (2).
7	Limit the creation or maintenance of certain activities	Regulatory	Social/Economic	(1) and (2).
8	Calculate and charge the actual cost to the society	Regulatory	Economic/Environmental	(1).
9	Limit growth to specific zones	Regulatory	Economic/Environmental	(5).
2. Distribution of tourists over time (days, weeks or months)				
10	Promote out of season events and experiences	Supportive	Economic	(3) and (4).
11	Promote and extended season	Supportive	Social/Economic	(1) and (5).
12	Establish dynamic prices	Regulatory	Economic	(1), (2), (3), (4) and (5).
13	Limit opening times and large group access	Regulatory	Social/Economic	(3) and (4).
3. Distribution of tourists in the territory (inside and outside the city)				
14	Use technologies to decongest	Supportive	Social/Environmental	(1), (2) and (4).
15	Promote less-visited attractions	Supportive	Economic	(1), (2), (3), (4) and (5).

16	Create new touristic routes	Supportive	Social/Economic	(3) and (4).
17	Host events in less popular areas	Supportive	Economic	(3) and (4).
18	Create new activities and attractions outside the city	Supportive	Economic	(3)
19	Create combined discounts	Supportive	Social/Economic	(3) and (4).
20	Improve transportation system and infrastructure.	Supportive	Social	(3), (4) and (5).
21	Increasing the accessibility of transport for visitors	Supportive	Social	(3) and (4).
22	Stimulate cycle and pedestrian routes.	Supportive	Social/Environmental	(3) and (4).
23	Create a single visual identity for the town and its surroundings	Supportive	Economic	(3) and (4).
<b>4. Marketing Strategy</b>				
24	Focus on a target group of visitors with a high-quality tourism	Supportive	Social	(3), (4) and (5).
25	Distribute target groups to areas around the city	Supportive	Social	(4).
26	Focus on activities based on social networks	Supportive	Social	(2).
27	Discourage certain types of tourists not in line with the strategy of the city	Supportive	Social	(3) and (4).
28	Produce educational campaigns for tourists	Supportive	Social	(5)
29	Produce campaigns that highlight the positive impacts of tourism	Supportive	Social	(3) and (4)
<b>5. Balancing tourists, residents and local stakeholders</b>				
30	Include residents and their products in tourist events	Supportive	Social/Economic	(4).
31	Extend the opening hours of establishments that serve residents and tourists	Supportive	Social/Economic	(4).
32	Stimulate the increase of jobs in the tourism sector	Supportive	Social/Economic	(3).
33	Stimulate the growth of vulnerable areas through tourism	Supportive	Social/Economic	(3).
34	Consider the visitor as a short-term resident	Supportive	Social	(3) and (4).
35	Include residents in the tourism production chain	Supportive	Social/Economic	(3) and (4).
<b>6. Monitoring of development</b>				
36	Create emergency strategies	Regulatory	Social/Economic/Environmental	(3).
37	Monitor key indicators	Regulatory	Social/Economic/Environmental	(3) and (5).
38	Organize discussions for the evaluation of the process	Regulatory	Social/Economic/Environmental	(4).
39	Specify the carrying capacity of the city and its attractions	Regulatory	Social/Economic/Environmental	(3).

\*Authors used in this chart: (1) McKinsey & Company & World and Travel & Tourism Council (2017); (2) Stanchev (2018); (3) UNWTO (2018); (4) Koens & Postma (2017) and (5) Peeters et al., (2018).

### **3.4. FINAL REMARKS**

Finally, we can conclude that the mitigation of tourist pressure should be directed with clear strategies to reduce congestion and social disputes caused by the three main actors' coexistence (residents, visitors and local stakeholders). As a possible proposed approach, thirty-nine instruments collected in the literature review are organised into six categories, seen in Table 8. However, for the plan to work correctly, it is important to choose instruments that vary in type, scale and duration. In addition, it is important to note that in practice, they should be used together. In the next chapter, these tools/instruments will be explored through case studies.



# 4

## EUROPEAN EXAMPLES

### 4.1. INTRODUCTION

This chapter aims to explore the use of urban planning tools/instruments through the analysis of case studies presented by other authors. Four cities were selected because of some common characteristics with each other and with the current research, carried out for the city of Porto and presented in the next chapter. In this way, four European urban centres were studied, due to the high production of scientific articles about tourist saturation and Overtourism. These areas are characterized by a robust historic centre, growing tourism and population no longer in the euphoria phase but already in the antagonism phase, according to Doxey's Irritation Index (Graph 2).

Before starting the analysis of the four case studies - Venice, Barcelona, Amsterdam, and Berlin -, it is essential to contextualize the particularities of the phenomenon in Europe. Thus, as already stated numerous times, tourism is the sector with the highest growth rate globally in the last six decades (Amore et al., 2020). The European regions do not diverge from this reality as they presented an increase between 5% and 13% in international tourist arrivals in 2017 (Peeters et al., 2018), being the most visited continent by Asian, North American and Latin American tourists (Stanchev, 2018). It is worth noting that this growth occurred in new destinations but, for the most part, happened in cities that already had a high flow of annual tourists (Stanchev, 2018). Therefore, it is clear that this uncontrolled growth justifies the presence of Overtourism in most European urban centres (Koens et al., 2018), with different levels of overload. This concentration in urban areas can be perceived through the popularisation of such destinations compared to coastal areas, with an increase of 100% since 2007, being more visited than any other typology in the continent (Amore et al., 2020). In this way, it can be considered one of the strongest and largest strands of European tourism, causing such cities to change their local economy to specialise in this sector (Amore et al., 2020).

Clearly, this valorisation of the tourist in relation to the resident, associated to the shift of the economy for leisure and travel brings what Milano (2018) describes as the touristification of social movements, in which it is increasingly common the organization of anti-tourist protests in large destination cities such as Barcelona, Lisbon, Venice, Berlin and Amsterdam (Milano, 2018; Peeters et al., 2018). It is essential to highlight that only with this flow of tourists, the city can maintain its current standards of development in terms of leisure and culture, as well as heritage conservation that the population is used to (Koens & Postma, 2017). Koens & Postma (2017) further mention the relevance of this sector, otherwise many jobs and enterprises that the locals use would disappear, bringing discomfort to them. Europe has some particularities that accelerate the process of tourist saturation, such as an increase in

short term trips (at weekends, for example), through low-cost airlines oriented to urban destinations (Amore et al., 2020). In addition, travel in the continent in the last decade has become more accessible both for Europeans (because of cheaper airline companies) and for foreign markets that have seen either their currency value against the euro (USA) or their economy grow in relation to what it was before (Asia and Latin America) (Stanchev, 2018). In addition to these, Jordan et al. (2018) also cite the increasing appeal of social media to stimulate concentration in specific places and attractions. This added to the causes exposed in Table 5 originates a debate on the tourism capacity of such cities.

## **4.2. CASE STUDIES EXAMPLES**

For the analysis of the four examples selected, a literature review was conducted with articles already cited in this work and specific papers of the localities in question. To systematize all the studies, all articles were analysed in three topics: context; main consequences of tourism pressure; and existing strategies. The first one aims at explaining the particularities of the region in the geographical, cultural, social and economic fields and how tourism pressure acts on them. The second discusses the major site-specific impacts of overtourism. The third topic addresses urban strategies and instruments to mitigate this phenomenon and if they were successful. Finally, there is the organisation of these topics in a chart to be more easily compared with the other examples.

### **4.2.1. VENICE, ITALY**

#### **4.2.1.1. Context**

Known for the gondola rides on its canals, Venice is in the popular imagination of places to visit and can be considered one of the world's most iconic cities. However, it is also symbolic when the subject is overtourism in historical centres since its negative impacts and challenges are visible and continuously debated by its residents and scholars (Bertocchi & Visentin, 2019). Besides, it was one of the first cities to discuss and expose the negative impacts of the visitor's exponential growth (Milano, 2018) mainly because mass tourism was promoted by the government in the 1950s, long before other cities (Trancoso González, 2018). One possible reason for the city's mysticism is that the historic centre is geographically delimited as it is located on an island with mostly maritime access, including large cruise ships (Figure 10). In this way, many authors see the city as a historical city rather than a historical centre within a town (Bertocchi & Visentin, 2019). In 1987 it was added to the UNESCO World Heritage List, but there is much debate about whether this title was only to attract new tourists and generate profit rather than preserve the heritage (Bertocchi & Visentin, 2019; Seraphin et al., 2018).

The mix between landscape and culture makes it one of the world's most visited destinations in the world (Peeters et al., 2018). As much as Venice is made up of a group of islands, the most seen is still the central one, which has 55.583 residents (Milano, 2017). Nevertheless, on peak days, the number of daily visitors can easily reach 60.000 (Seraphin et al., 2018), and the annual number in 2015 was 10.182.829 (Anuario del Turismo, 2015, as in Milano, 2017). This massive amount of travellers, in a physically restricted space, forces concentration in a few areas simultaneously (Trancoso González, 2018), diminishing the quality of the visitor's experience and life for the resident (Seraphin et al., 2018). There is no natural downward trend as there is a big boost through the cruises that land in the ports located in the heart of the city and which, in 2017, brought 2.5 million people (Trancoso González, 2018).



Figure 10: Map of Venice's historic centre with the main maritime routes. Source: Google Earth.

The pressure of tourism on the residents can easily be seen in their exodus, as with the rising cost of living, the city has lost two-thirds of its population in the last hundred years (Trancoso González, 2018). Amore et al. (2020) surveyed fifteen European centres and concluded that the Italian city has the highest overnight stays/resident ratio, which shows a lack of balance between tourists and residents. Furthermore, the study also concludes that, among the examples, Venice is the city with the highest Overtourism rate since in addition to the indicator as mentioned earlier, it also has the highest concentration of museums/inhabitant (Amore et al., 2020). The negative impacts of tourist pressure are so evident that make the Italian city one of the most cited cases of gentrification and touristification (Trancoso González, 2018). In this way, the concept of "Venice Syndrome" was created in the literature to describe this saturation and its citizens' expulsion to adjacent areas (Milano, 2017).

Bertocchi et al. (2020) points to possible generators of pressure on the island: the spread of low-cost airlines; the rise of the sharing economy; the increasing importance of the Central European, Asian and South American markets; Italian national security and the lacking terrorist attacks; the promotion of cruise travel; and, finally, the diversification of lodging types. In this way, the tourist flow does not slow down, and this threatens the conservation of the heritage, something that forced UNESCO, in 2016, to issue an ultimatum banning cruises from entering the lagoon, for being concerned with the absence of measures in this matter by the municipality (Stanchev, 2018). Thus, if this resolution was not complied with, Venice would be placed on the list of endangered heritage sites, a category intended for post-war ruins (Stanchev, 2018; Trancoso González, 2018). Finally, it is important to stress that not only the cultural heritage is under threat. The social structure has been completely changed in recent years as social welfare has been affected by the lack of services, real estate and jobs not related to tourism (Bertocchi & Visentin, 2019). Consequently, significant social tensions occur every year through movements becoming more popular in other European locations (Milano, 2017).

#### 4.2.1.2. Outcomes of Tourism Pressure

The negative impacts of Overtourism in Venice have been separated into six categories for systematisation; although, they cannot be studied separately, as they are part of a larger context, as explained in the previous topic.

- a. **Ongoing Social Conflict:** Similarly to other European cities, Venice has seen an increase in anti-tourism protests since 1990, when the debate on the role of tourism in urban planning began (Milano, 2017). According to Seraphin et al. (2018), this type of tension highlights a new trend among residents who prefer a better quality of life than making a profit from the tourism sector. Therefore, policymakers are vital as they are responsible for designing the strategies for tourism. Lately, the welfare and needs of the visitors have been the priority, creating tensions between residents and guests (Bertocchi & Visentin, 2019). Consequently, it is not uncommon to notice protests in the streets and on social media in the Italian city, such as in 2016, when the group "Generation 90" protested on the higher number of meals served to tourists than to locals (Stanchev, 2018).
- b. **Gentrification - Increase in Property Prices and the Cost of Living:** In the Italian city, properties previously used by residents are being offered for sale to make way for hotels, restaurants and P2P accommodation (Peeters et al., 2018). As a result, few houses become available for housing, which increases their value, making them accessible only to those that can afford – rich people and tourists (Milano, 2017). As shown in Figure 11, Venice has an exceptionally high Airbnb accommodation rate, which decreases the availability of flats for the local public (Stanchev, 2018).

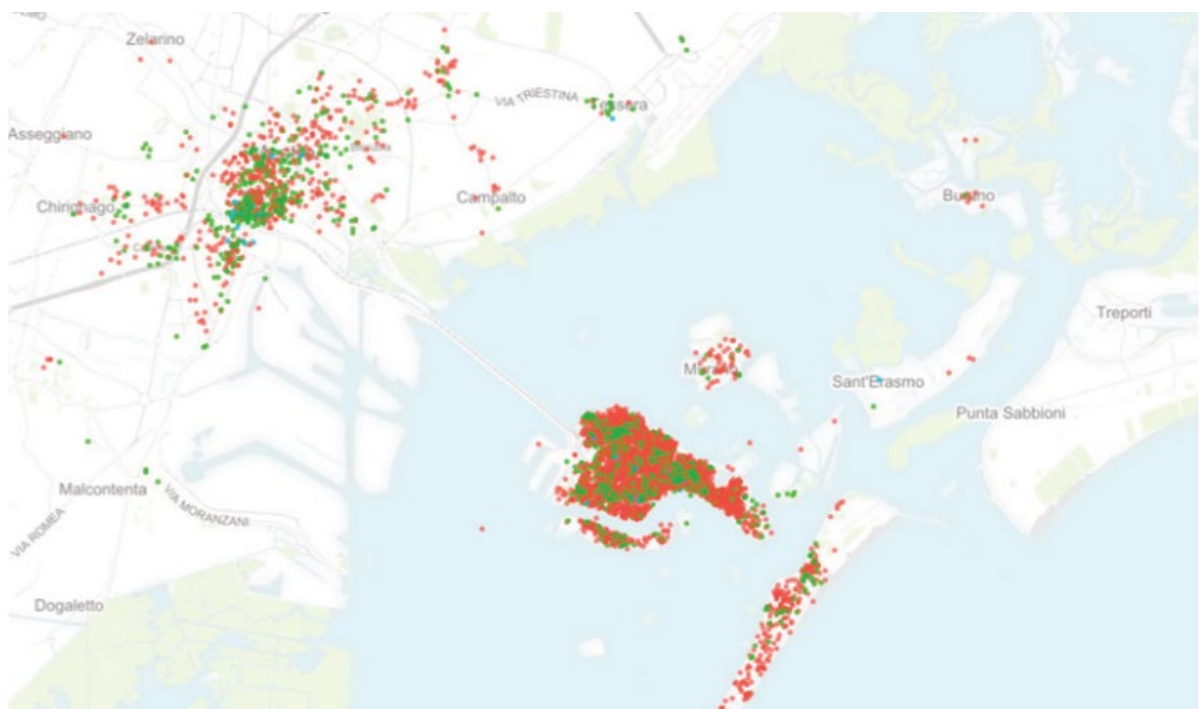


Figure 11: Location map for Airbnb accommodation. Source: Inside Airbnb, 2017, as in Milano, 2017

- c. **Residents Exodus and the Territorial Museification:** as said before, the population of Venice has decreased by two thirds in the last century, something that has affected the balance between tourists and residents (Seraphin et al., 2018). However, due to the high prices and cost of living, congestion

of the infrastructure and other inconveniences that tourist concentration brings, many residents no longer wish to live in the centre, and others cannot afford to stay (Bertocchi & Visentin, 2019; Trancoso González, 2018). This exodus of residents could lead to the process of Museification of the city, in which Venice would become a theme park that, due to the high cost of maintaining the heritage, only the rich and tourists can afford to use (Stanchev, 2018; Trancoso González, 2018).

- d. **Infrastructure Congestion:** As there is a large concentration of people in a limited space, there is a lot of overcrowding, whether in the streets, bridges, squares or public facilities (Stanchev, 2018). However, what causes the most tension is probably the congestion of the "vaporettos", essential boats for both tourists and residents to get around the city (Peeters et al., 2018).
- e. **Vulnerability due to the presence of large cruise ships:** The Italian city has one of the most active docks in Southern Europe and is one of the main routes in and out of its centre (Seraphin et al., 2018). This is a problem because the cruises have their own accommodation and gastronomy, i.e. they only leave tourists in the city who contribute little to the local economy (Milano, 2017; Trancoso González, 2018). These large ships destroy the local ecosystem and its structures, as well as damage the city's image since, as they enter the heart of Venice, which has small buildings, the large cruises can be compared to skyscrapers that are not in dialogue with the context (Trancoso González, 2018).
- f. **Mono-functional centre:** Venice is one of the cities most economically dependent on tourism, which makes its market monofunctional as it has been adapted to the needs of its visitors (Trancoso González, 2018). Thus, residents find it increasingly difficult to find local commerce on the island (instead of souvenir shops), such as hairdressers, grocery stores and cinemas, for example, because when they find, this establishment charges "tourist prices" (Bertocchi & Visentin, 2019; Stanchev, 2018). Tourism is also predominant in the labour market as almost all positions are related to visitors, undermining the city's complexity and social diversity (Bertocchi & Visentin, 2019).

#### 4.2.1.3. Existing Strategies

According to Bertocchi & Visentin (2019), although the risks of tourist pressure have been discussed for at least 30 years, the government has done little to guarantee the island's environmental sustainability and lagoon, together with the satisfaction of its residents. However, there are already urban planning strategies and instruments applied in the area:

- a. **Promotion of less known places:** the Italian government has focused its national marketing on promoting less-visited sites within the country (Peeters et al., 2018). Venice municipality is trying to distribute visitors beyond the central island and its main attractions, with a campaign entitled "Detourism: Travel Venice Like a Local" focused on slow tourism (Peeters et al., 2018; Stanchev, 2018). Still, according to Bertocchi et al. (2020), this strategy is timid and receives a tiny budget from the municipality (7,000 euros in 2014 and 14,000 in 2015).
- b. **Ban of cruise ships:** heeding popular demands, the municipality banned cruises of more than 55,000 tonnes from entering Guidecca Canal in 2015, a measure that lasted only three months due to pressure from the private sector that claimed their importance to the island's economy in addition to destabilising the Mediterranean sea lines (Peeters et al., 2018; Stanchev, 2018)
- c. **Establishment of a maximum capacity:** During the 2018 Carnival, barriers were put in place to prevent congestion in St Mark's Square during this popular event, forcing guests to arrive early to enter the area, or they would stay in the rest of the city where other activities were offered (Trancoso González, 2018).

- d. **Use of technologies to relieve congestion:** the municipality introduced real-time visitor counters at the most popular attractions in which the numbers would be posted on the Venice government's social networks, enabling tourists to see which sites were overcrowded (Stanchev, 2018).
- e. **Prioritising residents on public transport:** as mentioned above, one of the primary means of transportation for both travellers and residents on the island is "vaporettos". Thus, the government has implemented a card called "Venezia Unica Oro" that gives priority to locals in the queue and costs less than those sold to tourists (Stanchev, 2018).
- f. **Limit the creation or maintenance of certain activities:** to stimulate existing local commerce, the municipality has prohibited new gastronomic establishments, such as chain restaurants, except for shops selling handmade gelato (Stanchev, 2018).
- g. **Implementation of specific fees:** implemented in 2011, the tourist tax aims to help with the cost of maintaining the city by charging overnight tourists (Bertocchi & Visentin, 2019). The city will create an access fee in 2022 so that tourists who only spend the day also contribute to cleaning and maintaining the island (Bertocchi & Visentin, 2019).

#### 4.2.1.4. Diagnosis

Venice, being one of the first cities to stimulate mass tourism, has suffered from its problems for a longer time. This may be a justification as to why it has the most evident negative impacts on tourism. Moreover, its geographical configuration (a group of islands in a lagoon) facilitates overcrowding as there is no physical space for so many tourists. In this way, residents compete daily and often opt to leave the city centre because, besides the loss of quality of life, there is also an increase in its cost. This logic justifies the intense confrontations against tourism that can easily be found in the city. Many of these conflicts are seen as a whim of Venice's elite, who wish to ban tourists from having exclusivity of the island, something Bertocchi et al. (2020) disagrees with and states that the progression of the "Venetianization" must be stopped. These authors also refer the attempts already used by the government that for some time did not change the situation, or even encouraged the gentrification of other previously residential areas, as is the case of the adjacent islands in the 80s and 90s. For Trancoso González (2018), the Italian city urgently needs new strategies with new approaches since the ones that are being applied do not mitigate the phenomenon. Furthermore, these strategies should focus on qualitative tourism (Trancoso González, 2018), as well as taking away the mono functionality of the centre and expanding the functionalities of its centre so that it is not so dependent on tourism and is more attractive to its residents, old and new (Bertocchi & Visentin, 2019). Finally, according to Trancoso González (2018), there is an imminent need for greater control of the entry of cruises, especially large ones since until now, there are almost no restrictions, and they are major contributors for the presence of tourists in the city.

#### 4.2.2. BARCELONA, SPAIN

##### 4.2.2.1. Context

Barcelona is known worldwide for having the unique works of Gaudí and one of the best-preserved historical centres. However, the Catalanian capital has some geographical, social and political peculiarities that have made it one of the most discussed cities by the media in terms of Overtourism (Zemła, 2020) and have been experiencing this phenomenon for more than a decade (Milano, 2017).

The first unique characteristic is the location of its main tourist attractions since, even though it is considered a historical city, its heritage is concentrated in the Ciutat Vella (Russo & Scarnato, 2018). So, as much as it is not physically isolated from the rest of the town like Venice, there is still a heritage cluster (Russo & Scarnato, 2018) that has the characteristic of narrow streets and few wide spaces, something that increases the incidence of overcrowding. In Figure 12, we can see this aggregation in the historic centre. Still, it is also vital to highlight Gaudí's pieces, such as the Temple of the Sagrada Família and Parc Güell, also highly visited. Thus, according to Stanchev (2018), while these areas mentioned above have a high concentration of tourist activities, such as hotels and restaurants, the rest of the city is not developed for this sector because there is no demand.



Figure 12: Map of Barcelona indicating its main attractions (Ciutat Vella, Montjuïc Castle, Park Güell, Casa Batlló, Casa Milà and Sagrada Família). Adaptation from Google Earth.

It is essential to note that tourism in the capital was not developed gradually, as happened in other European centres; instead, it was mainly a product of the Barcelona 1992 Summer Olympic Games (Donaire Benito et al., 2019). This mega event was seen as a solution to overcome the economic crisis present at the time, by investing in the historic centre and increasing the existing infrastructure to improve the residents' quality of life while attracting more tourists and investors (Ramos & Mundet, 2021). To achieve this, projects were carried out to revitalise the heritage, the ports and the beaches and create specific areas, such as the Port Olímpic (Ramos & Mundet, 2021). To accomplish these objectives, a financial model was prepared that was so successful that even earned the nickname "Barcelona Model". It consists of a public-private partnership where governance holds most of the decision power, taking into account the needs of its residents (Russo & Scarnato, 2018). According to Russo & Scarnato (2018), there was a paradigm shift as early as 1992 when, instead of thinking about

permanent and beneficial changes for its population, there was a prioritisation of beautifying the city to be a competitive destination.

Thus, since the Games, Barcelona is seen as one of the most successful and established cities in the field of tourism (Stanchev, 2018), and this can be easily perceived through the exponential growth in the number of annual visitors: from 1.8 million in 1992 to 15.8 million in 2018 (Ramos & Mundet, 2021). This figure only considers tourists who sleep in the city, so an estimate has been made for cruise ship and day-tripper arrivals, and the number can reach up to 30 million visitors annually (Martín et al., 2018; Milano, 2017). This significant increase is also reflected in the economic participation as it represents, in 2017, 15% of the total GDP and 9% of all jobs, offering more employment opportunities than any other sector (Martín et al., 2018). Thus, Catalonia's capital has been considered a great world success in economic regeneration through urbanisation projects (Russo & Scarnato, 2018) and is the twelfth most visited city in the world and the third in Europe (Martín et al., 2018). To explain this popularity, many authors cite the creation of a city's own identity after the Olympics, through the public-private organization Turisme de Barcelona, created in 1993, which exalted the Catalan lifestyle through cultural projects, events and movies (Bourliataux-Lajoinie et al., 2019; Russo & Scarnato, 2018). Moreover, the city does not only have one type of tourism embracing the ambits of culture, sun and beach, architecture, major events, congresses, study exchanges as well as sports, with the great popularisation of F.C. Barcelona at the turn of the millennium (Martín et al., 2018; Russo & Scarnato, 2018). In this way, it is easy to understand how the search for "Visit Barcelona" achieves more than 280 million results on the internet, being more popular and easier to find information than any other Catalan place (Bourliataux-Lajoinie et al., 2019).

Nevertheless, in the last decade, the city has been experiencing what Ramos & Mundet (2021) characterises as "death by success", that is, due to the high growth of tourism, the city has entered a state of downfall. The town has become one of the most emblematic cases of Overtourism and the social movements against this unbridled growth (Stanchev, 2018). As much as 30 million people may not seem like such an expressive number concerning the whole population, the visitation occurs mainly in the small historic centre, so, if the ratio between centre inhabitants/visitors is done, the numbers are comparable to Venice, for example (Russo & Scarnato, 2018). Barcelona also has a port within the Ciutat Vella with the capacity for seven cruises that can disembark 30.000 people per day (Stanchev, 2018). McKinsey & Company & World and Travel & Tourism Council (2017) produces a heatmap (Figure 13) that puts arrival seasonality as the main cause of Overtourism, followed by less intensity by attraction concentration, historic site prevalence, and tourism density. According to Chibás (2014), for every ten people walking on Las Ramblas, eight are tourists, whereas, in previous years, this street was a multi-product market for residents and today, only souvenir shops can be found. This change caused much discontent among the population that the term "tourismphobia" was created in 2008 in the Spanish media and soon became popular even in academic articles (Milano, 2017).

Furthermore, Barcelona was the first city to have a documentary film ("Bye Bye Barcelona" by Eduardo Chibás) on Overtourism and the perception of residents about the negative impacts on the most affected neighbourhoods (Chibás, 2014; Milano, 2017). With all this discussion about the phenomenon, in 2015, it also became one of the first cities to elect a mayor with the political speech of controlling the overcrowding with the candidate Ada Colau, from the BComú Party (McKinsey & Company & World and Travel & Tourism Council, 2017). This party's overall proposal is to control tourism and bring the city back to the residents, and since its election, it has been implementing plans to achieve such effects even if they have not been so successful sometimes (Russo & Scarnato, 2018).





Figure 13: Heatmap of the principal risks of overcrowding in Barcelona. Source: McKinsey & Company & World and Travel & Tourism Council (2017, p. 24)

#### 4.2.2.2. Outcomes of Tourism Pressure

- a. **Ongoing Social Conflict:** Since the time of the Olympics, there have been voices against the negative impacts that the city suffered, but in recent years, social movements have become more frequent, to the point of creating and electing a party with the ideals of generating degrowth of tourism (Koens et al., 2018; Russo & Scarnato, 2018). In addition to frequent protests, it is possible to see phrases such as "Tourism kills neighbourhoods" and acts of vandalism on objects directly related to tourism, as well as an increase in journalistic articles with the term overtourism and tourismphobia (Milano, 2017; Ramos & Mundet, 2021). Thus, the Independent newspaper placed Barcelona as the eighth city that hates tourists the most globally (Ramos & Mundet, 2021). Something that can be perceived through the survey done by the municipality itself with the residents that for the first time since its beginning in the early tenths pointed out that tourism is the most severe problem of the city (Figure 14) besides being the problem that most affects them personally (Milano, 2017; Stanchev, 2018).

## Negative perception of tourism in Barcelona

(What do you consider to be the most serious problem in the city of Barcelona nowadays?)

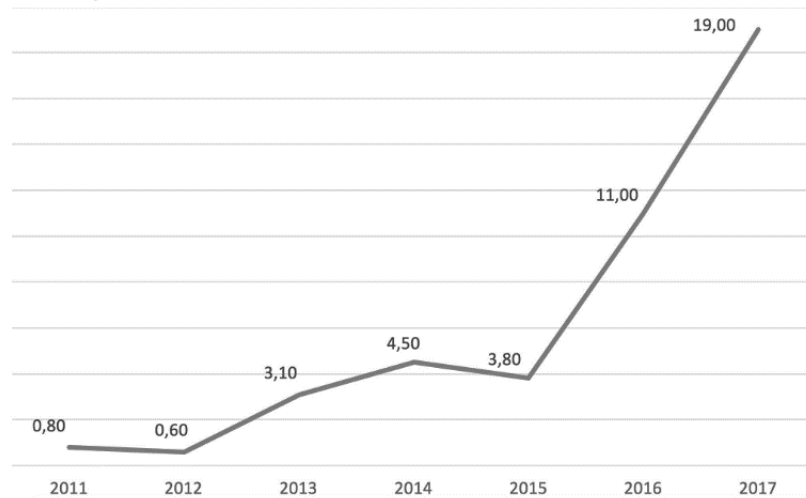


Figure 14: Negative perception of tourism in Barcelona from the residents. Source: Milano (2017, p. 27)

- b. Gentrification - Increase in Property Prices and the Cost of Living:** One of the main reasons for such discontent among the population is the removal of residents from the centre, due to the increase in the price of the square metre and the extinction of essential services, something that increases the cost of living for citizens (Milano, 2017; Russo & Scarnato, 2018). This gentrification took place for two reasons that occurred at the same time. The first was real estate speculation due to the acquisition of many properties by foreigners (mainly Europeans) to have a holiday home as the legislation itself made it easier to buy (Bourliataux-Lajoinie et al., 2019; Milano, 2017; Zemła, 2020). Secondly, there has been a decrease in the supply of homes for residents since, with the P2P platforms, many properties have been transformed into flats for tourists (Martín et al., 2018; Stanchev, 2018). In addition, there is a large concentration of "traditional" hotels in tourist districts, which diminishes neighbourhood cohesion and leads to direct conflicts between residents and visitors (Martín et al., 2018; Stanchev, 2018).
- c. Residents Exodus and the Territorial Museification:** Even though it is not discussed as much in scientific articles as in Venice, the exodus of residents and the consequent museification of the city is something debated with significant focus in the documentary "Bye Bye Barcelona". In it, interviewees cite the areas around the Sagrada Familia, Parc Güell, Barceloneta and Las Ramblas as increasingly losing their long-time residents and businesses and gaining, in their place, tourists and shops geared towards them, which simulate the ideal Catalan lifestyle (Chibás, 2014).
- d. Infrastructure Congestion:** As there is no physical division between tourist and residential parts, residents must compete with visitors for both transport and public spaces, often congested due to high demand (Zemła, 2020). In addition, essential services such as water supply are cut at peak seasons because of increased traveller usage (Koens et al., 2018). Finally, this congestion also brings environmental, noise and visual pollution considering the massive amount of tourist vehicles (Russo & Scarnato, 2018).

#### 4.2.2.3. Existing Strategies

- a. **Establish Dynamic Prices:** At the most visited attractions, such as Parc Güell and Montjuïc Castle, there is a practice of varying prices for residents of the neighbourhood who either get a discount or do not pay the entrance fee (McKinsey & Company & World and Travel & Tourism Council, 2017; Stanchev, 2018). However, many residents complain that the radius to be considered a "neighbour" of the attraction is too tiny (Chibás, 2014). Thus, for the rest of the city's population, there is a great bureaucracy as it is necessary to go to the city hall headquarters that will give you a visiting schedule and, this process takes around a month (Chibás, 2014).
- b. **Limit the creation or maintenance of certain activities:** In places that have too much tourist pressure, such as the historic centre and the coastal area, the municipality has banned the use of Segways and scooters, as well as prohibiting the establishment of new souvenir shops (Donaire Benito et al., 2019; McKinsey & Company & World and Travel & Tourism Council, 2017).
- c. **Reorganization of tourist transport stops:** Regarding cruises, there will be a total redistribution of international arrivals from the old port to Adossat, which will have one less terminal (seven in total) (Stanchev, 2018). Regarding tourist buses, two mobility plans have been created (2014 and 2017), which aim to place the stops in locations away from the principal attractions and are larger and able to support people's flow (Donaire Benito et al., 2019).
- d. **Implementation of specific taxes and fees:** In addition to the tourist tax for overnight visitors, Barcelona has implemented a tax for day-trippers charged to the tourist agencies that promote these quick visits in the city (Stanchev, 2018).
- e. **Establish a ticketing system:** In 2014, to reduce overcrowding, the municipality established a ticketing system at Parc Güell, a public park, in which tourists pay an entrance fee with a limitation on visitors per hour (Chibás, 2014; Russo & Scarnato, 2018).
- f. **Creation of representative bodies:** Due to popular claim, the ABTS (Assembly of Neighbourhoods for Sustainable Tourism) was created to unite social movements with the tourism sector, with demands related to the rights of citizens and the growth of tourism (Fletcher et al., 2019).
- g. **Organize discussions with all the stakeholders:** In 2017, there was a public discussion for the new tourism agenda, with the Barcelona municipality and government agencies related to tourism that had in the audience, representatives of ABTS and academics, a clear way to include the local population (Ramos & Mundet, 2021). According to Fletcher et al. (2019) it is possible to perceive a response from the government to popular demands, even if it is timid.
- h. **Distribution in the territory (micro-scale):** In the first instance, the municipality proposed decongestion within jammed neighbourhoods, taking the flow and redistributing uses to adjacent areas less overcrowded (Donaire Benito et al., 2019).
- i. **Distribution in the territory (municipality scale):** With the creation of a unique visual identity for Barcelona and its surroundings, the municipality proposed in 2010 to redefine landmarks, create new areas and define new routes (Donaire Benito et al., 2019).
- j. **Creation of specific plans including the tourism sector:** Barcelona has a tradition of creating many urban plans and, between 2010 and 2019, has created two specific ones for planning tourism and its visitors (Donaire Benito et al., 2019).

- k. Regulate lodging supply:** After Ada Colau's election in 2015, she imposed a one-year suspension of new licenses for tourist flats and hotels in the areas with the highest tourist pressure (McKinsey & Company & World and Travel & Tourism Council, 2017; Ramos & Mundet, 2021). In 2017, there was the creation of the PEUAT (Plan Especial Urbanístico de Alojamiento Turístico), which proposed the city's zoning according to its tourist pressure and its land-use regulation in terms of tourist establishments. Thus, in the most saturated areas, there can be no more new licences for shops or accommodation for visitors and no increase in the area of those already established (Stanchev, 2018; Urquiaga et al., 2019). Finally, there was also the regulation of P2P platform flats, which, if not legalized, would face fines and sanctions (Chibás, 2014; Ramos & Mundet, 2021).

#### 4.2.2.4. Diagnosis

As shown in the previous topic, Barcelona adopted several urban planning instruments, especially in the last years after Ada Colau's election. However, as much as there was hope in this government and its platform, many academics, journalists, and residents exalt its incompetence in controlling tourism growth (Chibás, 2014; Ramos & Mundet, 2021). While the administration fails to promote degrowth, it also applies too strict rules that may exterminate the tourism practice in specific places and consequently end competitiveness (Russo & Scarnato, 2018). Thus, according to Martín et al. (2018), the laws regulating land use with PEUATs, are too diverse and need to be simplified to work. Moreover, there is still a lack of regulation on online platforms since, as much as there are fines, there is little enforcement (Chibás, 2014; Martín et al., 2018). There is disapproval as far as ticketing is concerned, as few residents can benefit from free entry, so these public spaces are transformed into open museums (Donaire Benito et al., 2019). Finally, with this lack of strategies, it is possible to see more and more clashes between residents and visitors, which generates more social movements against the sector.

#### 4.2.3. AMSTERDAM, NETHERLANDS

##### 4.2.3.1. Context

Amsterdam is world-renowned for its unique architecture landscape, liberal thoughts, high use of bicycles, and a rich collection of works by renowned Dutch artists such as Rembrandt and Van Gogh. It is one of the ten most visited cities in Europe (Gerritsma & Vork, 2017). This is directly connected with the city's economic position and how it is at the vanguard of the Netherlands (Gerritsma, 2019). Thus, the capital is the country's largest financial hub and accounts for 13% of the GDP (Dredge et al., 2016) and began, in the 1960s, a search to maintain its productive position while expanding its cultural role with the liberal ideas of the younger population (Gerritsma, 2019). Thus, in the 1970s, there was a great appeal for the practice of tourism aimed at the LGBT public as there was an intense movement to fight for their rights and high receptivity from the population (Gerritsma, 2019). Nevertheless, even though it is not their focus tourist group today, Amsterdam Pride still gathers thousands of visitors, especially from the Netherlands. This liberal vision was also extended to prostitution and drugs, an image that endures to the present day and attracts a specific visitor type (Stanchev, 2018). Still, in the 90s, the municipality saw tourism as a solution to attract new investments and improve the local economy, through tourism policies focusing on culture and local heritage, through the investment in luxury tourism and its respective services, so that the liberal low-budget tourists would be substituted (Pinkster & Boterman, 2017). In the 2010s, Amsterdam's tourism experienced high growth with the consecration of the Canal District as a UNESCO cultural heritage and the Jubilee Year in 2013, which celebrated the

400th anniversary of the canals through various activities and the reopening of the Rijksmuseum (National Museum) (Gerritsma, 2019; Pinkster & Boterman, 2017).



Figure 15: Map of a section of Amsterdam pointing to the city center. Adaptation from Google Earth.

After the anniversary year and its great worldwide repercussion, the city's popularity multiplied, which can be perceived through the numbers (Gerritsma, 2019). Even with high density and a population of 850.000, visitors reached 18 million in 2017 (Stanchev, 2018). Since the 1970s, the number of visitors has increased fivefold (Koens et al., 2018), and the current figure is expected to grow to 30 million by 2025 (Hospers, 2019). Similar to Barcelona, the main attractions are situated in the small city centre (Figure 15), which is home to 86.000 residents and has an almost total inflow of 18 million visitors (Pinkster & Boterman, 2017; Riganti & Nijkamp, 2008).

With this concentration in a reduced space, tourist pressure has increased to such an extent that in recent years, both residents and the government already see this as one of the city's main problems (Stanchev, 2018). However, the residents of the Canal District, a middle-class neighbourhood in the centre of town, have been increasingly dissatisfied with tourism through open letters to the press, town hall meetings and social networking pages such as Pretpark Amsterdam (Amsterdam Theme Park) (Gerritsma & Vork, 2017; Pinkster & Boterman, 2017). This discontent arises from the disturbances caused by the more liberal visitors and the decrease in the supply of housing for locals (Koens et al., 2018). Nonetheless, it is worth noting that since its creation in the 17th century, this neighbourhood has been inhabited by the bourgeoisie, who, after the Second World War, preferred the newly created suburbs, leaving a large percentage of the residences vacant (Pinkster & Boterman, 2017). Thus, in 1970, a generation of highly educated young people linked to the creative market moved to the area in a process that, in 1990, led to the gentrification of the district (Pinkster & Boterman, 2017). This type of new resident, along with the temporaries and Dutch day-trippers, has increased the overcrowding and disturbance of the place, which is often mistakenly seen as a consequence of tourists alone (Gerritsma, 2019; Koens et al., 2018). Tourism is one of the capital's most significant sources of income and, according to Riganti & Nijkamp

(2008), it is what makes it possible for the city to hold the title of "creative city". In summary, according to the McKinsey & Company & World and Travel & Tourism Council (2017) heatmap, the main causes for Overtourism are the density of tourism and tourism intensity, followed by, with less intensity, the importance of tourism, arrivals growth, degraded tourist experience, arrival seasonality and attraction concentration.

#### 4.2.3.2. Outcomes of Tourism Pressure

- a. **Ongoing Social Conflict:** With the connection of Amsterdam tourism with negative liberal practices such as prostitution and drugs, a type of visitors are often attracted to the city misbehaving because of the capital's image as a place where everything is allowed (Pinkster & Boterman, 2017; Stanchev, 2018). This kind of conduct includes public urination, littering and rude gesture (Koens et al., 2018). Thus, in a survey prepared by Gerritsma & Vork (2017), residents pointed out the following as the primary impacts related to tourism in the city centre: overcrowding (46%), littering (21%), excessive noise (19%) and lack of safety (14%). This discontent is noticeable in the anti-tourism sentiments exposed in the last municipal elections (Koens et al., 2018) and in the large growth of opposing web pages, letters to newspapers and speeches at public events (Gerritsma & Vork, 2017).
- b. **Gentrification - Increase in Property Prices and the Cost of Living:** As previously stated, the gentrification process of central neighbourhoods predates the tourist explosion in the Dutch capital (Pinkster & Boterman, 2017). In recent years it has intensified, as there is a conversion of existing properties to short-term, resulting in 56% of the housing supply being for rental residences (Dredge et al., 2016). Thus, it is possible to perceive a significant lack in the supply of these houses, especially for social interest, since the new constructions are focused on private actors (Dredge et al., 2016).
- c. **Residents Exodus and the Territorial Museification:** With this gentrification, there is an exodus of residents and their local businesses, as according to a study done by the municipality, the owners of this type of companies intend to leave the central areas due to the lack of residents, something that diminishes the options for the remaining locals (Gerritsma, 2019; Stanchev, 2018). Thus, more and more tourist-focused food stores, such as waffle shops, spring up (Stanchev, 2018). Consequently, the theme park metaphor became more popular among its residents (Pinkster & Boterman, 2017).
- d. **Infrastructure Congestion:** As the centre has most of the attractions visited, there is a lot of pressure on the local infrastructure through lack of public transport capacity and long queues that occupy public space that is not meant for them, such as the streets (Koens et al., 2018).

#### 4.2.3.3. Existing Strategies

- a. **Produce educational campaigns for tourists:** With residents' dissatisfaction growing, in 2018, the municipality created the "Enjoy and Respect" campaign, which aimed to make travellers aware that there are still residents in the tourist districts (Hospers, 2019; Jordan et al., 2018). The advertising pieces focus on young Dutch and British men who show that bad behaviour, such as littering, can bring expensive fines (Jordan et al., 2018). Besides, there are also promotions on respecting and acting as a cyclist since it is a common practice in the city (Koens et al., 2018). So, for Koens et al.

(2018), in recent years, the city's marketing has shifted from increasing the number of visitors (since it will grow anyway) to educate those already there.

- b. Limit the creation or maintenance of certain activities:** In the year 2017, the city banned in its centre the creation of new tourist ventures such as souvenirs, waffle and ticket shops (McKinsey & Company & World and Travel & Tourism Council, 2017; Stanchev, 2018). Also, it banned the traditional "beer bikes", which however successful, was quite reluctant in the legal field (Koens et al., 2018).
- c. Limiting traffic in centres:** Through weekends, the small neighbourhood in the central area, 9 straatjes, cannot have vehicle traffic (Koens et al., 2018).
- d. Use technologies to decongest:** Through artificial intelligence, the Amsterdam municipality is creating new tools to make queuing times available in real-time to visitors on its website (McKinsey & Company & World and Travel & Tourism Council, 2017). Also, a mobile app, "Discover the City", has been created that sends notifications to its users, alerting them when an attraction is too crowded and suggesting other less-visited ones (Stanchev, 2018). Finally, the city also implements a platform that uses Facebook data to offer new destinations and activities (Stanchev, 2018).
- e. Implement specific taxes and fees:** After the jubilee year in 2013, there was a second increase in the tourist tax to help fight the financial crisis and cover the expenses of the tourism advertising campaigns (Gerritsma, 2019). Also, people staying in the city centre pay higher rates than those staying in other areas (Hospers, 2019).
- f. Create new touristic routes:** There is a project of taking the cruises out of the city centre and putting them in another distant port, but with direct transport for visitors to the central area (Stanchev, 2018). In addition, when you buy the Amsterdam City Card, different routes are suggested to avoid congestion (Stanchev, 2018).
- g. Promote less-visited attractions:** It is one of the most robust policies of the Amsterdam government and can be perceived through programmes or specific actions. Actions include removing the "I Amsterdam" sign (which has become a tourist attraction itself) from the busy Rijksmuseum square and its relocation to a nearby lesser-known court (Gerritsma, 2019). The highlight, however, is the successful "Visit Amsterdam, See Holand" programme which was granted the UNWTO Ulysses Award (Koens et al., 2018). It aims to promote attractions beyond the city limits through a partnership of different actors: governments at all levels, public transport managers and representatives of the tourism sectors (Koens et al., 2018). In this way, the City Card was expanded to places that are one hour away from the centre, making it possible to promote areas with specific functions such as "Amsterdam Forest" or "Amsterdam Beach" (Hospers, 2019; Stanchev, 2018). Finally, tourists are also encouraged to stay in adjacent cities, such as Rotterdam and Utrecht, as the government provides free public transport to the capital (Koens et al., 2018; Stanchev, 2018).
- h. Discourage certain types of tourists not in line with the strategy of the city:** With Amsterdam's image still too closely linked to drug use and bad behaviour of tourists resulting from this practice, the mayor has introduced a bill to ban the sale of cannabis to tourists by 2021 (Holligan, 2021).
- i. Regulate lodging supply:** Accommodation through P2P platforms is allowed; however, it has many regulation and taxation (Koens et al., 2018). Since 2014, this type of accommodation can only hold up to four guests per night; it can only be rented for sixty nights annually; the property must be registered and; the visitors must not cause disturbances (Dredge et al., 2016; Gerritsma, 2019). Anyone who fails to comply can be fined up to 6.000 euros, and there are increasing numbers of accusations from neighbours (Stanchev, 2018).

- j. Create a tourist managing program:** In 2014, the "City in Balance" programme was created to deal with the tourist pressure on the city while maintaining the quality of life of its residents, as well as creating a new, more positive view of tourism (Gerritsma & Vork, 2017; Hospers, 2019). Seventy measures were used to achieve this, including those already explained here in previous topics (banning vehicles and new tourist-oriented shops, for example) (Hospers, 2019; Koens & Postma, 2017). Thus, this programme seeks a link between different actors to prioritise the resident even though the tourist is also welcome in the city (Hospers, 2019). Finally, it also established a programme for monitoring this development so that the results can be adapted over time (Gerritsma & Vork, 2017).

#### 4.2.3.4. Diagnosis

Amsterdam's tourism has become increasingly popular due to the plurality of its attractions and heritage (Riganti & Nijkamp, 2008), which has transformed it from a small trading centre to one of the ten most visited destinations in Europe (Gerritsma, 2019). This was a product of the intense government programmes mentioned in the previous topics, which have experienced changes in their purpose over the years. For example, in the 1990s, only one sentence quoted the residents, and the rest was all about the visitors (Gerritsma, 2019). Today, with the award-winning "City in Balance", it can be seen that the resident has become the central figure as tourism will spontaneously continue to grow without the need for dedicated marketing (Hospers, 2019). The "Visit Amsterdam, See Holland" programme also demonstrates an important step towards the future that can already be seen now (Koens et al., 2018). Thus, although overtourism is very evident in the centre and visitor behaviour is not yet adequate, the literature review authors consider that the government's measures are a model for other locations.

#### 4.2.4. BERLIN, GERMANY

##### 4.2.4.1. Context

The capital of Germany is known for the plurality of its culture, rich architecture and for having, probably, one of the most iconic images of the last decades with the fall of the Berlin Wall in 1989. It is the largest city in Deutschland, holding 3.7 million residents (Bouchon & Rauscher, 2019) and the most visited destination in the country (Dredge et al., 2016). However, this tourist popularity only came about after November 1989 and subsequent German reunification in October 1990 (Novy, 2016). Immediately after these events, the sector experienced a boost due to the festive atmosphere in the city where tourists sought to witness the history been made (Novy, 2016). To this day, even though the city does not have a target audience or a tourist cluster, it is still seen as a destination that values tolerance, freedom (Bouchon & Rauscher, 2019), creativity, vibrancy and coolness (Füller & Michel, 2014). The title of "Europe's Capital of Cool" by Time Magazine demonstrates the euphoria the public and media had about tourism growth until the 2010s (Novy, 2016). In 2018 Berlin had 32.9 million overnight stays, but the most significant increase was between 2005 and 2015 when numbers doubled (Bouchon & Rauscher, 2019). Furthermore, the ratio of overnight stays/km<sup>2</sup> is 230 higher than the European Union average (Dredge et al., 2016). Thus, these figures place the German capital as one of the top three European destinations for urban tourism, following only the French and British capitals (Schäfer & Hirsch, 2017).





Figure 16: Map of Berlin indicating the most quoted neighbourhood in the literature review, Kreuzberg, as well as traditional sights such as the Brandenburg Gate, Memorial to the Dying Jews of Europe, Reichstag Palace, Siegestsäule and Kaiser Wilhelm Gedächtniskirche. Adaptation from Google Earth.

It is important to note that this growth was due to the government's encouragement to promote the city through place marketing, and the sector is one of the only ones that has had steady and continuous growth since the fall of the wall (Novy, 2016). In this way, with tourism playing such a decisive role in the capital's economic scenario, it is easy to understand why the authorities and policymakers consider this sector to be one of the priorities (Novy, 2016). Thus, in 1993 the government agency Visit Berlin was created with two objectives: to act as an intermediary between the government and its industry partners and act as a travel agent to promote local tourism to the tourism industry and visitors (Novy & Colomb, 2016). Within the city itself, there are some neighbourhoods with the most activity. The most important of them is Kreuzberg, which gathers all the liberal and progressive ideas in the popular imagination about Berlin since the 2000s (Füller & Michel, 2014). Besides this neighbourhood, other working-class districts are also undergoing a rapid and aggressive touristification due to government, travel agencies and social media promotion on urban tourism, in which visitors seek the experience of local lifestyle (Novy, 2018). For example, from 2003 to 2006, the number of overnight visitors to Kreuzberg grew by 345%, more than twice as much as the average for Berlin (Novy, 2018). In this way, tourists and residents end up frequenting and competing for the same infrastructure and attractions (Zemła, 2020). In Figure 16, we can see the location of the main points.

As seen in the previous examples, due to this extensive exposure with visitors and their bad behaviour, in recent years, locals end up with anti-tourist sentiments (Milano, 2017). This kind of conduct can be explained by the city's fame, similar to what happens in Amsterdam, about the number of nightclubs and bars that attract a young and low budget public, especially in Kreuzberg (Bouchon & Rauscher, 2019). Koens & Postma (2017) points out that, even if it is not advertised as such, the "party city" character is getting in the way of local identity as a new alternative culture is being established. The main driver of anti-tourism in the city is the intense gentrification process coupled with rising property prices as, in neighbourhoods with the highest concentration of tourist accommodation, such as Airbnb,

rents are higher (Milano, 2017). This kind of feeling is becoming increasingly noticeable both in the media and among residents, especially in Kreuzberg (Füller & Michel, 2014) due to changing feelings of cohesion, belonging and increasing economic inequality (Novy, 2016). According to Koens & Postma (2017), these feelings are more visible in the neighbourhoods that have been under tourist pressure more recently, as those who are home to the late-night tourist spots are more accustomed to them. Although Berlin is nowadays seen by the media, as a city not so friendly regarding tourists, the government reaffirms that this kind of conflict is getting too much attention and there is no need to be solved (Novy, 2016). In addition, the senate always uses an interview made with residents in 2013 in which 87% said they do not feel bothered by tourism; however, this survey raises doubts since the majority of respondents did not live in areas that experience Overtourism (Novy & Colomb, 2016). Finally, the McKinsey & Company & World and Travel & Tourism Council (2017) heatmap on the main causes of tourism pressure puts density of tourism, tourism intensity and arrival seasonality in first place.

#### 4.2.4.2. Outcomes of Tourism Pressure

- a. **Ongoing Social Conflict:** The dissatisfaction of Berlin's population with tourism started to be more noticeable in the 2010s and is linked to the change of neighbourhoods with a residential character and now is subject to intense tourist pressure (Bouchon & Rauscher, 2019; Milano, 2017). Thus, complaints include overcrowding, increased noise, littering, bad behaviour by tourists, privatisation of public spaces and rising property prices (Bouchon & Rauscher, 2019). However, it is worth noting that these protests are not linked to social movements, i.e. they are more connected to the consequences of tourism than to the sector itself (Milano, 2017).
- b. **Gentrification - Increase in Property Prices and the Cost of Living:** Berlin, until a few years ago, had the reputation of having a cheap housing market compared to other European capitals (Koens & Postma, 2017). Since then, an intense gentrification process is taking place, and real estate prices increase due to the lack of housing supply (Milano, 2017). Although this phenomenon does not occur only due to the growth of tourism, the popularization of P2P platforms and the consequent transformation of these properties into tourist flats contribute to the acceleration of the process (Novy, 2018; Schäfer & Hirsch, 2017).
- c. **Residents and Local Business Exodus:** In addition to the exodus of residents due to the gentrification mentioned in the previous topic, much encouraged by online platforms, there is also the displacement of local businesses (Novy, 2016). This is because more and more companies for young tourists, such as restaurants, bars, and general stores, are taking the place of shops once for citizens' basic needs (Novy, 2018). To make this more evident, Kreuzberg residents have created an interactive map with the traditional shops that no longer exist in the district, and 50 shops have been recorded since 2015 (Novy, 2018).
- d. **Infrastructure Congestion:** The residents who are most bothered by overcrowding are those living on the streets and in areas adjacent to major tourist spots and neighbourhoods that have been transformed into tourist zones (Novy, 2016). The government policy to build new buildings to accommodate tourist residences, has been increasingly noticeable that traffic blockages in the cities are causing major conflict with residents (Koens & Postma, 2017).

#### 4.2.4.3. Existing Strategies

- a. **Establish dynamic prices:** To include residents in the tourist circuit, as well as favouring the sector, in the low season, locals can stay in hotels at highly reduced prices (Koens & Postma, 2017).
- b. **Create new touristic routes:** Through brochures and the Welcome Card, the government tries to stimulate new tourist routes, mainly in the high seasons, by redistributing visitors to less-visited areas inside and outside the city (Bouchon & Rauscher, 2019; Koens & Postma, 2017).
- c. **Use technologies to decongest:** In the capital, there is already a mobile phone application, "Going Local App", which gives the visitor a suggestion of other places less frequented by tourists (Koens & Postma, 2017).
- d. **Produce campaigns that highlight the positive impacts of tourism:** A portion of Visit Berlin's advertising campaign in 2014 was aimed at residents and what positive results tourists bring to the city (Novy, 2016). Thus, a paradigm shift can be perceived compared to the promotions of the early 2000s, in which now the government tries to bring a spirit of belonging to its citizens, rather than selling the idea of the capital to tourists (Novy, 2016).
- e. **Organize discussions to evaluate the process:** The Berlin government has provided an online platform (<https://du-hier-in.berlin>) for residents to provide feedback, positive or negative, on tourism practice in the city (Novy, 2016). From this, workshops are organized with the local so that new ideas emerge and are put into practice (Novy, 2016). Novy (2016), however, points out that little has taken off.
- f. **Include residents in tourist events:** The government has decided to encourage events such as conferences in neighbourhood structures and schools so that the money can be directly returned to the local population and their public facilities and bring tourists and residents closer together (Koens & Postma, 2017).
- g. **Establish working hours:** Berlin residents' annoyance at the overcrowding on the small Admiralbrücke bridge has prompted the government to ban gatherings after 10 pm since, during the summer, more than 500 people settle there because there is no car traffic (Novy, 2018). However, this decision was not well received by either the media or the residents, who also use the bridge as a meeting place for drinking and listening to live music (Novy, 2018).
- h. **Implement specific taxes and fees:** Since 2014, a fee is charged in the city for any stay that is not business associated (Bouchon & Rauscher, 2019).
- i. **Regulate lodging supply:** Berlin has a few regulations regarding the lodging supply. Firstly, in 2014, a law was passed that only allowed residential flats registered with the municipality to be rented out for commercial or tourist uses (Dredge et al., 2016). In addition, it also set a maximum limit of m<sup>2</sup> in addition to the number of days such a property could be rented out (Bouchon & Rauscher, 2019). However, it is worth noting that no law was directly drafted for P2P platforms (Dredge et al., 2016).

#### 4.2.4.4. Diagnosis

As shown above, the tourism phenomenon in Berlin is recent and is seen by the government as a highly positive sector that the attention given to the negative impacts is out of proportion to what is happening (Novy, 2016). Thus, policies aimed at tourism control have never been the main discussion (Novy, 2016), and the instruments used are small-scale and unlikely to change the scenario of overtourism and tourismphobia that is being fulfilled in recent years (Novy & Colomb, 2019). Nevertheless, it is

undeniable that tourism has been important for the city's economy since 1989 (Milano, 2017) and, for many times, it was treated as just an economic sector, something that turned its impacts into a consequence of investments (Novy, 2016). In recent years it is possible to see a change in this attitude, in which tourism is seen in all its nuances, such as social, cultural and environmental aspects (Novy, 2016). Consequently, it is noticeable an increase in the number of urban policies mentioned in the previous topic. Nevertheless, perhaps there is still a lack of a more significant insertion of the tourism debate in politics because some approaches, even if they are not directly linked to the sector, affect it and increase its impacts. Zemła (2020) exemplifies the measure taken at the end of 2019, which froze the prices of properties that had long-term contracts, something that will stimulate the shift of such flats to online platforms and the consequent worsening of gentrification.

#### 4.3. FINAL REMARKS

In conclusion, we can separate the four examples into two pairs: Venice/Barcelona and Amsterdam/Berlin. They were grouped considering the similarity both in morphological issues and in the state of local tourist saturation. On the geographical matter, in the first duo, a historical centre can be easily delimited, while in the second, the attractions are distributed throughout the city, as can be seen on the maps presented in the previous topics. Regarding the state of overtourism, data were taken from the literature review, such as city/centre population and area, as well as the number of visitors and overnight stays. In this way, it was possible to draw direct comparisons between all the case studies by calculating the Tourism Density Rate (TDR)<sup>1</sup>, Tourism Penetration Rate (TPR)<sup>2</sup> and the ratio between Overnight Stays/km<sup>2</sup>, figures that can be found in Appendix 1. These analyses are critical because, besides enabling a comparison, it is possible to estimate a higher chance of negative impacts of overtourism when TDR and TPR values are high (Peeters et al., 2018). In this way, the Authors (2018) stipulate the maximum values based on their case study analysis (Figure 9). Thus, for the Venice/Barcelona duo, the values of population and area were used, both for the city and the historical centre, since they are well delimited and available in the articles or government's website. As for Amsterdam/Berlin, as there is no good definition concerning a centre, was used the definition made by Amore et al. (2020), which considers the area of the ten most visited attractions in the city. Therefore, as there is no such delimitation by the municipality, it was not possible to collect the number of residents in the area that suffers the most tourism pressure. Consequently, it was not viable to calculate the TPR of the centre.

	Average TDR	Average TPR
Rural	41.0	N.A.
Heritage & Attractions	104.3 <sup>25</sup>	12.0
Urban	221.4	6.3
Coastal & Islands	306.3	279.4

Figure 17: Table of usual TDR and TPR values. (Peeters et al., 2018, p. 87)

<sup>1</sup> TDR is calculated using the Number of Visitors/km<sup>2</sup>/day (Peeters et al., 2018).

<sup>2</sup> TPR is calculated using the Number of Visitors/100 inhabitants/day (Peeters et al., 2018).

The comparison started by calculating the density (inhabitants/km<sup>2</sup>) of these cities to determine whether they were indeed compact. What we can see in Figure 18 is that Barcelona has the highest concentration because it still has a significant number of residents, 1,666,530 in only 101.9 km<sup>2</sup> (Ajuntament de Barcelona, 2020), the smallest city among the four. On the other hand, Venice presents the lowest concentration since there is a great departure of its residents to other areas.

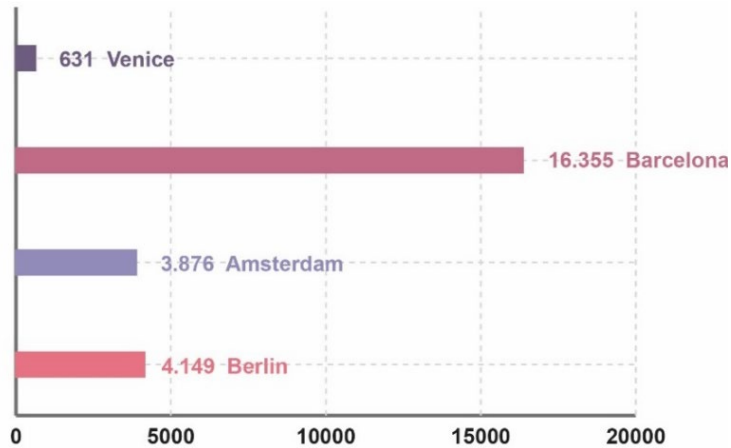


Figure 18: Density (inhabitants/km<sup>2</sup>) of the cities exemplified in the chapter. Elaboration by the Author.

Additionally, the ratio between Overnights stays/km<sup>2</sup> was also calculated (Figure 19), which once again places Barcelona at the top of the list due to the small size of the city. Furthermore, it is essential to note that as much as Venice is one of the most commented places in relation to Overtourism, Amsterdam and Berlin have higher numbers than the Italian city and are not so studied. Something that may be justified by the patterns of urbanization and by their dimension, with infrastructures able to accept the flow of visitors and, thus the phenomenon of Overtourism is diluted. When we look at the ratio of Overnight stays/inhabitants, Venice shoots to the top of the list as there is a significant exodus of its residents. It is essential to note that Amsterdam appears in second place, as it has a population of 850,000 (Stanchev, 2018), lower than the remaining two.

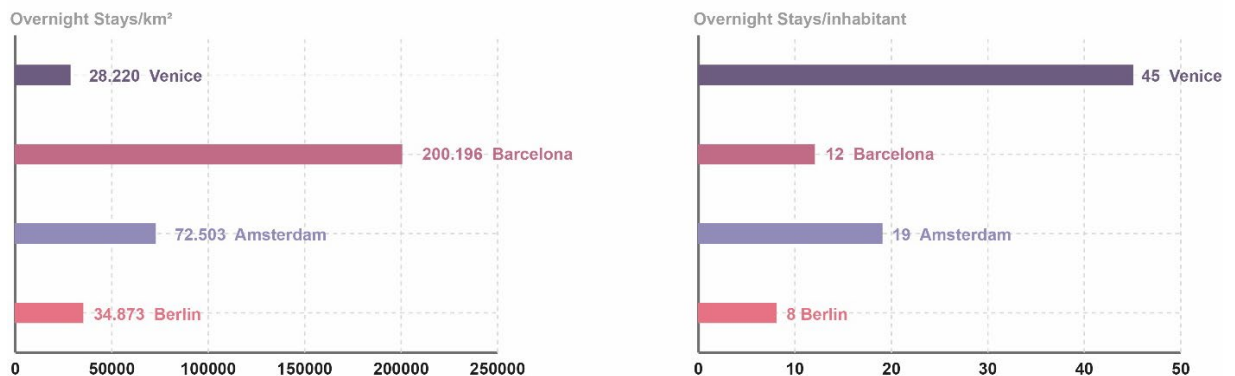


Figure 19: Overnight Stays/km<sup>2</sup> and Overnight Stays/inhabitant ratio. Elaboration by the Author.

About the Tourism Penetration Rate, Venice is placed with the highest tourist saturation level since this parameter only considers visitors in relation to inhabitants (Figure 20). Therefore, the number is almost five times higher than in the second city and much greater than the average of 12.0 calculated by Peeters et al. (2018). By using data from the city centre, the place with the most concentration of visitors, we can see the lack of balance between visitors and residents.

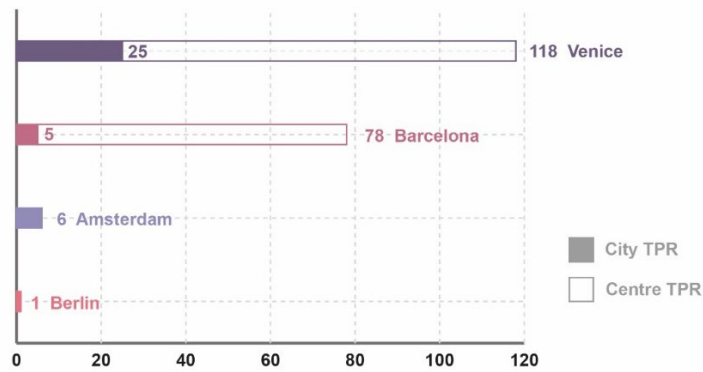


Figure 20: Calculation of the Tourism Penetration Rate. Elaboration by the Author.

As the last category of analysis, Tourism Density Rate compares the number of visitors in the total area of the city (Figure 21). However, the graph was separated into two phases since, for the area calculation, the first duo has a well-delimited centre. In contrast, the second considered the measure of the top ten most visited attractions made by Amore et al. (2020). Thus, the second pair has a larger area which decreases its TDR and, it would not be fair to compare it with the other two cases. We can see that even when calculating the entire city area, Barcelona have an extremely high number, much greater than the average of 221.4 used by Peeters et al. (2018) in Urban Destinations.

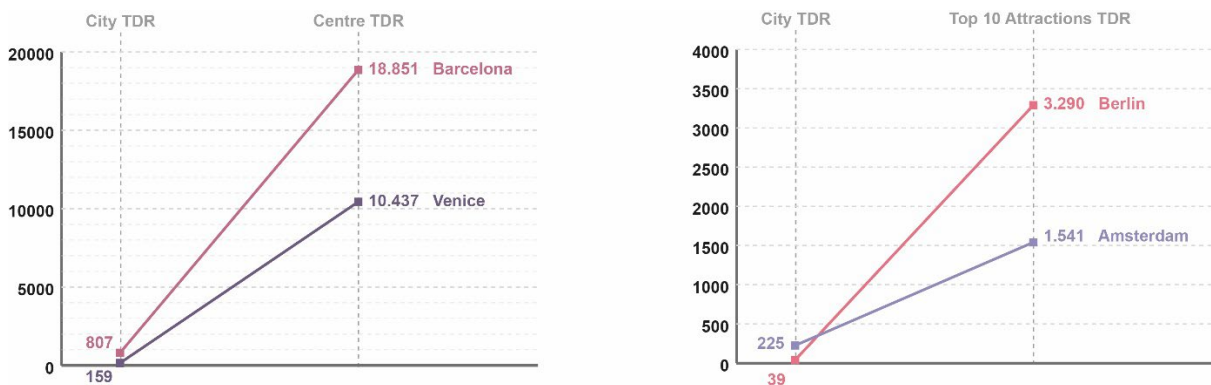


Figure 21: Calculation of the Tourism Density Rate. Elaboration by the Author.

Table 6: Comparative table with the data collected on this topic in relation to the cities of Venice, Barcelona, Amsterdam and Berlin. Elaboration by the Author.

City	Type	Attractions Concentration	Strategies' Dimension	Decade	Density	TPR	TDR	Overnight stays/km <sup>2</sup>	Overnight stays/inhabitant
Venice	Heritage and Attractions	Delimited Centre	Regulatory	1950	631	25	159	28.220	45
Barcelona	Heritage and Attractions	Delimited Centre	Regulatory Supportive	1990	16.355	5	807	200.196	12
Amsterdam	Urban Tourism	Sprawled	Regulatory Supportive	1990	3.876	6	225	72.503	19
Berlin	Urban Tourism	Sprawled	Regulatory Supportive	1980	4.149	1	39	34.873	8

Finally, it is important to emphasize, besides the state of tourist saturation, the measures taken by the government in the strategy of sustaining and minimizing this phenomenon. Table 9 aims to compare these examples in the classification of the destination; in the concentration of its attractions; in the dimension of most strategies; in the decade that tourism suffered a boost; and, in the data presented in the previous graphs. In this way, it is clear the complexity of measuring tourist saturation, since each city has its own particularity, whether by physical size or population or by the year in which the government promoted tourism. If we look at only one piece of data, we may have an erroneous perception; for example, if we consider only TPR and Overnight stays/inhabitant, we may conclude that Barcelona is not subject to Overtourism because its figures are low. But, these values are not high due to the significant population residing in the city, which happens to be the smallest of the four studied. Thus, when we look at parameters that consider the area, its numbers become the largest of the examples. Lastly, it is important to analyse every possible dimension to reach a fitting conclusion.





# 5

## THE CASE STUDY OF PORTO

### 5.1. INTRODUCTION

From the analysis of the cases found in the literature and gathered in the previous chapter, namely Venice, Barcelona, Amsterdam and Berlin, and based on the concepts presented previously, this chapter will present a case study in the city of Porto, Portugal. Firstly, it is essential to contextualize the situation in the national scenario. According to Costa et al. (2019), the country has become an increasingly popular and trendy destination over the years. This is directly reflected in the economy as tourism represented in 2018, 9.4% of all jobs and, in 2019, 8.6% of Portuguese GDP (Turismo de Portugal, 2021b). It can also be seen by the 14% increase in international arrivals from 2013 to 2017, resulting in 15.432 million in the most recent year (Freitas et al., 2020). All this expansion was stimulated by the municipality itself, which after the 2008 crisis, saw tourism as a way to leverage the country's economy, something that has proven very effective so far (Carvalho et al., 2020; Costa et al., 2019; Freitas et al., 2020).

When looking at the academic production, it is easy to see that the most analysed Lusitanian city is Lisbon. However, Peeters et al. (2018) place Região Autónoma da Madeira and the Algarve as two of the fifteen regions most prone to develop overtourism. This situation is further intensified because Portugal is the seventeenth most popular destination globally (McKinsey & Company & World and Travel & Tourism Council, 2017). Costa Xavier & Almeida (2017) points out that there is an increase in tourism in the Portuguese capital due to the popularisation of low-cost flights and the arrival of cruise ships on the Tejo river. Consequently, tourism has provided significant development and revitalization in the city and puts pressure on fragile ecosystems such as some historic central districts (Costa Xavier & Almeida, 2017). McKinsey & Company & World and Travel & Tourism Council (2017) creates a heatmap with nine categories that would be precursors of overcrowding and points out that, in Lisbon, the most alarming would be seasonality, the increase of arrivals, amount of historical sites and the importance of tourism for the city's economy. This can be seen in the ranking done by Amore et al. (2020) with the ratio overnight stays/inhabitant, in which the capital is in second place (17.3), only behind Venice (124.4) and ahead of Amsterdam (16.0), Barcelona (10.4) and Berlin (3.9).

In Lisbon, three major impacts can be pointed out on the already existing tourist pressure: gentrification; the emigration of locals; and the growth of tourism in residential neighbourhoods (Peeters et al., 2018). Thus, to outline a strategy for tourism until 2027, in 2017 a national plan was created based on sustainability between economy (increase overnight stays and revenue); society (end seasonality; qualify the population; ensure resident satisfaction); and environment (make the distribution and management

of energy, water and waste effective) (Turismo de Portugal, 2017). In the capital, there is still no specific policy of the municipality to combat gentrification, and it will be necessary, for the coming years, public strategies for housing and tourism that dialogue with social movements (Peeters et al., 2018), as there are many in the city that calls for the satisfaction of residents and their right to housing (Milano, 2017).

Lisbon is no exception for a significant increase in the tourism sector. Connected with the shift of tourism from coastal destinations to urban centres (Costa et al., 2019), the north of Portugal has experienced a constant increase in demand and supply from the sector. In this way, we can notice a greater production of scientific articles about this area, especially about Porto, the second-largest city in the country with the historic centre considered a World Heritage Site by UNESCO (Freitas et al., 2020). Porto was chosen as a case study of the thesis because even experiencing tourist growth in recent years, neither the population nor the government faces tourism as a problem in the city. If the municipality of Porto adopts a *laissez-faire* strategy, without considering any policies controlling the tourism-related activities, it is only a matter of time until tourism saturation reaches the levels of the European cases studied in the previous chapter.

In the following sections, we will develop a comprehensive study of the city of Porto, based on the theoretical review and on a comparative analysis with the European cities presented previously.

## **5.2. METHODOLOGY OF ANALYSIS**

For the analysis of Porto's tourism saturation, a model like the one already used in Chapter 04 will be applied but with more details and information from primary sources. In this way, a more direct comparison between European examples and the case study. Thus, it will be separated into the following categories: 1. Context; 2. Tourism in Figures; 3. Outcomes of Tourism Pressure; and 4. Existing Strategies. This logic follows the model of Peeters et al. (2018), which in a well-defined manner in the same topics for all case studies, separates the information in a brief introductory text about the current situation; statistics; major impacts; and the future of Overtourism. It also meets the Milano (2017) organization, which, even not having topics with the same denomination for all examples, separates its data in a text about the context and the main impacts of tourist saturation. However, in this model the statistics and measures taken by the government are within these two themes, which sometimes makes the comparison between the studies more difficult for not being intuitive.

The case study of Porto will be separated into categories and subcategories that, while following the pattern already used in this thesis and in the articles above, adding even more site-specific information, according to the following scheme:

- 1. Context:** This first topic will discuss the location; geographical features; the delimitation of the centre; historical context; and how tourism has been promoted over the years.
- 2. Tourism in Figures:** The second category aims to analyse the primary tourism figures and compare the cities analysed in the previous chapter.
- 3. Outcomes of Tourism Pressure:** The third topic aims to understand the main impacts on the city due to tourism pressure.
- 4. Existing Strategies:** the last topic will analyse the existing policies, both local and national, of the strategies already in place for tourism planning.

It is important to note that due to the current timing of the pandemic of COVID-19, data from up to 2019 will be used so that they are more faithful to reality since, in the last two years, the tourism sector has noted an interruption of its activities.

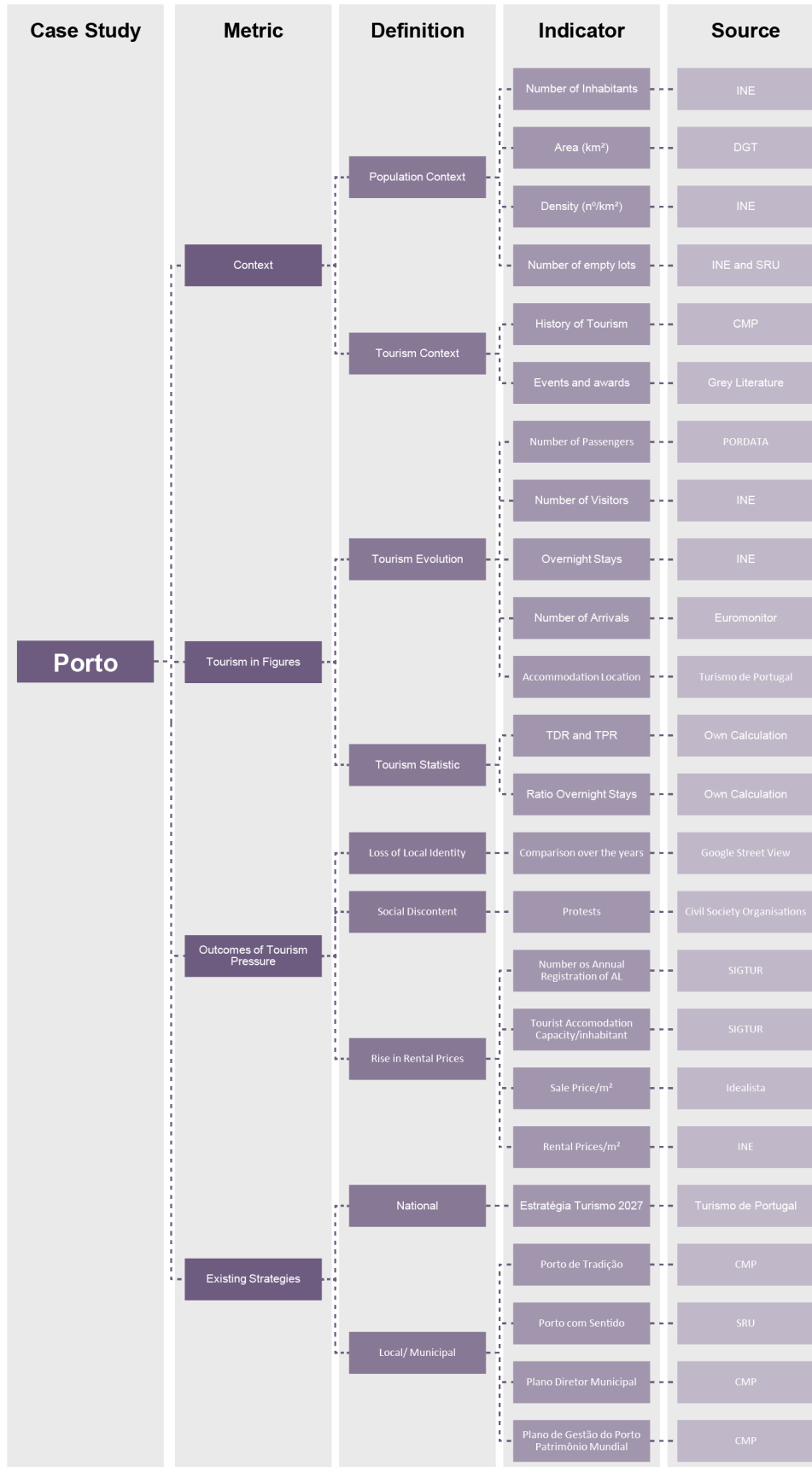


Figure 22: Methodological Framework. Elaboration by the Author.

### 5.3. THE CASE STUDY OF PORTO

#### 5.3.1. CONTEXT

Portugal's second-largest city has proved to be an increasingly popular destination as a cultural and multicultural destination for travellers and students (Ramires et al., 2018). While the number of tourists is increasing due to the architecture, gastronomy and the world-renowned Port wine, students are attracted by the nightlife and the excellent faculties that have their campi spread all over the city. In the town's largest institution, the University of Porto, the number of international students in regular programmes has tripled, while those enrolled in exchange have increased fivefold (Fernandes et al., 2018). This success that has been perceived in recent years was given through the promotion of Porto, made by the government since the nineties with the inscription of the centre in the UNESCO World Heritage, until today with the awards of Best European Destination.



Figure 23: Porto City Location Map. Elaboration by The Author.

##### 5.3.1.1. Porto before being World Heritage

Before being considered World Heritage, the historic centre has undergone major interventions in the 40s and 50s as the architects, to end the imminent degradation, preferred to demolish the existing buildings, following the modernist hygienic theories from the first half of the XX century (Câmara Municipal do Porto, 2010). There were no financial means to follow through with the intended plans and only some parts of Sé, Barredo and Miragaia were demolished (Câmara Municipal do Porto, 2010). In the 1960s, a paradigm shift can be perceived in the 1962 City Master Plan, which highlights the heritage qualities and identity of the city, that can be exploited and rehabilitated through tourism (Falcão, 2000). In this plan, the emphasis goes to the need to increase the quality of the visitor experience, to improve the conservation of the heritage, to remove the "slum islands", to establish a pedestrian

connection between Sé Cathedral and São Bento, as well as to promote tourist circuits in the city (Falcão, 2000).

Until the 1970s, the historic centre was one of the most deteriorated areas of Porto that had undergone an intense suburbanisation process leaving many buildings empty and others significantly degraded with only low-income residents (Câmara Municipal do Porto, 2010; Fernandes et al., 2018). In 1974, through the popular demand of Ribeira-Barredo residents for improvements in the quality of life, the historic centre is now seen as a heritage site by the government, which creates the CRUARB (Commissariat for the Urban Renewal of the Ribeira-Barredo Area), and declares the area as the first degraded area of Porto in need of urgent interventions (Câmara Municipal do Porto, 2010). This organisation will be essential for the classification of the centre as a World Heritage Site since in 1982 it becomes part of the Porto City Council and in 1993 publishes the book for the submission for the UNESCO document (Câmara Municipal do Porto, 2010).

#### 5.3.1.2. Porto as an established tourist destination

In 1996, a part of the centre of Porto was considered World Heritage Site by UNESCO (Figure 24) because, according to the organisation, it has an inestimable value of a 2,000-year history dating back to the Roman period (Freitas et al., 2020). Some authors consider this milestone as the starting point for the regeneration of the city that projected it internationally, affirming its position as a cultural and tourist destination (Gusman et al., 2019; Ramires et al., 2018). Something that directly impacted the rehabilitation of its build complex as in 2008, only 25% was considered in good condition, a figure that rose to 39% in 2016 (H. Santos et al., 2017).



Figure 24: Map of the boundaries of the historical world heritage centre with its buffer zone. Adapted from Câmara Municipal do Porto, 2020

Other events and awards were also critical to the regeneration of the city (Figure 25). The first of them, Porto 2011 European Capital of Culture, allowed a large-scale intervention in improving infrastructure, the regeneration of public space and the construction of new equipment, such as the Casa da Música

(Câmara Municipal do Porto, 2010). In addition, other interventions followed: the implementation of more parking spaces, the requalification of iconic areas such as Praça da Cordoaria, the reorganization of traffic with the Ceuta tunnel opening, and the regeneration of non-central spaces (Antas and Boavista) (Gusman et al., 2019). According to Ramires et al. (2018), since this event, the city has been seen as renewed in which it mixes heritage with modernity and sees in tourism an excellent opportunity for its development. Regarding awards, in 2012, Porto won the European Best Destination award, an honour that would be repeated in 2014 and 2017, something that characterises the consolidation of the city as a popular tourist destination. In 2018, it appeared for the first time in the Euromonitor ranking as Top 100 City Destinations in position 96 and as one of the four cities to watch (Euromonitor, 2018). Finally, in 2020 it received Europe's Leading City Break Destination award from the World Travel Awards, beating cities like Amsterdam, Berlin, London, Paris, Rome and Venice (World Travel Awards, 2020).

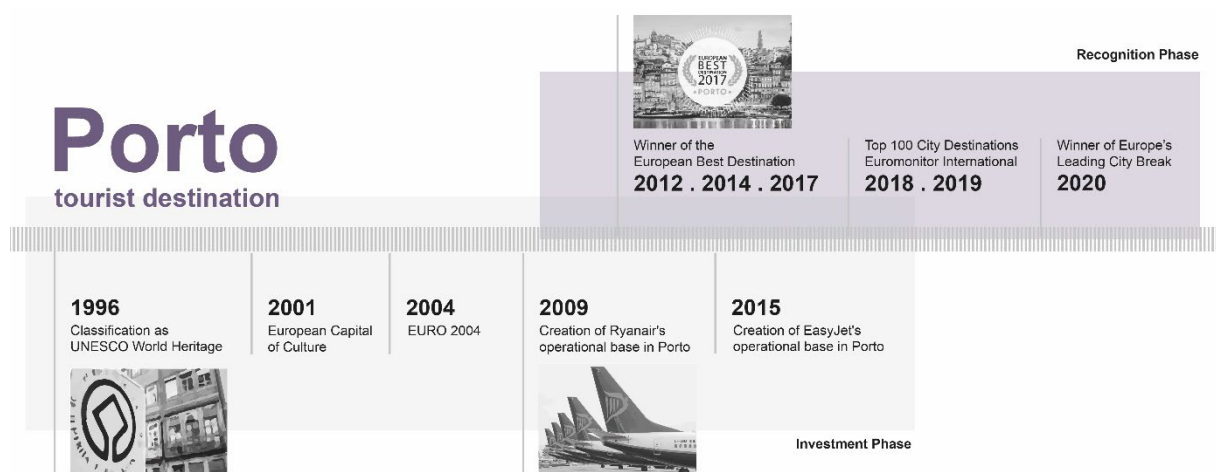


Figure 25: Timeline with the most important events and awards for the regeneration of the city of Porto. Elaboration by the Author.

Besides the extraordinary cultural richness of the city, something intensely used by marketing campaigns as a way to attract new visitors (Gusman et al., 2019), Porto has other unique characteristics that facilitate the insertion of tourism. The first is the presence of an international airport, something that allows stakeholders to invest more easily (Feio & Guedes, 2013). Moreover, it is near Lisbon and the border with Spain, becoming an important European hub. However, it can also attract many tourists from South America, mainly from Brazil, due to the lower costs concerning the rest of Europe and the proximity of the language. Finally, it has a waterfront in the historical centre, allowing for a large tourist development in just a few blocks, making it easier to control and invest (Falcão, 2000). Thus, Porto consolidated itself as a tourist destination with these facilitating points and was able to renew its historical centre, giving it a "new life" through investments and the diversity of visitors and students (Fernandes et al., 2018).

### 5.3.1.3. The role of tourism in the historical centre

As previously mentioned, it is impossible to dissociate the urban regeneration of the centre and tourism, since this sector saw in the emptying of the area (by suburbanisation and a shrinking phenomenon), an opportunity to invest. This argument is repeated by many authors and mainly by government players, as

it was the case of the interview with the architect Vera Chapado from Turismo de Portugal<sup>3</sup> in which she states that without this sector, it would be difficult to have such an intense regeneration that brought so many economic benefits, such as the increase of jobs. It is essential to highlight the government entities that enabled and managed this regeneration. As previously stated, CRUARB was the first organisation that emerged as a direct response to the abandonment of the Barredo-Ribeira area and that was essential for the classification of Porto as a World Heritage Site (Câmara Municipal do Porto, 2010). Later, in 2003 it was extinguished and replaced in 2004 by the Porto Vivo Urban Rehabilitation Society (SRU-Porto Vivo), which played a fundamental role in restoring Porto's downtown (Câmara Municipal do Porto, 2010).

The following year, the SRU published the Masterplan for the area, which aimed to promote the revitalization through commerce, culture and leisure while ensuring sustainability and respecting its residents (Câmara Municipal do Porto, 2010; Gusman et al., 2019). In Figure 26, in 2006, the Municipal Masterplan was launched, and in 2010 the Historic Centre Management Plan for the World Heritage area was published. These two plans still dictate the city's planning rules as the official publications of their revisions, which are due in 2021, have not yet been released. Moreover, it is possible to notice that in 2016 and 2020, after the intensification of tourism, there was the creation of two programs aimed at minimizing the displacement of residents and the extinction of traditional trades. The first, "Porto com Sentido", promotes affordable rents in the city's central areas and had a re-edition in 2021 that prioritized young families who could not afford the rents in the area. The "Porto de Tradição" focuses on commerce and the preservation of traditional and historic shops, with a government protection programme.

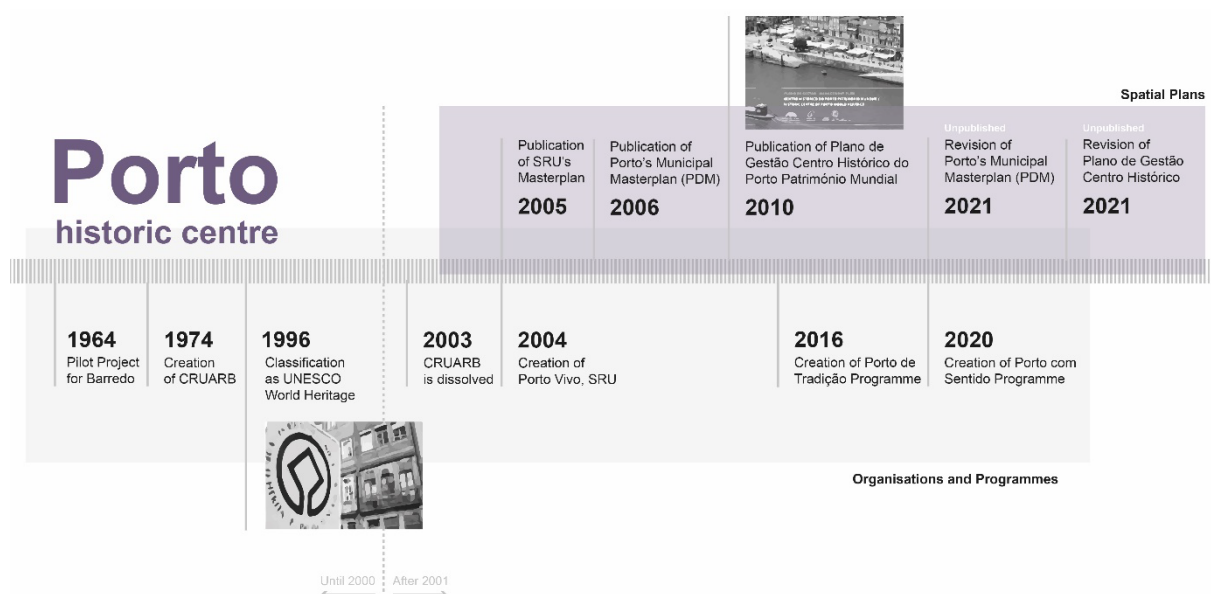


Figure 26: Timeline with the most important organisations, programmes and spatial plans in the historic centre

It is also important to note the general context of the centre's population when tourism was consolidated. According to an interview given by Pedro Baganha (Porto Innovation Hub, 2021), the architect who is leading the revision of the Municipal Master Plan, the tourism sector occupied an already emptied centre and saw, in this situation, an investment opportunity that led to the tremendous urban rehabilitation seen nowadays. This argument is repeated by many authors of the literature review and downtown Portuguese, questioned on the subject. The city still suffers a significant loss of population, which can

<sup>3</sup> Turismo de Portugal is the National Tourist Authority attached to the Ministry of Economy and Digital Transition

be seen in Figure 27, where 28% was lost in almost 30 years. However, in comparison with other cities, Porto is second only behind Barcelona, being denser than Amsterdam, Berlin and Venice (Figure 28).

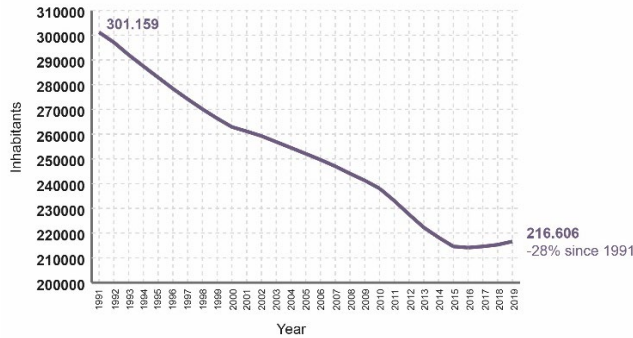


Figure 27: Historical series of the population in the city of Porto. Data: INE.

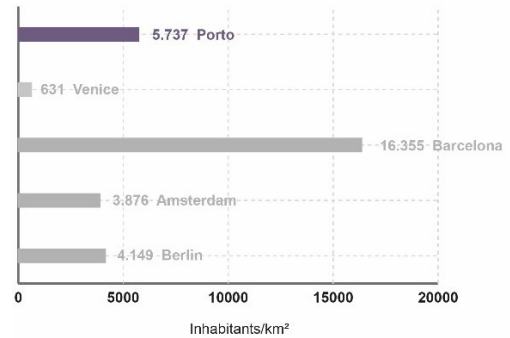


Figure 28: Population density (2019). Elaboration by the Author.

This population loss can also be perceived through the separation of these data in the city's neighbourhoods. Thus, in Figure 29, we can perceive the population density in the 2011 Census that shows a significant concentration in Bonfim and in the historic centre, "Núcleo Histórico", that is constituted by the union of neighbourhoods in the area<sup>4</sup>. It is also important to note that the highest proportional population loss between 2001 and 2011 was recorded in these regions.

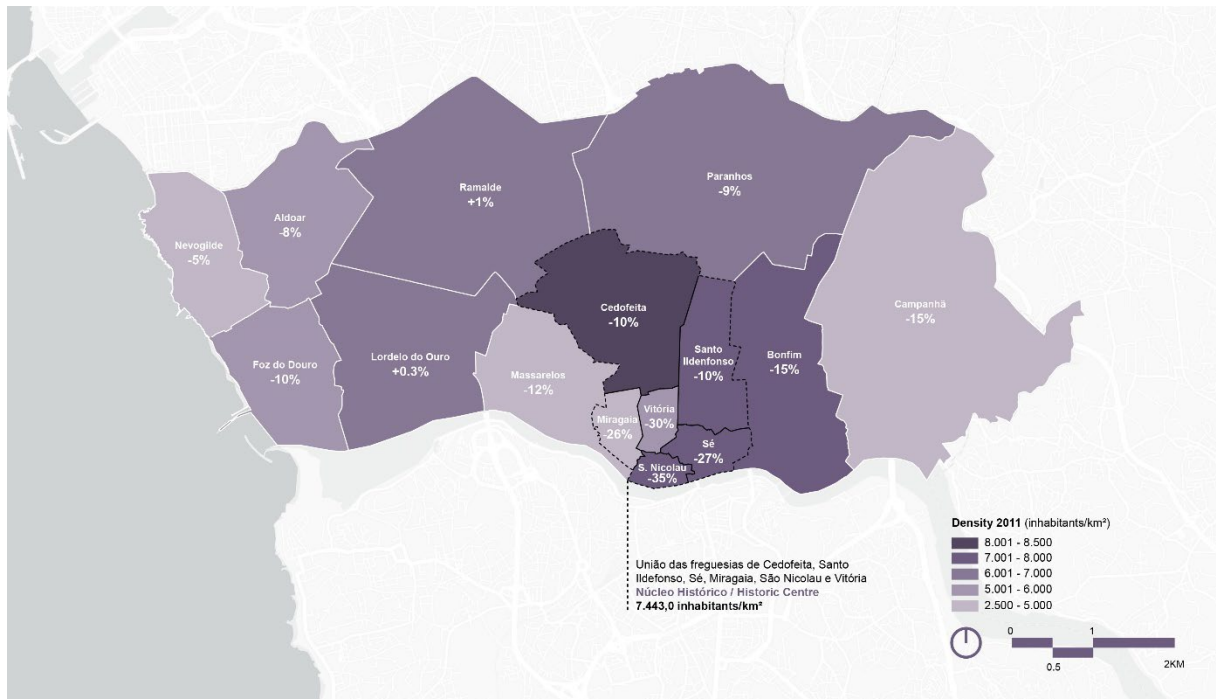


Figure 29: Map of Porto's density by neighbourhoods in 2011 and the loss in percentage, compared to 2001. Data: INE (Appendix 2). Elaboration by the Author.

<sup>4</sup> As there is already this separation by the government of the historic core in these neighbourhoods, here they will be used as the study area since much data is only available at this scale.



In Figure 30, we can see the population density by statistical subsection used by the national agency to conduct the 2011 Census. We can see in the central districts the large concentration of highly occupied areas while in the rest of the city there are many blank areas.

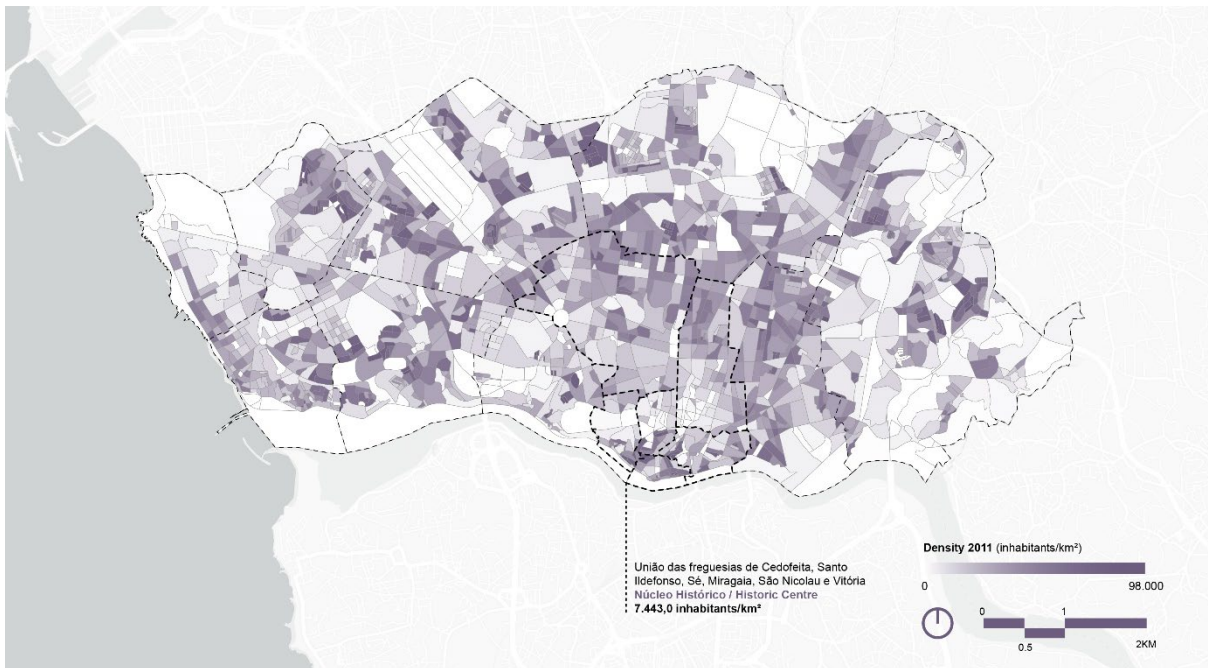


Figure 30: Map of Porto's density by statistical subsection in 2011. Data: INE. Elaboration by the Author.

However, even being the densest area, the historical centre is also characterised by the locality with the highest percentage of empty conventional dwellings in the city, as shown in Figure 31. Attention should be drawn to the regions of Vitória and São Nicolau that has a percentage higher than 40%, while in the non-central neighbourhoods, it is no more than 20%.

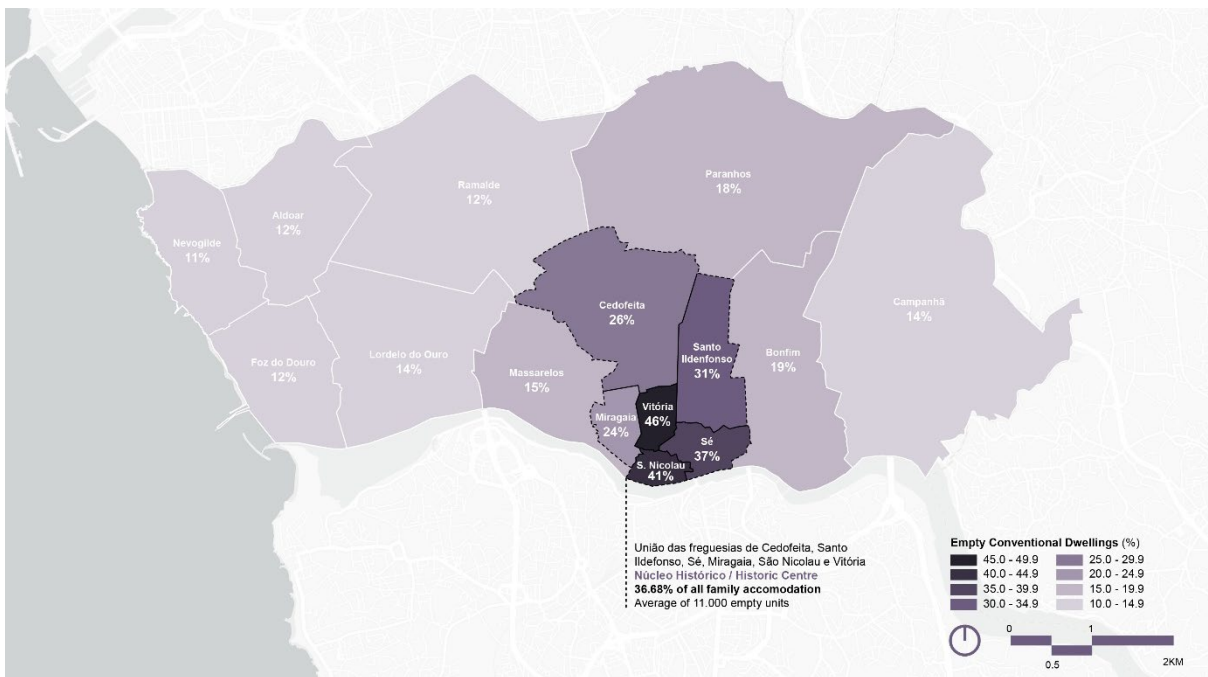


Figure 31: Map of Porto's Empty Conventional Dwellings in percentage. Data: INE. Elaboration by the Author.

In Figure 32 we can observe this concentration in the sub-regions. Once again, the central areas have a higher percentage of the unoccupied regions that reach an average of 11,000 empty units. Thus, even though the centre has undergone intense regeneration, it is still devoid of inhabitants.

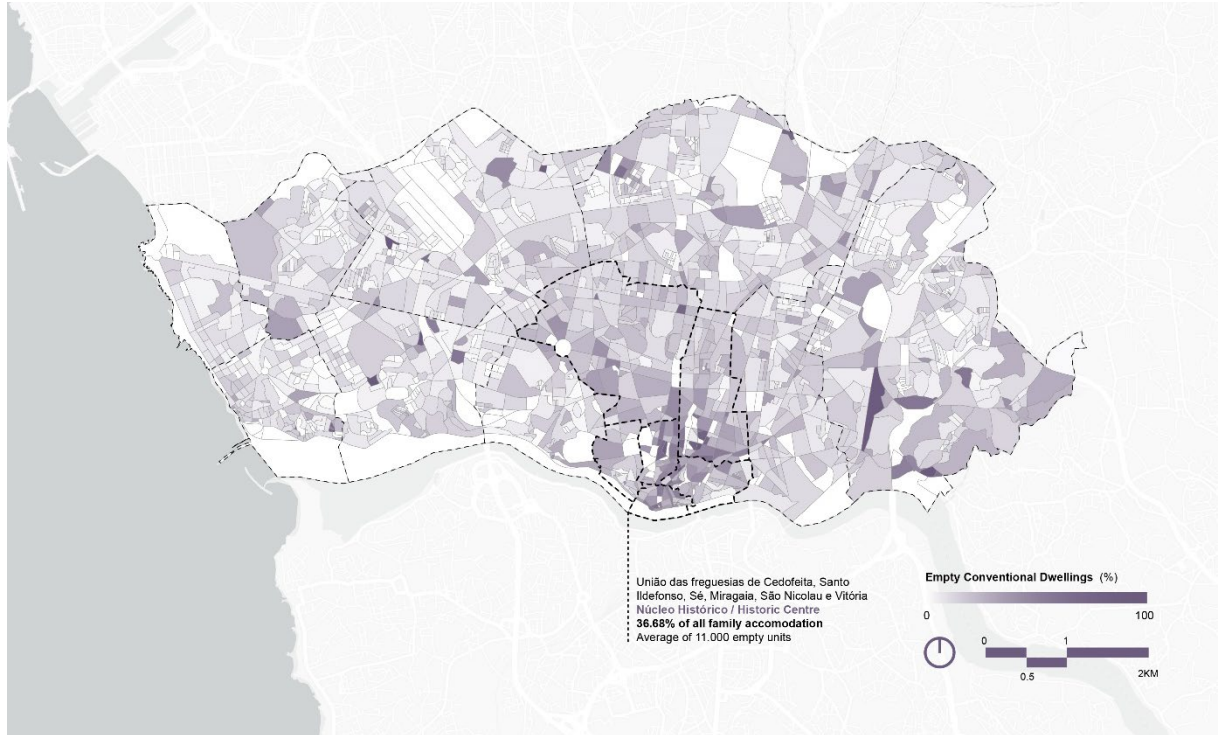


Figure 32: Map of Porto's Empty Conventional Dwellings in percentage by estatistical subregion. Data: INE. Elaboration by the Author.

SRU Porto-Vivo does annual monitoring of the World Heritage Historic Centre's management plan. One of the data studied is the number of buildings not occupied for more than one year. As much as there is a slight variation of plots surveyed each year, it is possible to perceive a stability in the numbers of voids which in 2019 counted 314, an average of 18% of the total (Figure 33).

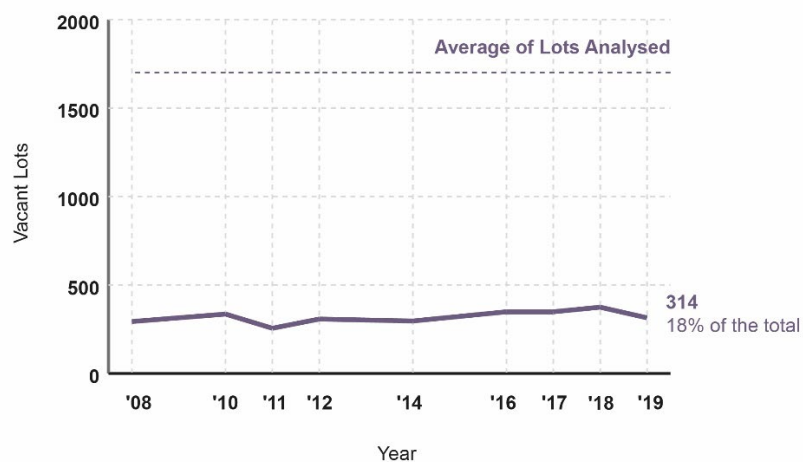


Figure 33: Number of buildings vacant for more than one year in the Historic Centre World Heritage and its buffer zone. Data: SRU. Elaboration by the Author.

### 5.3.2. TOURISM IN FIGURES

The first indicator used for the analysis of tourism figures is the growth in the number of arrivals<sup>5</sup>, in this case, collected in the Top 100 City Destinations reports that ranks the cities using this parameter. Porto appeared on the list for the first time in 2018 and grew 42 positions since 2012 (Euromonitor, 2018, 2019). Thus, as shown in Figure 34, there was a 126% growth between 2016 and 2019, in a period that tourism was already consolidated.

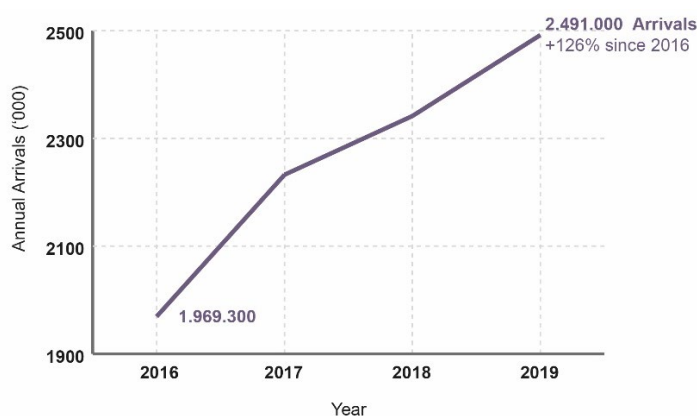


Figure 34: Growth of Annual Arrivals in Porto. Data: Euromonitor (2019). Elaboration by the Author.

If we look only at the numbers of passengers regarding Porto Airport (Francisco Sá Carneiro Airport), from 1991 to 2019, we can perceive an even more expressive percentage increase of 901%, as can be seen in Figure 35. Contributing to the growth, it is vital to highlight the establishment of the base of airlines in Portugal that first launched themselves in the city of Porto, as is the case of Ryanair in 2009 and EasyJet in 2015.

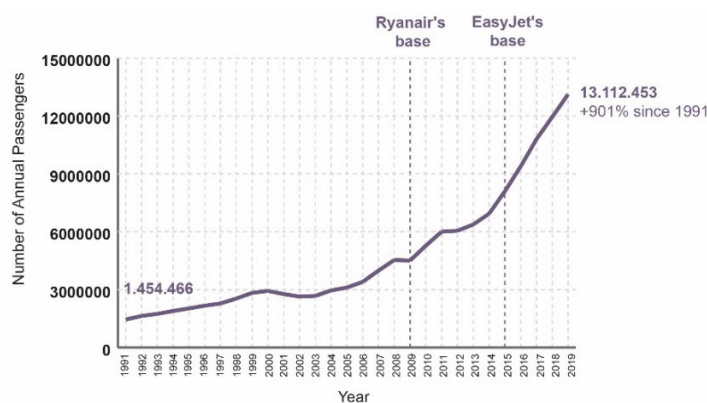


Figure 35: Growth in the Number of Passengers at Porto Airport. Dados: PORDATA. Elaboration by the Author.

Finally, the last two indicators are correlated since they show the exponential growth in the number of tourists in Porto. Overnight Stays represents the number of overnight stays per year in the city and had a 314% growth since 2009 (Figure 36). The second, Number of Visitors, represents the number of guests in tourism accommodation establishments of all types and had a 238% growth since 2009 (Figure 37).

<sup>5</sup> Arrival can be defined as: "as international tourists, i.e. any person visiting another country for at least 24 hours, for a period not exceeding 12 months, and staying in paid or unpaid, collective or private accommodation" (Euromonitor, 2018, p. 1)

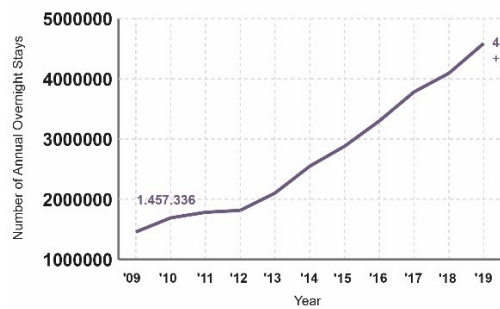


Figure 36: Number of Annual Overnight Stays. Data: INE. Elaboration by the Author.

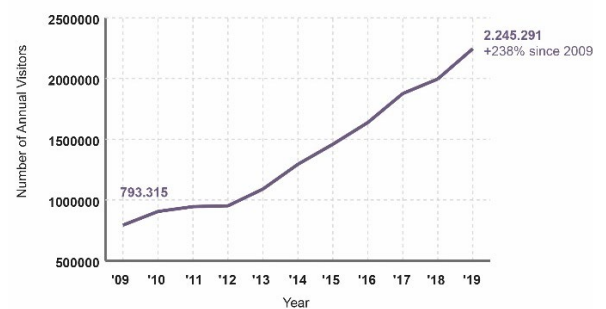


Figure 37: Number of Annual Visitors. Data: INE. Elaboration by the Author.

With the collection of these primary data, it is possible to calculate the statistics used by the authors in the literature review and already analysed in the previous chapter, namely Tourism Penetration Rate, Tourism Density Rate, Overnight Stays/km<sup>2</sup> and Overnight Stays/inhabitant. The organization of these indicators and their calculation can be found in Appendix 3. Therefore, with these figures, a comparison was made between Porto and the other European examples (Venice, Barcelona, Amsterdam and Berlin) so that the state of tourism in the Portuguese city could be perceived more easily.

For the first statistic, the Overnight Stays/km<sup>2</sup> ratio (Figure 38), places Porto only behind Barcelona, which has a small territory and a large number of stays. As for the Overnight Stays/inhabitant ratio (Figure 29) the Portuguese city is only behind Venice since the Italian island has a significant population loss. Thus, even though tourism in Porto is something recent and not as discussed as in the other places mentioned in the graphs, it is already noticeable that the sector has expressive numbers.

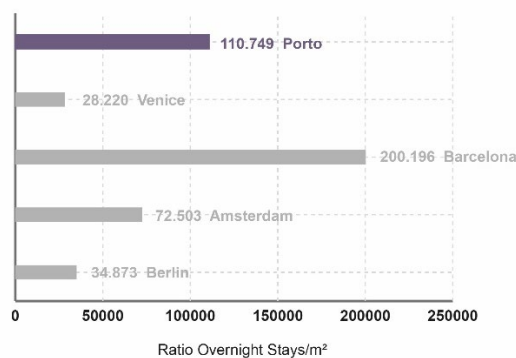


Figure 38: Ratio Overnight Stays/km<sup>2</sup>. Elaboration by the Author.

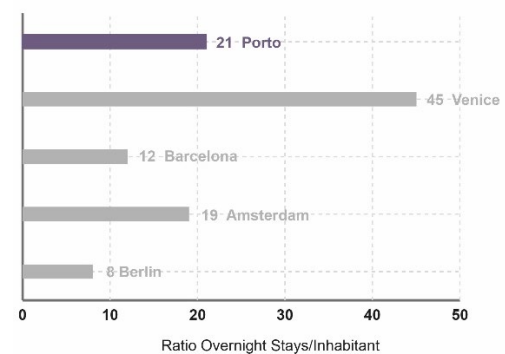


Figure 39: Ratio Overnight Stays/inhabitant. Elaboration by the Author.

When comparing Porto's Tourism Density Rate with other cities, it is noticeable that it has a similar number to Venice and Amsterdam, while much higher than Berlin and extremely lower than Barcelona. However, according to Figure 17 elaborated by Peeters et al. (2018) Porto's index is lower than the one established by the Authors in urban destinations. Likewise, the Tourism Penetration Rate shows a lower number than the ones established by the authors and lower than most of the cities analysed.

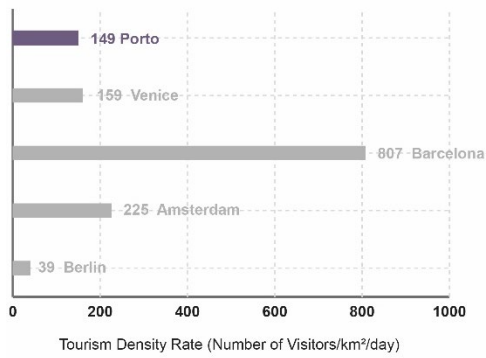


Figure 40: Tourism Density Rate. Elaboration by the Author.

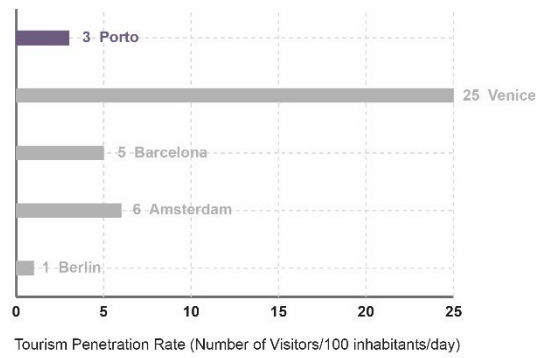


Figure 41: Tourism Penetration Rate. Elaboration by the Author.

Thus, we can see that even though tourism in the city has grown exponentially in recent years, it still does not present statistics that are as worrying when compared with other cities that have had this phenomenon for longer. According to Pedro Baganha (Porto Innovation Hub, 2021), the problem of Porto is not the excess of tourism but its concentration in only one area, namely the historical centre of the city. As said before, because most of the buildings were vacant, the sector found more investment opportunities in that place than in others. This argument is perceptible when looking at Figure 42, which shows the location of the tourist accommodation regulated and registered by the municipality, called "Alojamento Local". These properties can be villas, flats, lodging establishments or rooms, with a maximum limit of 9 rooms and 30 users per registration (Turismo de Portugal, 2021a).

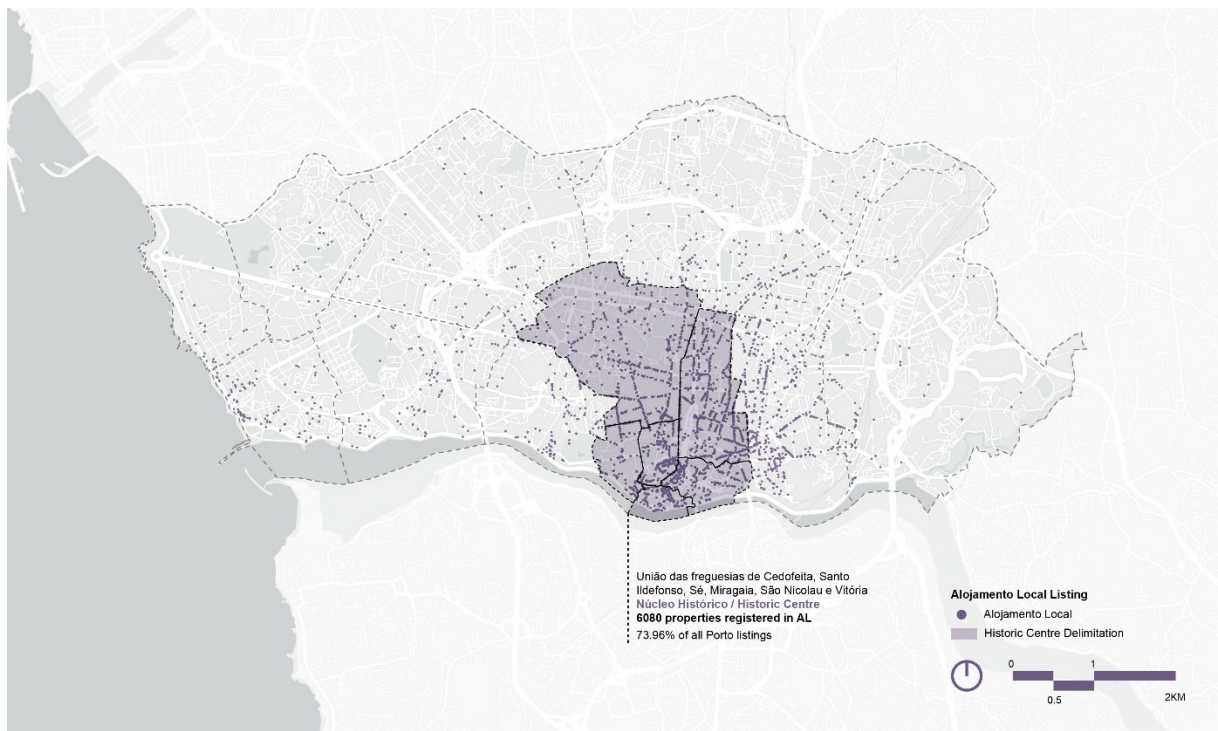


Figure 42: Map of the location of Tourist Accommodation. Data: Turismo de Portugal. Elaboration by the Author.

In 2019, the municipality of Porto City Council established the prohibition of the licenses permits for new properties in the "Alojamento Local" programme in areas predominantly in the Historic Core, as shown in Figure 43. However, most of the area remains accessible for new registrations.

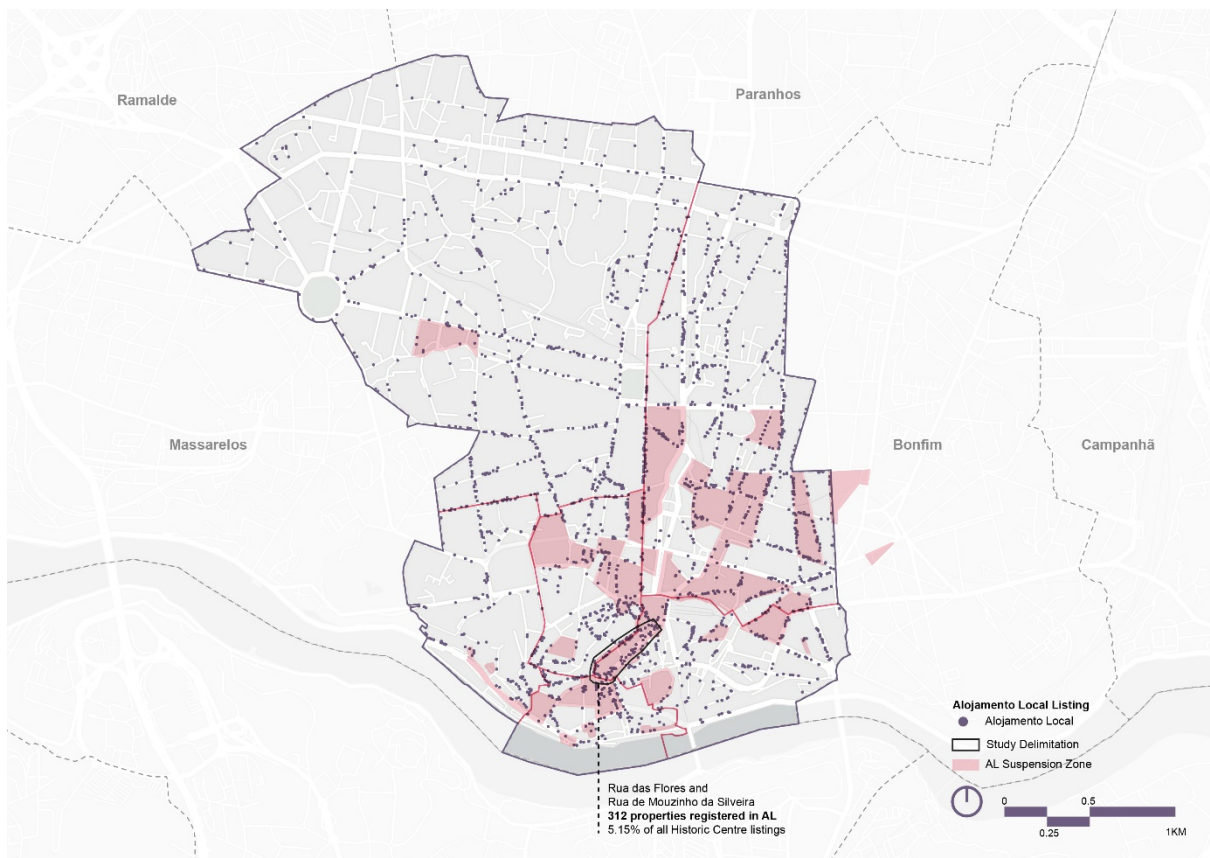


Figure 43: Map of the location of Tourist Accommodation in the Historic Centre. Data: Turismo de Portugal and Câmara Municipal do Porto. Elaboration by the Author.

When we look at the same indexes analysed above but focusing only on the historic centres of Porto, compared to Venice and Barcelona<sup>6</sup> with similar geographical structures, namely a well-defined core, it is possible to see that the Portuguese city is still behind the others.

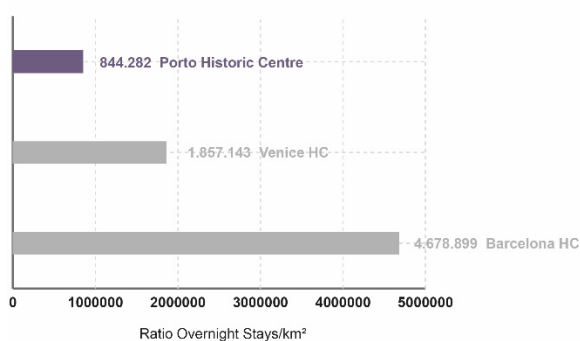


Figure 44: Ratio Overnight Stays/km² in Historic Centre. Elaboration by the Author

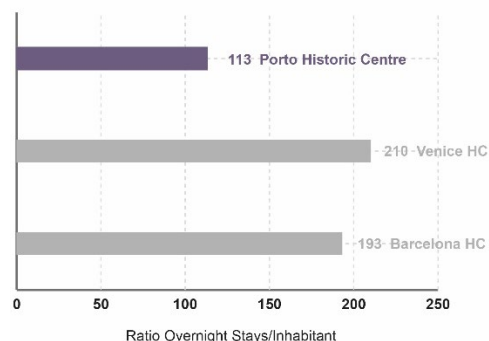


Figure 45: Ratio Overnight Stays/Inhabitant in Historic Centre. Elaboration by the Author.

<sup>6</sup> The centres of Berlin and Amsterdam have not been compared as, as they do not have a well-defined centre, there is no specific data for the area.

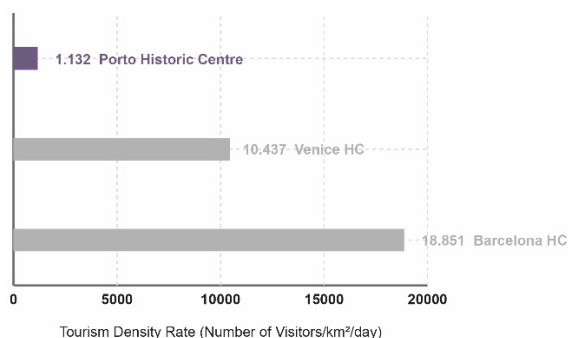


Figure 46: TDR in Historic Centre. Elaboration by the Author

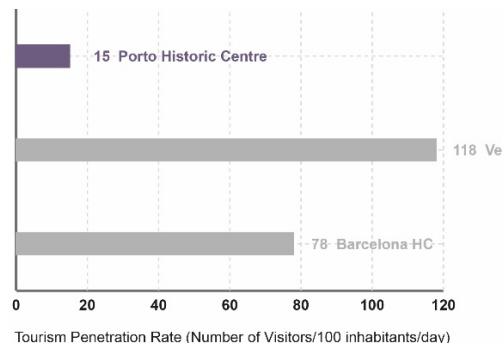


Figure 47: TPR in Historic Centre. Elaboration by the Author.

### 5.3.3. OUTCOMES OF TOURISM PRESSURE

#### 5.3.3.1. Loss of Local Identity

The city of Porto had a tradition of concentration of some professions in specific streets and neighbourhoods, as is the case of shoemakers in Rua dos Congostas, rope manufactures in Cordoaria and goldsmiths in Rua das Flores and Rua do Loureiro (Santos, 1978). However, with this large tourist concentration in the Historic Core, one of the most noticeable impacts on the city's experience is the shift from traditional shops to tourist-oriented ones, both in the choice of products and price range. CMP created the “Porto com Sentido” project in 2016 which aimed to protect those shops that were approved by the programme. Other shops were affected by real estate speculation and even the one used as an example in the Historic Centre Management Plan became a shop selling canned sardines to tourists.



Figure 48: Photo used in the Historic Centre Management Plan as an example of traditional commerce. Source: Câmara Municipal do Porto, 2010, p. 101



Figure 49: Photo of how the shop looks today in which the original sign has been kept, with few adaptations, while selling canned sardines with years on the packaging. Source: The Author.

In this way, to exemplify this paradigm shift a study area (Eixo Mouzinho-Flores) was chosen and marked in Figure 50. This place was chosen both for its historical importance as for its value in the tourism market. In terms of history, Rua das Flores began to be opened in 1521 to connect the Monastery of São Bento to the rest of the city and became one of the most essential circulation axes, being the first paved street in Porto (Porto Vivo SRU, 2012). By connecting the most important economic areas of the city, it was home to the wealthiest families and the main goldsmiths. The Rua de Mouzinho da Silveira started to be opened in 1877 to connect the higher and lower levels of the city, something that was done through the Rio da Vila and that, for health reasons, was channelled entirely in the opening of the new axis (Porto Vivo SRU, 2012).

In terms of tourism, it has a high concentration of tourist accommodation and represents 5% of the Alojamento Local listings in the historic centre core (Figure 43). Since 2019, it is prohibited to grant new licenses. In addition, it is worth noting that the area underwent a major urban operation in 2012 through the SRU, which transformed Rua das Flores into a pedestrian street through the process on the Mouzinho-Flores Axis. This project was seen with much enthusiasm and is considered a success since it managed to improve the conservation status of the buildings, besides occupying those that were abandoned or in ruins. However, as shown in Figures 51 and 52, as much as these processes did occur, the street had a large concentration of fabric shops, which were converted into shops aimed at tourists.



Figure 50: Map with the location of tourist accommodations with the date of the last registration. Data: Turismo de Portugal. Elaboration by the Author.

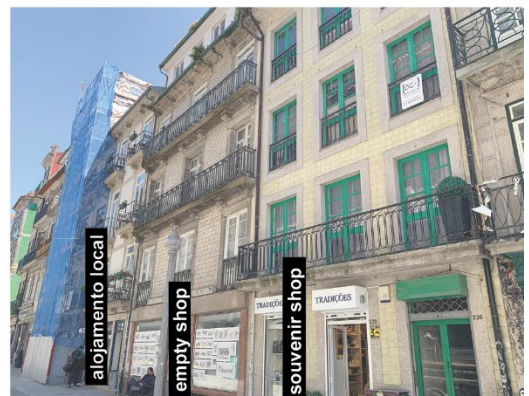


2009



Source: Google Street View

2021



Source: The Author

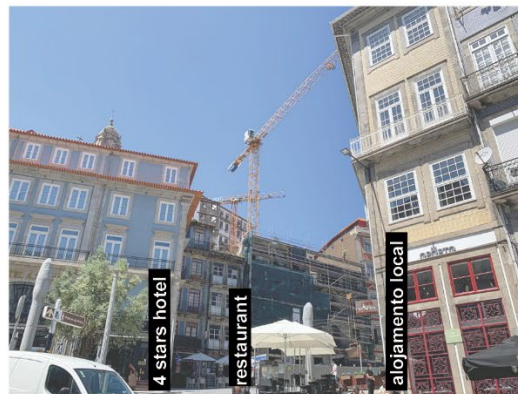
Figure 51: Comparison of Rua das Flores in the years 2009 and 2021. Source: Google Street View and The Author.

2009



Source: Google Street View

2021



Source: The Author

Figure 52: Comparison of Rua das Flores in the years 2009 and 2021. Source: Google Street View and The Author

### 5.3.3.2. Social Discontent

As the city centre was empty, with most dwellings vacant, initially, there were no conflicts between the residents. However, with the significant growth of the last few years, the residents who have continued to live in the area have seen their houses being exchanged for local accommodation due to real estate pressure. This is especially true in areas closer to tourist attractions, such as Sé and Ribeira. According to Gusman et al. (2019), the government, in particular the municipality, is being accused by civil society organisations of not protecting the residents and of not regulating seasonal rentals and other problems related to tourism. An example, a group of protesters came out to the streets in Ribeira in 2018, with banners saying, "can I live where I was born?" or "The residents of Porto are in the peripheries" (Figure 22). Other demonstrations and opinions against tourism have occasionally appeared in the media in the last years, usually associated with cases of eviction. This dissatisfaction is still perceived by a minority of the population since most still see tourism as a sector that has rehabilitated and given new life to an extremely degraded area in the 1970s and 1980s. In a study based on interviews with residents of the centre, Freitas et al. (2020) conclude that residents still perceive tourism as something positive, which is excellent for the tourist's own experience.



Figure 53: Protests against the evictions of its residents in 2018.

Source: Assembleia de Moradoras e Moradores do Porto

### 5.3.3.3. Rise in Rental Prices

With the great attraction of tourism in the area, many investors acquired properties to be transformed into tourist accommodation. This phenomenon occurs in many European historical centres and usually leads to a process of gentrification and real estate speculation (H. Santos et al., 2017). Something similar

has been happening in the centre of Porto with the creation of the "Local Accommodation" in 2009, which has become an important business for investors. According to Gusman et al. (2019), in 2010, there were only ten registered properties, a number that reached 11,583 in 2018. Moreover, in the beginning, the activity was not declared in order to avoid taxation. However, according to Author (2019), the listing of these properties on Airbnb has slowed down over time, revealing some maturity of the sector. It is also worth noting that in 2021, this number dropped to 8,000 listings, which may reflect the COVID-19 pandemic or the market adapting to saturation (Figure 54). It is essential to remember that there is a large concentration in the historic core (Figure 55), which increases real estate pressure.

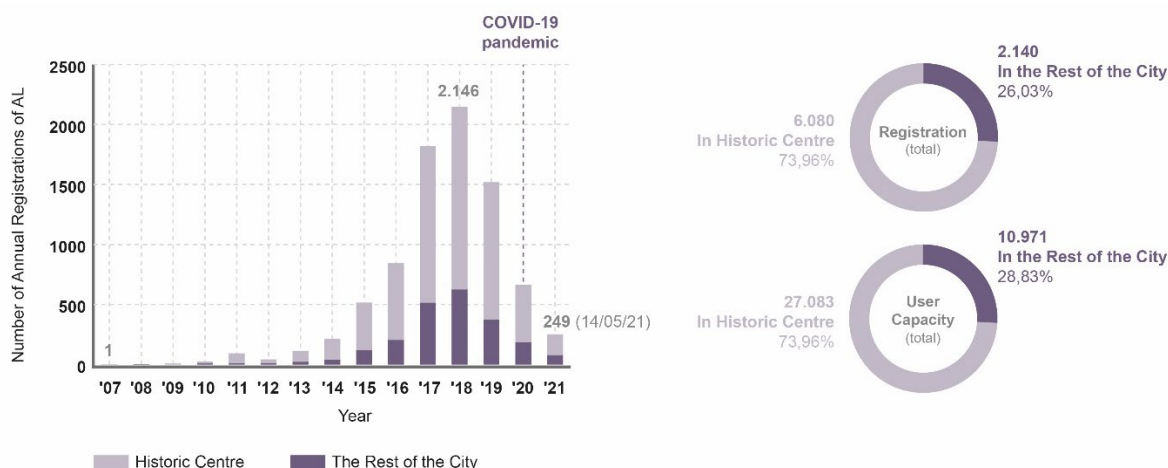


Figure 54: Number of Annual Registrations of Alojamento Local still active and the Percentage in The Historic Centre. Data: SIGTUR. Elaboration by the Author.

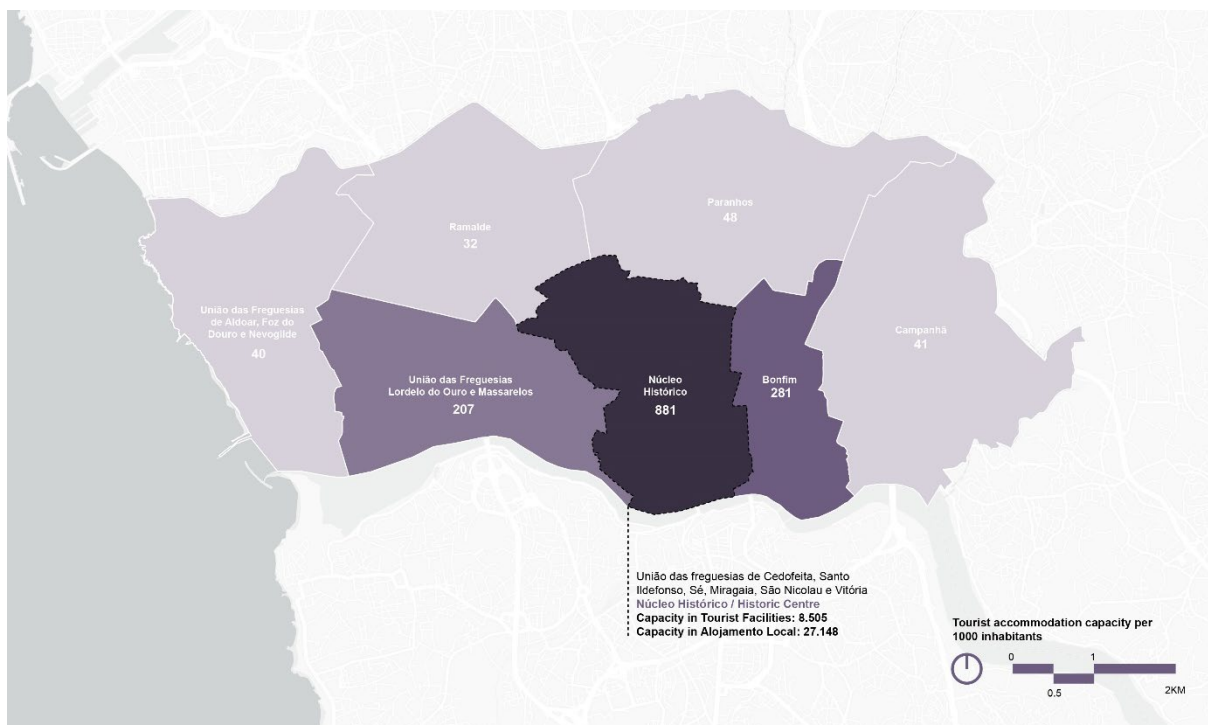


Figure 55: Tourist Accommodation Capacity/1000 inhabitants. Data: SIGTUR. Elaboration by the Author.c

In any case, the entry of this type of accommodation created great speculation. Today, a one-bedroom flat in the centre costs around one minimum wage, an unattainable value for many families, especially young ones. Meanwhile, unlike the municipalities of Barcelona and Berlin, the Porto government only facilitates the registration process instead of increasing protection for the residents who still live in the area (H. Santos et al., 2017). The lack of regulation allows for an increase in the gap between profits from renting to P2P platforms and renting to long term residents (Gusman et al., 2019). The increase in the price of rentals is no unique. Similarly, the cost of square meters in Porto has also grown by 217% between 2015 and 2021, even with the ongoing pandemic (Figure 56).

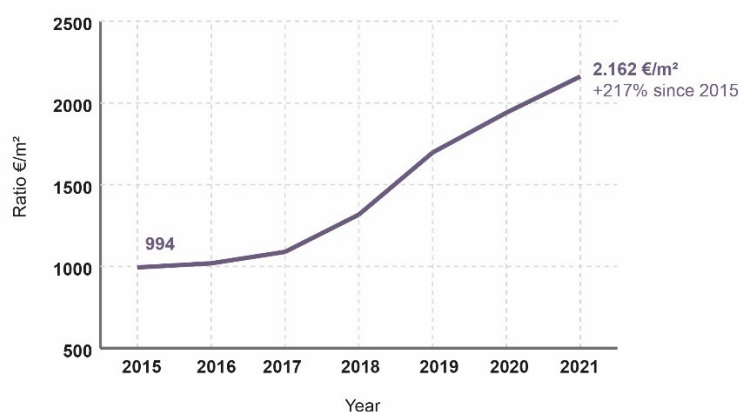


Figure 56: Rise in the Sale Price of m². Data: Idealista. Elaboration by the Author.

There is few available data of real estate market prices per streets or blocks in Porto, so it is difficult to estimate the increase in the axis Mouzinho-Flores. However, JLL (2018, 2020) estimates that prime rent in this area went from 30€/m² in 2016 and 2017, to 40€ in 2018 and 2019, which was then reduced to 35€ in 2020. In addition, it is possible to see the growth in rent prices by neighbourhood (Figure 57), which places the historic core as the second most expensive neighbourhood in the city.

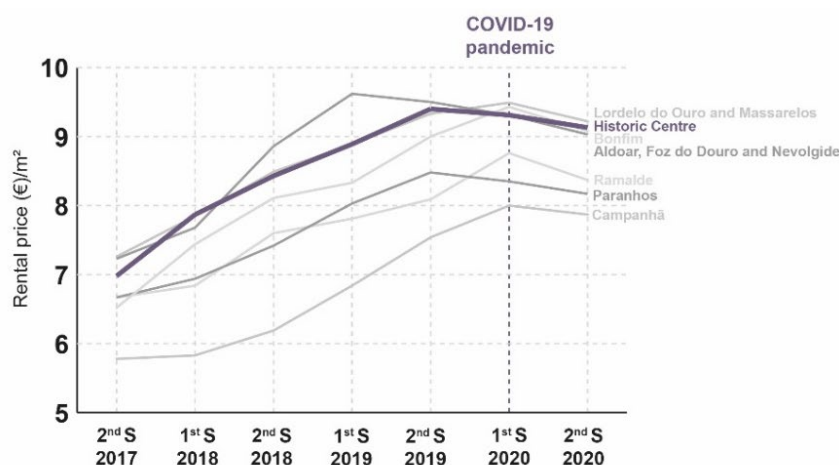


Figure 57: Rental prices per square metre in the neighbourhoods of Porto. Data: INE. Elaboration by the Author.

#### 5.3.3.4. Revitalization of the centre

As in the other cases studied, one cannot only talk about the negative impacts. As previously stated, the centre of Porto has undergone a significant revitalization primarily due to investment from tourism. This can also be perceived in Axis Mouzinho-Flores and in the data collected by SRU in monitoring the urban

operation. It can be seen that the number of empty lots decreased considerably, while the wholly occupied already represent 47.3% of the total 245 lots analysed. As seen in Figures 51 and 52, much of this redevelopment has taken place on an empty street that has gained new tourist uses.

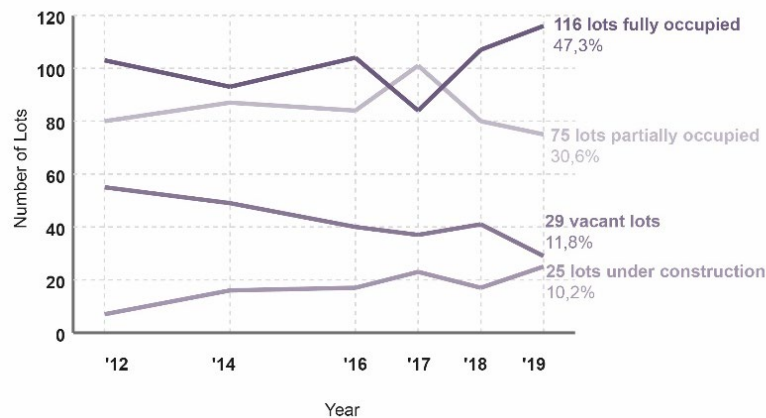


Figure 58: Distribution by plot classification on the Mouzinho-Flores axis. Source: SRU. Elaboration by the Author.

#### 5.3.4. EXISTING STRATEGIES

This topic will only address what we consider as the most relevant planning policies and programmes for tourism in Porto that are still in force, not including those no longer in force, as the tourism scenario is constantly changing.

##### 5.3.4.1. National level

###### a. Tourism Strategy 2027 (Estratégia Turismo 2027)

The strategic plan for national tourism in force was launched in 2017 and has its objectives outlined until 2027 (Turismo de Portugal, 2017). It also guides the tourism strategies made by all levels of government that must always take into account sustainability, according to the interview made with architect Vera Chapado from Turismo Portugal. One of the main assumptions is a combination of long and short term measures, which would be instituted in 2017 or 2021 (Turismo de Portugal, 2017). In addition, the figures for Portugal (NUTS I or NUTS II levels) are analysed, which at the time of the study were reaching record levels of growth. The strategies of the plan aim to make the country an increasingly competitive destination with the rest of the world, through eight objectives: increase tourism demand in the country; grow revenue from overnight stays; decrease seasonality; increase the qualifications of tourism workers; ensure a good impact on the local population; increase the energy efficiency of tourism; promote rational management of water in tourism; and promote efficient waste management in tourism (Turismo de Portugal, 2017). The plan also provides for three entities to manage and monitor the indicators over these ten years (Turismo de Portugal, 2017). Finally, it is possible to observe that even though it is mentioned in the plan, the resident and the social well being are still not a priority, this continues to be the economic development. Moreover, as it is a strategy at a national level, it does not go into detail in the northern region since most of the overnight stays are concentrated in Algarve, Madeira Island and the Metropolitan Area of Lisbon (Turismo de Portugal, 2017).

#### 5.3.4.2. Local / Municipal level

##### **a. “Porto de Tradição”**

Instituted in 2016, the programme aims to preserve establishments and entities of historical, cultural and social interest (Diário da República, 2019). It was renewed for a second edition in 2019 with a municipal fund of 525,000 euros (Porto., 2020b). At the end of 2020, there were 90 establishments and 4 entities covered by the programme (CMP, 2020). It is worth noting that only in 2019, it gained its own regulation that institutes criteria for evaluating the business, such as whether it is longevous, if it is family-owned, if it is a workshop and if it has historical value (Diário da República, 2019). After being accepted, the establishments get an identifying sign and promotion in the tourist guides made by the municipality. Furthermore, the municipality promotes protection measures, namely exemption from advertising fees, training related to commercial activity, visibility mechanisms, and thematic cultural itineraries' design (Diário da República, 2019). In addition, exemption from municipal property tax is also granted (Diário da República, 2019). However, we can notice the programme still has few establishments covered, which makes the example given in Figure 20 something common.

##### **b. “Porto com Sentido”**

The programme created at the beginning of 2020 aims to strengthen the affordable housing policy in the centre and has already three editions (Idealista, 2020). It is based on the rental of private properties by the municipality and their subsequent subletting at affordable prices to the population that fits the choice criteria (Idealista, 2020). It is essential to note that as much as it accepts any private property, it focuses on those currently listed as Alojamento Local (Porto., 2020a). Tenants gain tax benefits such as exemption from property tax and guaranteed payment of rent, while renters have leases fixed by the typology and size of the house (Porto., 2020a). The whole operation is carried out by Porto Vivo, SRU and aims to lease a maximum of 500 properties (44 have been made available so far), through various editions in which the tenants are drawn into a lottery (Porto., 2020a; Porto Vivo SRU, 2021). Finally, it can be seen that the programme is still in its initial stages with few properties made available (even though each edition increases the number each time). In this way, it is difficult to draw a criticism since little has happened. In the very first edition, among the seven properties drawn, there was one in Rua Mouzinho da Silveira, demonstrating that even flats in prime areas were selected.

##### **c. Master Plan (Plano Diretor Municipal)**

The revision of the Municipal Master Plan has not yet been published and should take place by the end of 2021. The characterization studies and the report for public discussion have already been published and will be the materials considered here in this summary. When looking at this material, we find little about tourism, especially in the studies on the territory where only the number of tourists (2001-2011), number of people attending the tourist offices (2002-2013) and data related to the amount of tourist accommodation (2001-2011) are studied (Câmara Municipal do Porto, 2015). Besides the few indicators, we can notice that the data only goes up to 2013, a lag of eight years concerning the future publication of the master plan. In addition, these data are before the pandemic of COVID-19 (which directly affected the sector) and by the possible saturation in tourist accommodations in 2018 (Graph 29).

Thus, when looking at the public discussion document, it is possible to perceive the same lack of mentions to the sector. Even if briefly, there is a strategy positioning: the dispersion of tourist activities from the historic centre to other areas of the city (Câmara Municipal do Porto, 2020).

According to the document (2020), even though the centre has undergone a great process of dynamisation and revitalisation, mainly due to the entry of tourism, this is one of the sectors that most affects the city's identity. Hence, one of the places that will undergo urban intervention to decentralise tourism is Foz, which will have a requalification of its maritime and fluvial front (Câmara Municipal do Porto, 2020). Furthermore, there will be a focus on the promotion of specialised tourism such as congress and business but always prioritising the city's sustainability (Câmara Municipal do Porto, 2020). In a recent webinar, the architect responsible for the master plan participated, in which he assumed that the centre suffers from monofunctionality and there is no overtourism, but rather a concentration that should be contradicted with new touristic nodes throughout the municipal territory (Porto Innovation Hub, 2021). Finally, we can perceive that the municipality still sees tourism as a great opportunity for Porto and, according to what has already been published, regulation in the future will be moderate in restrictions.

#### **d. World Heritage Porto Management Plan (Plano de Gestão do Porto Patrimônio Mundial)**

The first management plan for the historic centre world heritage was launched in 2010 as a requirement of the UNESCO classification. It is possible to observe the use of tourism to promote urban regeneration and create new jobs (Câmara Municipal do Porto, 2010). In 2021, a revision of this plan will be launched, and a significant paradigm change is expected in order to embrace the pandemic situation and its consequences in the tourism sector. The municipality aims at differentiated management that attenuates the centre's dependence on tourism, increasing economic diversity through creative and technological industries (Ribeiro, 2021). In this way, by 2019, business investments had already surpassed tourism investments, which already showed a market shift (Ribeiro, 2021). The local authority admits that there has been a "tourist gentrification" that has augmented the real-estate market exponentially in the historic centre, thus making it necessary to seek a better coexistence between tourists and residents through programmes such as "Porto com Sentido" (Teixeira, 2021). Unfortunately, the documents about the new revised plan are not yet available. There was a webinar but not accessible online. Consequently, it is difficult to make a more in-depth analysis, but it is already noticeable a change of opinion from the municipality side.

## **5.4. FINDINGS FROM THE ANALYSIS**

To conclude this case study, a heatmap was made with the opportunities and weaknesses regarding tourism in Porto (Figure 59). In this way, the chart was separated between the main tourism players, i.e. the tourism sector, city, and residents. Within these categories, four more sections concern the main problems or opportunities for the actors and stakeholders concerned. Finally, these groups were analysed on a scale of 1-5 from observing how they affect their stakeholders, positively or negatively, and high or low.

It is noticeable that Porto has been experiencing a considerable increase in its tourism indicators in recent years. However, some numbers, such as the number of tourist flats, peaked in 2018 (before the pandemic), showing a possible maturity or saturation of the market. It is also important to remember the concentration of tourist attractions and establishments in the centre, which saw a great investment opportunity since it was an empty area. So, at the same time that it brought positive impacts, such as the rehabilitation of vacant buildings and the increase of the sense of security, in the last years, it is already noticeable, even if timidly, a worn-out relationship with the population, especially when taking into account the social justice in the increase of rents and the evictions of the elderly. On the part of the



government, we still see few policies to govern or regulate the impacts of this sector since it is still considered one of the main tools of urban regeneration.

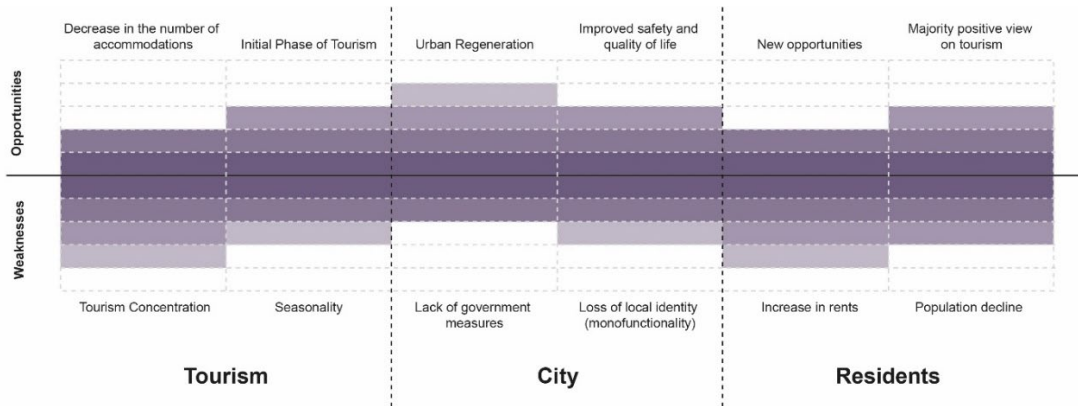


Figure 59: Heatmap of Opportunities and Weaknesses found in Porto. Elaboration by the Author.

### 5.5. PROPOSAL OF NEW STRATEGIES / POLICIES

Looking again at Figure 27, Porto still has a balanced situation between its residents and tourists, probably because it is still at the beginning of the process. An opportunity for the municipality to take preventive action, avoiding future breakdown in the future. With this in mind, seven strategies were proposed based on the weaknesses and existing approaches of the city, presented in Chart 10. The first strategy is to revise what is established in the revised PDM of 2021, which defines several tourist poles throughout the city. Here, a concentration of these new investments and attractions in two axes that connect the centre with Foz (an area that will undergo major interventions by the municipality) and one, connecting Bonfim and the eastern part (a place that will have new major public equipment projects).



Figure 60: Map with the proposals of two new tourist axes. Elaboration by the Author.

Table 7: Proposal of new strategies based on the weaknesses of Porto. Elaboration by the Author.

Weakness	Existing strategy	Proposed strategy	Observation
Tourism Concentration	Creation of new poles in the municipality	Creation of 3 new tourist axes	While the PDM proposes the creation of several poles, here there is the proposal of tourist axes (Figure 28).
		Extend tourism to surrounding cities	Similarly to Amsterdam, use the neighbouring cities as points of specialised tourism. For example, Matosinhos being the beach. This requires a strategy at a larger scale (regional).
Seasonality	-	Increase the number and marketing of off-season events	Many events like São João are unknown to international visitors. Therefore, in addition to increasing the quantity, the existing ones should be better publicised.
		Creating campaigns for tourists travelling off-season	In <i>Estratégia Turismo 2027</i> is already explained that some nationalities travel more out of season, as is the case of Brazilians. However, campaigns should be made to increase this trend.
Loss of local identity	Porto de Tradição	Limit the creation of new tourist shops in saturated sites	The existing programme only acts on the impacts of property speculation. Thus, a more regulatory approach should be applied in the most saturated locations.
Increase in rents	Porto com Sentido	Limit new licences based on the density of the sub-region	As much as there is a slight limitation on new licences, this should be reviewed to add subregions with a low population density, something so common in the city.
	Limitation of new AL licenses		
Population decline	Porto com Sentido	Increasing the scope of the existing programme	Increase the supply of smaller flats focused on younger people living alone, including residents of other nationalities.

These axes considered the existing natural and cultural attractions since, according to architect Vera Chapado, tourists will only go to places with points of interest. Thus, in the case of the axes that connect with Foz, it is taken into account the natural attractions as the riverfront, besides the great concentration of museums already present and the works that are foreseen in the PDM. The East Axis considers Bonfim as a tourist consolidated area (as it can be seen in Figure 42) as a connection with the new public works that will be made by the government, as is the case of Matadouro. With this distribution, there is a better reallocation of wealth, not being concentrated only in the richest areas. In addition, it was also suggested to expand to neighbouring towns so that they are specialised tourism spots, such as the beach in Matosinhos and Leça da Palmeira, the fishery villages along the coast to the North and South of Porto, the wine cellars in Vila Nova de Gaia and ecological tourism in Valongo.

Two supportive strategies are indicated for decreasing seasonality while for loss of local identity and increase in rents, regulatory strategies are suggested. Finally, as much as the sharp decline in population has occurred for reasons unrelated to tourism, the sector has only intensified the process. Although there is already a programme to bring new residents to the centre, its scope is still limited to new Portuguese families, not including foreign residents and single-person households, a global trend in recent years.

# 6

## CONCLUSION

In this study, it was possible to realize that measuring tourism capacity objectively is not easy, or even possible. Several aspects and indicators must be considered since tourism is a dynamic activity and has different realities in each place. From the four European examples taken from the literature review, it was possible to understand how the analysis is done and which parameters are used. In this way, the city of Porto was selected to be compared with the other cities based on their particularities.

In this way, it was possible to note that although tourism brings positive impacts in the economic and cultural spheres, many cities in Europe, such as Venice and Barcelona, already experience negative impacts in an exacerbated manner. Others, such as Berlin and Amsterdam, are heading towards this reality, but do not yet have statistics as high as those of the other two cities. One factor that may justify this difference is that the first pair has well-defined historical centres, the Italian city being the extreme example since it is physically isolated because it is an island. The tourist saturations are more noticeable in places with high density and restricted spatial configurations since there is a higher concentration of tourists per area. This fact leads to conflicts between residents and tourists since, without preventive measures, there is, e.g. an increase in rents and overuse of infrastructures.

This scenario is still in its early stages in Porto. Still, it is already possible to draw alarming statistics in the city compared to the other four mentioned above, especially if the number of Overnight Stays is considered. Moreover, it is still possible to see a posture of the municipality encouraging tourism, stating that the city's problem is not Overtourism but the concentration of this activity in only one locality and that the solution would be its decentralization. However, when looking at Barcelona, for example, we can see that tourism is also mainly concentrated in the Ciutat Vella, and as much as they opt for decentralization, they also have other protective measures within the centre. This way, it is clear a need for tools/instruments that deal directly with the tourism growth regulation and not only with its impacts, as is the case of Porto com Sentido and Porto de Tradição. It is also noticeable for a need of supportive instruments to fight the monofunctionality of the centre besides creating new poles throughout the municipality. This policy is mentioned in the discussion report of the master plan under revision, but there is no information on the operational measures and how they will be implemented. Hopefully, the final official document may deeper explain the implementation process. It is also important to consider that by dispersing the flow of tourists, we may be creating pressure on new locations, which can become a vicious cycle. In Porto, with the current numbers and the optimistic view its residents still have towards tourism, there is a great opportunity to be an example of Sustainable Tourism. It is easier to steadily control tourism growth from its initial stage than to promote degrowth in an already consolidated market.

Thus, as much as it had catastrophic humanitarian impacts, the pandemic of COVID-19 may have brought a possible solution by slowing down tourism growth and consequently, allowing for an adaptation of the market to the new reality. This can already be seen even in Porto, in which the programme Porto com Sentido was created to place new long-term residents in central Alojamento Local. Additionally, there was a trend of tourist shops closing in relation to opening or maintaining shops geared towards locals. Also, there is a greater willingness to support local businesses, such as restaurants, which were barely open and were already booked out on the part of residents. However, like everything in this pandemic, it is difficult to predict the future scenario because sanitary measures are constantly increasing. So, at the beginning of this thesis, back in October 2020, when the forecast for the pandemic situation was only few months, the tourist establishments just closed, waiting for the reopening. Now, more than a year after the beginning of the pandemic, many of these facilities have already adapted to the new reality turning to their residents, such as seasonal flats that now have long-term contracts. Though, it is not possible to say that tourism will remain at lower levels than before. Still, until there is a global vaccination, this considerable decrease will force the market to find new ways to sustain itself. Even though the European governments are planning to open their continental borders for the summer season 2021, this decision is very uncertain and volatile, and may change at any moment. In short, the restrictions imposed by the pandemic situation led to the self-regulation of the tourist market, and consequently has brought some moderation to the inflows to Porto, despite the negative impacts to local entrepreneurs dependent on tourism-related activities.

Finally, it is important to emphasise once again that analysing the tourism pressure of a place depends on numerous indicators and that these need to be constantly updated and monitored, taking into account the fast evolution of tourism. These numbers are available on the INE and PORDATA websites in Porto, even though they do not have intuitive usability. The current research has some main limitations, like getting interviews with local authorities and civil society representatives, since interviews with users and residents were not possible due to the imposition of lockdown. In this way, it was hard to get information about the existence of specific policies and planning instruments oriented to tourism. Thus, it is essential to reiterate the opportunity that the city of Porto has to develop a sustainable growth of its tourism, in which positive aspects, such as the undeniable urban regeneration, do not conflict with the rights of the locals.

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## APPENDIX

	City Population	Centre Population	Density	City Area (km <sup>2</sup> )	Centre Area (km <sup>2</sup> )	Visitors	City TDR	Centre TDR	City TPR	Centre TPR	Overnight Stay	Overnight Stay/km <sup>2</sup>	Overnight Stay/Inhabitant
<b>Venice</b>	261.680	55.583	631	414,6	6,3	24.000.000	159	10437	25	118	11.700.000	28.220	45
	Milano, 2017	Milano, 2017	Own Calculation	Google, 2021	Amore et al., 2020	Peeters et al., 2018	Own Calculation	Own Calculation	Own Calculation	Own Calculation	Amore et al., 2020	Own Calculation	Own Calculation
<b>Barcelona</b>	1.666.530	105.820	16.355	101,9	4,36	30.000.000	807	18851	5	78	20.400.000	200,196	12
	Ajuntament de Barcelona, 2020	Ajuntament de Barcelona, 2020	Own Calculation	Google, 2021	Ajuntament de Barcelona, 2020	Milano, 2017	Own Calculation	Own Calculation	Own Calculation	Own Calculation	Amore et al., 2020	Own Calculation	Own Calculation
<b>Amsterdam</b>	850.000	-	3.876	219,3	32	18.000.000	225	1541	6	-	15.900.000	72.503	19
	Stanchev, 2018	-	Own Calculation	Google, 2021	Amore et al., 2020	Stanchev, 2018	Own Calculation	Own Calculation	Own Calculation	Own Calculation	Amore et al., 2020	Own Calculation	Own Calculation
<b>Berlin</b>	3.700.000	-	4.149	891,8	10,6	12.730.000	39	3290	1	-	31.100.000	34.873	8
	Bouchon & Rauscher, 2019	-	Own Calculation	Google, 2021	Amore et al., 2020	Novy, 2018	Own Calculation	Own Calculation	Own Calculation	Own Calculation	Amore et al., 2020	Own Calculation	Own Calculation

Appendix 1: Chart with data collected in the literature review on international examples. Elaboration by the Author.

Neighbourhoods	Area (km <sup>2</sup> ) (CAOP 2020)	Population 2001 (Censos 2001)	Density 2001 (inhabitant/km <sup>2</sup> )	Population 2011 (Censos 2011)	Density 2011 (inhabitant/km <sup>2</sup> )	Variation Pop. 2001-11
União das freguesias de Aldoar, Foz do Douro e Nevogilde	6,26	31.449	5023,8	28.858	4609,9	-8%
Ramalde	5,83	37.647	6463,0	38.012	6525,7	1%
União das freguesias de Lordelo do Ouro e Massarelos	5,59	29.968	5364,0	29.059	5201,3	-3%
União das freguesias de Cedofeita, Santo Ildefonso, Sé, Miragaia, São Nicolau e Vitória	5,43	48.046	8842,9	40.440	7443,0	-16%
Paranhos	7,17	48.686	6792,0	44.298	6179,9	-9%
Bonfim	3,10	28.578	9229,7	24.265	7836,8	-15%
Campanhã	8,04	38.757	4819,0	32.659	4060,8	-16%
<b>Porto</b>	<b>41,41</b>	<b>263.131</b>	<b>6353,9</b>	<b>237.591</b>	<b>5737,2</b>	<b>-10%</b>

Appendix 2: Calculation of the population of Porto according to neighbourhoods. Elaboration by the Author.

<b>Primary Numbers</b>	<b>City Population</b>	<b>Centre Population</b>	<b>City Area (km<sup>2</sup>)</b>	<b>Centre Area (km<sup>2</sup>)</b>	<b>Visitors (annual)</b>	<b>Overnight Stays (annual)</b>
	216.606	40.440	41,41	5,43	2.245.291	4.587.237
	INE (2019)	INE (2011)	DGT	DGT	INE (2019)	INE (2019)
<b>Statistics (Porto)</b>	<b>Density (n<sup>o</sup>/km<sup>2</sup>)</b>	<b>TPR</b>	<b>TDR</b>	<b>Overnight Stays/inhabitant</b>	<b>Overnight Stays/km<sup>2</sup></b>	
	5231	3	149	21	110.776	
<b>Statistics (Historic Centre)</b>	<b>Density (n<sup>o</sup>/km<sup>2</sup>)</b>	<b>TPR</b>	<b>TDR</b>	<b>Overnight Stays/inhabitant</b>	<b>Overnight Stays/km<sup>2</sup></b>	
	7443	15	1133	113	844.282	

Appendix 3: Calculation of tourism statistics of the city and historical centre of Porto. Elaboration by the Author.



