

# Assessing Tourist Perceived Attributes of Overtourism

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## Abstract

**Purpose** - The purpose of this study is to assess the perceived importance and satisfaction of domestic tourists who visited Venice, Italy, regarding the attributes of overtourism.

**Design/methodology/approach** - An online survey was conducted to measure the tourist perceived attributes of overtourism from November 8th to 22nd, 2023. Convenience sampling was employed to target study participants who are domestic tourists in Venice, Italy. A total of 127 responses were used for analysis, including frequency analysis, paired-sample t-tests, and Importance-Performance Analysis (IPA).

**Findings** - First, the results of the IPA showed that attributes related to urban facilities and spaces directly associated with travel behavior were highly rated in both importance and satisfaction by tourists. Second, attributes related to carrying capacity were perceived as highly important but had lower satisfaction level. Third, tourists evaluated the management of affordable prices for tourism products as both less important and less satisfying. Lastly, attributes related to the protection of local businesses showed higher satisfaction levels compared to their perceived importance.

**Research implications or Originality** - This study contributes to an extended understanding of overtourism by examining the phenomenon from the tourists' perspective.

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**Keywords:** Overtourism, Tourist, Venice, Italy, Importance-Performance Analysis

**JEL Classifications:**

## I. Introduction

Experiencing population growth and the industrial revolution, more people have been moving to more places at a faster pace, resulting in an increase in the number of tourists (Szromet, Hysa, & Karasek, 2019). Globalization, advances in information and communication technologies, and the widespread availability of tourist facilities such as low-cost airlines have rapidly alleviated geographical, informational, and temporal constraints on tourists. The growing phenomenon of tourism has become a substantial industry, contributing to approximately 10% of the global GDP (UNWTO, 2020), fostering economic development at the regional or national level. However, concerns exist regarding the negative impact of concentrated tourist influx at specific times and locations, which can adversely affect tourist destinations (Buitrago & Yniguez, 2021). The phenomenon of overtourism, where tourism surpasses the physical, envi-

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ronmental, social, political, and psychological capacity of a destination at specific times and places, is spreading globally (European Parliament, 2018).

Among numerous cities worldwide where overtourism has become a critical issue, Venice in Italy has garnered attention from various stakeholders due to its proactive stance in considering the seriousness of the problem and seeking solutions (Bertocchi et al., 2020). Renowned for being an ancient city located in the Veneto region of Italy, Venice has simultaneously faced negative impacts of overtourism due to the constraints of capacity inherent in small and old cities. Overtourism has led to an increase in adverse effects on the region, affecting its environment, economy, and socio-cultural aspects.

Due to environmental and economic negative phenomena such as damage to buildings and roads, inadequate infrastructure, waste issues, price inflation, and rising real estate prices, the quality of life for residents in Venice has been declining (Simmons & Kaval, 2023). Furthermore, as residents increasingly convert their residences into shared accommodations (e.g., Airbnb) and relocate to other areas, the city is experiencing not only economic problems but also negative socio-cultural impacts, leading to the disappearance of the city's culture and social identity (Simmons & Kaval, 2023). Additionally, overtourism is lowering the quality of the tourist experience. In efforts to address these issues, the Venetian government is making efforts to formulate various policies and legislation (Eberle, 2020). However, it is emphasized that relying solely on isolated regulatory measures may have limitations in mitigating overtourism, and there is a need for improved awareness and participation from a diverse set of stakeholders including tourists.

With the recent emergence of voices opposing overtourism from local residents worldwide, there has been a growing scholarly and policy-oriented effort to deeply understand this phenomenon and address its challenges. While various studies have been conducted on overtourism, the majority have focused on conceptual definitions of overtourism (UNWTO, 2018; European Parliament, 2018; O'Reill, 1986), the causes and manifestations of overtourism (Buitrago & Yniguez, 2021; Hugues et al., 2018; Szromet, Hysa, & Karasek, 2019), negative impacts resulting from overtourism (Eberle, 2019), and residents' perceptions of overtourism (Žemřa & Szromek, 2021).

However, there has been a lack of research on how tourists visiting overtourism destinations experience and perceive the phenomenon. Overtourism is closely linked to tourists' overall behavior throughout the travel process—from pre-travel to during travel and post-travel. Understanding the perceptions and actions of tourists, who are one of the stakeholders in the region, is essential to addressing the overtourism issues in that area. Our research provides significant insights into the phenomenon of overtourism from the perspective of tourists. Specifically, our study advances the understanding of the managerial aspects of overtourism by examining how tourists perceive the importance of overtourism management strategies compared to their level of satisfaction.

The purpose of this study is to assess the perceived importance and satisfaction of domestic tourists who visited Venice, Italy, regarding the attributes of overtourism management strategies. The specific research objectives are as follows. Firstly, this research assesses the perception of overtourism among domestic tourists visiting Venice, aiming to broaden scholarly understanding of this phenomenon from the tourist perspective. Secondly, this research attempts to understand the differences in how tourists perceive overtourism, specifically examin-

ing the importance they attribute to different overtourism management strategies and assessing their evaluation of how well Venice manages each attribute. Thirdly, this research utilizes Importance-Performance Analysis (IPA) to grasp the tourist perception structure for each attribute based on their perceived importance and performance. IPA has been used by various researchers in tourism and other disciplines because it is useful for providing strategic suggestions derived from comparisons between the importance and performance levels of attributes of products or certain phenomena (Oh, 2001; Sun & Han, 2024). IPA helps managers or policy-makers develop data-driven, rational decisions with limited resources for sustainable destination management (Sun & Han, 2024). This study expects to provide insights from the tourist perspective to address local issues arising from overtourism and to present implications for policy and practical approaches reflecting the tourist perspective on minimizing consequences caused by overtourism.

## II. Literature Review

### 1. Overtourism

The controversy over issues related to an excess of tourists began as early as 1960, before the concept of “overtourism” was defined (Oklevik et al., 2020). The idea of how many tourists a specific destination can accommodate started being discussed through the concept of “carrying capacity” (O’Reill, 1986). Researchers in tourism studies agree on the need for carrying capacity management, asserting that establishing criteria for an optimal level of tourists before negative impacts manifest can enable the control or management of the appropriate tourist carrying capacity (McCool, 1994; Williams & Gill, 1991). This, in turn, allows for the preservation and management of the environmental and cultural resources of the destination.

The phenomenon known as overtourism has its roots in discussions about the negative impacts caused by an excessive number of tourists visiting a particular area (Buitrago & Yniguez, 2021). However, this phenomenon has been more actively discussed in recent years from both a policy and academic perspective. In 2017, the United Nations World Tourism Organization (UNWTO) defined overtourism as the negative impact of the concentration of tourists in a specific destination, exceeding the carrying capacity of the residents' quality of life and tourists' tourism experience. Additionally, the European Parliament defined overtourism as a tourism phenomenon that surpasses the physical, environmental, social, political, and psychological capacity of a destination at specific times and places (European Parliament, 2018). In other words, the renewed discussion on overtourism focuses not only on the phenomenon of carrying capacity but also on the negative impacts it has on the quality of life for residents and the quality of the tourism experience for visitors.

The impact resulting from the visits of both domestic and international tourists affects the social, economic, and cultural development of cities. However, an excessive number of tourists can lead to negative impacts due to overcapacity, and UNWTO (2018) has outlined the causes and consequences of overtourism for these negative effects. Firstly, overtourism arises from an overwhelming number of tourists, particularly during specific periods, causing discomfort in the daily lives of residents. It is emphasized that if this discomfort intensifies, it may lead

to residents leaving the area. Secondly, overtourism can result from the behavior of tourists rather than just the sheer volume of tourists. This can lead to negative phenomena in urban spaces. When tourists visit in large numbers, there is a limit to the capacity of urban infrastructure, leading to issues such as traffic congestion, waste problems, noise pollution, etc. Additionally, an increase in tourism demand contributes to a high dependence on the tourism industry, bringing about changes in the industrial structure. As tourist numbers rise, infrastructure for them also increases, leading to phenomena like the excessive spread of hotels and the growth of commercial facilities catering to tourists. This high dependence on the visitor economy can make the city's industrial structure vulnerable. Moreover, the conversion or shared use of facilities previously used by residents into facilities for tourists can create problems in the capacity of resident facilities.

European Parliament (2018) has emphasized not only the issues related to changes in the tourism dependency of local industries due to overtourism but also the negative social and cultural impacts. Specifically, overtourism occurring in areas containing or adjacent to UNESCO World Heritage Sites, or other protected cultural assets, can lead to irreversible negative impacts such as cultural heritage damage. The spread of the sharing accommodation industry, like Airbnb, has also been highlighted as contributing to the displacement of local residents, intertwining with the issue of overtourism.

Researchers have presented various issues related to the deterioration of the quality of life for local residents due to the negative impacts of overtourism. Fedyk et al. (2020) pointed out that overtourism results in environmental pollution, waste problems, cultural heritage deterioration, safety/security issues, rising costs, and gentrification due to increased property prices, all contributing to a decline in residents' quality of life. Szromet et al. (2019) emphasized that overtourism can lead to cultural clashes, the disappearance of local identity, and inconvenience in residents' daily lives due to unfamiliar cultural norms and behaviors of tourists. Fedyk et al. (2020) stated that the cost of living and property prices inevitably rise due to overtourism, leading to a deterioration in the quality of life for residents. These researchers addressed that another significant change among the negative impacts of overtourism is the disappearance of local identity.

Researchers acknowledge that the increase and concentration of visitors are inevitable phenomena due to the globalization of tourism, the development of tourism information, and societal changes such as weather and holidays (Yrigoy, Horrach, Escudero, & Mulet, 2023). However, they note that it may not be something that can be unilaterally controlled. While it might be challenging to completely control the occurrence of overtourism, managing the negative impacts resulting from this phenomenon is crucial. Particularly, the UNWTO emphasizes that to counter overtourism, a shift toward sustainable tourism is encouraged (UNWTO, 2018). Scholars and practitioners stress that by promoting sustainable tourism, achieving the ultimate goal of enhancing the quality of life for both tourists and local residents through the management of urban facilities, organizations, and industries is possible.

## 2. Negative Consequences of Overtourism: Focusing on a Case of Venice, Italy

Venice is the capital of the Veneto region in Italy. Located on the Adriatic Sea, this ancient city is composed of 120 islands. Venice has played a crucial role as a commercial hub since

the 10th century, serving as a bridge between the Western and Eastern worlds (Eberle, 2019). Due to its geographical and historical significance, the city has accumulated a rich heritage of historical, artistic, and cultural identity. In 1987, UNESCO recognized Venice and its lagoon as a World Heritage site. Over the years, Venice has been a prominent tourist destination, with records indicating around 30,000 visitors even in the 18th century (Eberle, 2019).

However, due to its small and ancient nature, Venice inherently has limitations in its carrying capacity, leading to inevitable negative impacts caused by the simultaneous influx of numerous tourists. The challenges arising from these limitations and the resulting negative effects have been a longstanding issue. Records from 1964 indicate that Venice faced societal concerns to the extent that news reported on “mass tourism [corrupting] the traditions” (Kaval, 2023). Additionally, in 1969, UNESCO highlighted the seriousness of issues caused by the high number of tourists, stating that it posed an “attack on the city,” drawing attention to the migration of local residents to other areas (Kaval, 2023). In recent years, Venice has emerged as a prominent example of overtourism in the European region, with residents intensifying their objections to the negative impacts associated with overtourism.

The ongoing discussion regarding the negative effects of overtourism in Venice encompasses various aspects, with the issue of city capacity in relation to the local population being a primary concern. Researchers emphasize that tourist destinations are inevitably planned and operated with city facilities exceeding their capacity due to the excessive number of tourists, directly impacting the quality of life for residents (Regione Veneto, 2018). Specifically, in contrast to a population decrease from 171,000 in 1951 to fewer than 50,000 in 2022, Venice records approximately 30 million tourists annually (Kaval, 2023; Enciclopedia Treccani, n.d.). The disproportionate number of tourists compared to the population creates challenges in managing city infrastructure, physical building capacity, and other related issues, directly affecting the quality of life for residents. Attempting to address these challenges by building infrastructure and services tailored to tourists can also cause harm to the local population, leading residents to relocate to other areas.

Furthermore, sustainability issues stemming from overtourism have been extensively discussed, particularly in terms of socio-economic aspects such as rising prices, increased real estate costs, and the transformation of the local economy into a tourism-centric one (Eberle, 2019; Regione Veneto, 2018). Considering the ultimate goal of regional tourism development to improve the local economic situation and enhance the quality of life for residents, the negative economic impact of overtourism contradicts these anticipated benefits of tourism (Regione Veneto, 2018). During the early stage of tourism development, Venice was initially focused on the economic revitalization brought about by tourism, expecting job creation and increased employment rates (Eberle, 2019). However, the phenomenon of overtourism led to changes in the local economic structure, resulting in adverse effects. For instance, although the tourism-related job count in the Veneto region is reported to be 60,000, a significant proportion of these jobs are temporary, part-time contracts, primarily sustained during peak tourist seasons, contributing to lower overall job security (Regione Veneto, 2018). This trend indicates that while tourism may lead to job creation, the quality of employment is compromised, ultimately impacting the residents' quality of life negatively.

Additionally, the commercial facilities in the city, which traditionally provided goods and services essential for residents' daily lives, are increasingly adapting to the needs and demands

of tourists. In reality, in Venice, many shops have transformed their purposes to cater to the products sought after by tourists. Moreover, there is a growing trend of unauthorized tourism-related commercial establishments, such as unregistered accommodations, contributing to an increase in prices and real estate costs (Eberle, 2019).

Lastly, the issue of ecological and urban cultural environment degradation is significant. Tourism is reported to contribute to approximately 5.3% of global greenhouse gas emissions (UNEP & UNWTO, 2005). Beyond greenhouse gas emissions, it encompasses environmental problems such as urban environmental pollution, damage to historical and cultural heritage, deterioration of buildings and streets, and an increase in waste (Eberle, 2019). While accurately measuring whether environmentally negative impacts are solely caused by the phenomenon of overtourism may be challenging, considering the resources simultaneously consumed by a large number of tourists makes it difficult to exclude the issues related to waste, water, air, etc., in cities experiencing overtourism (Regione Veneto, 2018). In 2022, UNESCO stated that due to issues related to overtourism, Venice had reached such a severe level that it should be considered for inclusion in the World Heritage in Danger list (Kaval, 2023). Discussions regarding the sustainability of regions affected by overtourism continue.

### **III. Methods**

#### **1. Measurement and Data Collection**

This study utilized various sources to derive measurement items being managed at tourist destinations in response to negative issues arising from overtourism. Firstly, this study referred to overtourism reports published by international organizations (European Parliament, 2018; UNWTO, 2017) to construct measurement items based on key concepts included in the definition of overtourism and response cases to similar overtourism phenomena in selected cities. Additionally, a review of concepts discussed in relation to carrying capacity that are still debated in conjunction with overtourism (McCool, 1994; O'Reill, 1986; Williams & Gill, 1991) was used to inform the construction of measurement items. Moreover, measurement items from recent previous studies on overtourism (Eberle, 2019; Fedyk et al., 2020; Mihalic, 2020; Szromet et al., 2019) were adapted to incorporate items such as measurement tools for overtourism phenomena and management strategies. Finally, among these items, only those that aligned with the actual situation in Venice, Italy were selected and included. This was achieved by reviewing and analyzing overtourism-related news articles, regional government websites, etc. (Kaval, 2023; Regione Veneto, 2023) refining the items accordingly. Through this process, a total of 19 items were included in the survey.

This study consisted of three main parts. Firstly, Part I was designed to allow respondents to indicate the importance of attributes related to overtourism. In Part II, respondents were asked to express their satisfaction with the management of each attribute based on their experiences while visiting Venice. Part III included demographic characteristics. All measurement items used in Parts I and II were rated on a five-point Likert scale. For importance, the scale ranged from "1=Not important at all" to "5=Extremely important," while for satisfaction, it ranged

from “1=Not satisfied at all” to “5=Extremely satisfied.” The measurement items, originally developed in English, were translated into Italian using the back-translation technique (Brislin, 1970) and included in the survey.

This study was conducted to measure the attributes of overtourism from the perspective of domestic tourists who visited overtourism destinations. An online survey was conducted with Italian domestic tourists who had visited Venice for tourism purposes. To select participants suitable for the study's objectives, a definition of overtourism and an explanation of the phenomenon occurring in Venice due to overtourism were provided before starting the survey. Additionally, a screening question, “Have you ever heard of the term ‘Overtourism?’” was used to include only participants who understood the terminology and had experienced the phenomenon, which is relevant to the research objectives. The survey was conducted online using the ‘google form’ from November 8th to 22nd, 2023. The survey for this study specifically targeted adults aged 20 or older, utilizing convenience sampling. Surveys were distributed to 172 individuals, and after excluding participants based on the screening question, a total of 127 responses were collected and used for analysis. SPSS 25.0 was utilized for analysis, including frequency analysis, paired-sample t-tests, and IPA analysis.

## 2. Importance-Performance Analysis (IPA)

IPA is a research technique initially developed as a marketing tool by Martilla and James (1977) to review and propose new management strategies. While it was originally designed for marketing purposes, it has since been applied to various fields, including tourism (Hwang & Lee, 2018; Tang, Zheng, & Ng, 2019), sustainable cities (Nicolas, Kim, & Chi, 2020), among others. IPA is valuable for diagnosing the performance of different attributes, facilitating data interpretation, and providing practical management recommendations. In tourism research, IPA is utilized to measure tourists' perceived importance and performance (or satisfaction) on various attributes. This information is then combined into a two-dimensional matrix for easy data interpretation. This allows organizations to make informed decisions based on data, helping to identify and address critical areas. IPA plays a significant role in contributing to data-driven decision-making, especially in addressing organizational problems (Oh, 2001).

IPA positions importance on the Y-axis and performance(or sanctification) on the X-axis. Subsequently, by establishing 2 dimensions based on the mean values of each axis, four quadrants are formed. The interpretation of each quadrant is as follows: Firstly, Quadrant 1 represents the area where both importance and performance are high, signifying an area that should be continuously maintained. Quadrant 2 indicates an area where importance is high, but performance is low, suggesting a need for improvement. Quadrant 3 reflects an area with both low importance and low performance, highlighting a crucial area requiring enhancement. Lastly, Quadrant 4 denotes an area where importance is low, but performance is high, indicating an area where resources have been oversupplied.

## IV. Results

### 1. Respondents' Demographics

The results of a frequency analysis based on the collected 127 responses for the final analysis reveal the demographic characteristics of the respondents, as shown in (Table 1). First, examining the gender composition, there were 44 males (34.6%) and 83 females (65.4%). Regarding age distribution, the 20s group consisted of 13 individuals (10.2%), the 30s group had 45 individuals (35.4%), the 40s group had 18 individuals (14.2%), and those aged 50 and above were 51 individuals (40.2%). The educational level showed that 56 respondents (44.1%) had graduated high school or below, 23 respondents (18.1%) were currently enrolled in college, and 48 respondents (37.8%) were enrolled in graduate school or beyond. In terms of monthly household income, the highest proportion was in the range of 10,000 to 25,999, accounting for 46 respondents (36.2%). Looking at the occupational distribution, full-time employees comprised the largest group, with 64 individuals (50.4%).

**Table 1.** Respondents' Demographics

Characteristics		Frequency	Percent
Gender	Male	44	34.6
	Female	83	65.4
Age	20-29	13	10.2
	30-39	45	35.4
	40-49	18	14.2
	50 or more	51	40.2
Marital Status	Married	63	49.6
	Single	64	50.4
Education	High school	56	44.1
	Undergraduate	23	18.1
	Graduate	48	37.8
Household Income	Under 10000 euro	9	7.1
	10,000~25,999	46	36.2
	26,000~35,999	36	28.3
	36,000~45,000	20	15.7
	Over 45,000 euro	16	12.6
Occupation	Employed full time	64	50.4
	Employed part-time	7	5.5
	Self-employed	21	16.5
	Business owner	10	7.9
	Student	11	8.7
	Retired	9	7.1
	Housemaker	3	2.4
	Unemployed	2	1.6

### 2. Descriptive Statistics and Paired-sample t-test

Tourists perceive 'Preservation of historical and cultural heritage' (mean=4.62) as the most important attribute in managing the negative impacts of overtourism on tourist destinations. Following this, attributes such as 'Garbage and waste management' (mean=4.45), 'Capacity



management of public facilities (e.g., public bathrooms, parking)' (mean=4.39), 'Organized traffic jam and public transportation' (mean=4.34), and 'Controlled clean air and water quality' (mean=4.27) were analyzed to be important for overtourism management in descending order of significance.

**Table 2.** Paired-sample t-test

No.	Measurement Item	Importance Mean (S.D.)	Performance Mean (S.D.)	Mean difference	t-value
1	Organized traffic jam and public transportation	4.34 (0.809)	3.41 (0.912)	0.929	9.005***
2	Ease on the use of pedestrian spaces	4.19 (0.880)	3.32 (0.999)	0.866	7.812***
3	Regulated city noise	3.88 (1.005)	3.21 (0.905)	0.669	5.681***
4	High level of security and safety in the city	4.17 (0.944)	3.19 (0.897)	0.984	8.761***
5	Quality management of public facilities (e.g., public bathrooms, parking)	4.24 (0.742)	2.88 (0.923)	1.362	13.651***
6	Capacity management of public facilities (e.g., public bathrooms, parking)	4.39 (0.669)	2.82 (0.912)	1.575	16.657***
7	Garbage and waste management	4.45 (0.784)	2.95 (1.007)	1.496	13.739***
8	Controlled clean air and water quality	4.27 (0.886)	2.89 (0.799)	1.378	13.220***
9	Availability of environmentally friendly tourism products (e.g., green hotels, eco-friendly bus)	4.03 (0.881)	2.75 (0.786)	1.283	11.911***
10	Resident participation in environmental protection of the city	4.01 (0.930)	2.85 (0.798)	1.157	11.474***
11	Preservation of historical and cultural heritage	4.62 (0.701)	3.43 (0.813)	1.189	13.118***
12	Resident participation in historical and cultural protection of the city	4.19 (0.888)	3.13 (0.830)	1.055	10.949***
13	Residents' positive attitude towards tourists	3.86 (0.915)	2.93 (0.927)	0.929	8.801***
14	Protection of local businesses and artisans' shops (ex: artisans, local-owned restaurants etc.)	4.09 (0.971)	3.07 (0.936)	1.024	8.874***
15	Acceptable number of tourists compared to number of residents	4.15 (0.943)	2.41 (1.011)	1.740	13.337***
16	Regulated number of infrastructures dedicated only to tourists	3.76 (1.080)	2.80 (0.846)	0.961	8.105***
17	Regulated number of tourists' retails (e.g., souvenir stores, tourist restaurant)	3.57 (1.073)	3.09 (0.917)	0.480	3.924***
18	Affordable accommodations prices	3.98 (1.072)	2.19 (1.029)	1.787	13.935***
19	Affordable tourism prices (e.g., food, shopping, museums, parking etc.)	3.91 (1.062)	2.20 (1.064)	1.709	13.399***

Notes: \*\*\*  $p < 0.000$ .

Analyzing the satisfaction ratings of tourists based on their travel experiences for the level of management in overtourism destinations, the attribute with the highest rating is 'Preservation

of historical and cultural heritage' (mean=3.43). This corresponds to the attribute that tourists rated as the most important, indicating that tourists visiting Venice are satisfied with the importance and institutional protection policies regarding the preservation of the city's historical and cultural heritage. Following in satisfaction rankings are attributes such as 'Organized traffic jam and public transportation' (mean=3.41), 'Ease of use of pedestrian spaces' (mean=3.32), 'Regulated city noise' (mean=3.21), and 'High level of security and safety in the city' (mean=3.19).

To analyze the differences in importance and satisfaction for the 19 management attributes in overtourism destinations, a paired-sample t-test was conducted, and the results are presented in (Table 2). The analysis revealed statistically significant differences ( $p < .001$ ) between importance and satisfaction for all 19 attributes, with satisfaction being lower than importance for each attribute. The attribute showing the largest difference is 'Affordable accommodations prices' (mean difference = 1.787, t-value = 13.935,  $p < .001$ ). The second-highest difference is observed for the attribute 'Acceptable number of tourists compared to the number of residents' (mean difference = 1.740, t-value = 13.337,  $p < .001$ ), followed by the attribute 'Affordable tourism prices (e.g., food, shopping, museums, parking, etc.)' (mean difference = 1.709, t-value = 13.399,  $p < .001$ ).

### 3. IPA Results

The results of evaluating the importance and satisfaction of overtourism attributes, positioned in quadrants, are presented in (Table 3) and (Figure 1). In the Quadrant 1, six attributes were located, demonstrating high importance and high satisfaction. These include 'Organized traffic jam and public transportation,' 'Ease on the use of pedestrian spaces,' 'High level of security and safety in the city,' 'Garbage and waste management,' 'Preservation of historical cultural heritage,' and 'Resident participation in the historical protection of the city.' These results suggest that tourists highly value and are satisfied with facilities and spaces such as public transportation, pedestrian-friendly environments, and city safety, which are directly associated with travel behavior in urban spaces.

In the Quadrant 2, four attributes were placed, indicating high importance but low satisfaction. The attributes in this quadrant are 'Quality management of public facilities,' 'Capacity management of public facilities,' 'Controlled clean air and water quality,' and 'Acceptable number of tourists compared to the number of residents.' These attributes represent areas where tourists find importance but are less satisfied, emphasizing concerns related to capacity management, air and water quality, and the balance of tourists and residents.

Quadrant 3 includes five attributes where both importance and satisfaction are low. These attributes are 'Availability of environmental-friendly tourism products,' 'Residents' participation in environmental protection of the city,' 'Regulated number of infrastructures dedicated only to tourists,' 'Affordable accommodation prices,' and 'Affordable tourism prices.' These results suggest that tourists perceive the aspects of management for affordable prices of tourism products, such as accommodations, food, shopping, etc., as less crucial and are also less satisfied with them.

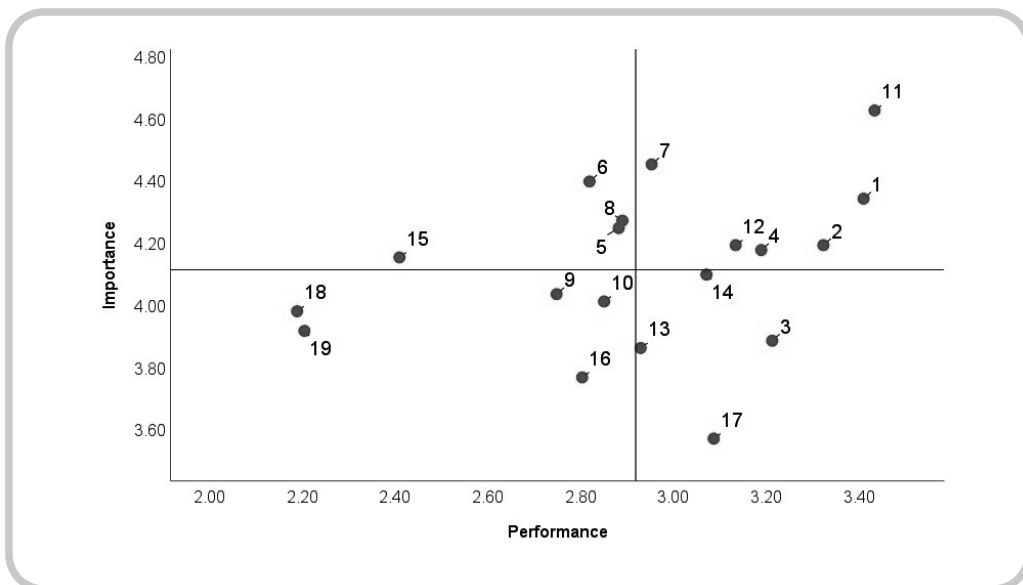
Finally, in Quadrant 4, four attributes are situated, indicating low importance but high satisfaction. These attributes include 'Regulated city noise,' 'Residents' positive attitude towards

tourists,’ ‘Protection of local businesses and artisans’ shops,’ and ‘Regulated number of tourist’s retails.’ These findings suggest that although the management policies for protecting the local economy may be less important to tourists, they contribute to high satisfaction levels when experienced.

**Table 3.** IPA Result

Quadrant 2 High importance, Low satisfaction	Quadrant 1 High importance, High satisfaction
5. Quality management of public facilities 6. Capacity management of public facilities 8. Controlled clean air and water quality 15. Acceptable number of tourists compared to number of residents	1. Organized traffic jam and public transportation 2. Ease on the use of pedestrian spaces 4. High level of security and safety in the city 7. Garbage and waste management 11. Preservation of historical cultural heritage 12. Resident participation in historical protection of the city
Quadrant 3 Low importance, Low satisfaction	Quadrant 4 Low importance, High satisfaction
9. Availability of environmental-friendly tourism products 10. Residents participation in environmental protection of the city 16. Regulated number of infrastructures dedicated only to tourists 18. Affordable accommodation prices 19. Affordable tourism prices	3. Regulated city noise 13. Residents’ positive attitude towards tourists 14. Protection of local businesses and artisans’ shops 17. Regulated number of tourist’s retails

**Fig. 1.** IPA Matrix



## V. Conclusion

Due to overtourism, there is a rise in negative issues in the local environment, economy, and socio-cultural aspects. For instance, damages to the historical and cultural heritage of the city, deterioration of buildings and roads, inadequate infrastructure, air and water quality problems, garbage issues, inflation, and increases in tourism-related prices are negatively impacting the quality of life for residents. Especially in ancient small cities like Venice in Italy, the negative impact of overtourism can be more intense. While various strategies have been suggested to manage and mitigate the negative effects of overtourism, the most crucial aspect is to establish comprehensive strategies for improving awareness and encouraging participation from various stakeholders (European Parliament, 2018; Mihalic, 2020; UNWTO, 2019; Yrigoy et al., 2023). This study aims to evaluate the perception of domestic tourists who visited Venice, Italy, regarding overtourism attributes and provide insights into the issues arising from overtourism from the tourists' perspective. A summary of the research results is as follows.

The analysis of the survey responses from 127 Italian tourists who visited Venice for the 19 attributes related to overtourism, using a paired-sample t-test, revealed that satisfaction scores were significantly lower than importance scores for all items. The results of the IPA analysis showed that attributes related to urban facilities and spaces, such as public transportation, pedestrian-friendly environments, and city safety, directly associated with travel behavior, were highly rated in both importance and satisfaction by tourists. Attributes related to carrying capacity, such as capacity management of public facilities and acceptable number of tourists compared to the number of residents, were perceived as highly important but had lower satisfaction scores in terms of management. On the other hand, tourists evaluated the management of prices for tourism products such as accommodations, food, and shopping as both less important and less satisfying. Lastly, attributes related to the protection of local businesses and reducing the tourism dependence of local commercial activities showed higher satisfaction levels compared to their perceived importance, indicating that recognition of the importance of such policies leads to increased satisfaction with outcomes.

The research results provide the following academic insights. Firstly, this study contributes extended understanding on overtourism by examining the phenomenon from the tourists' perspective. Most scholarly reviews on overtourism have primarily focused on defining the concept or conducting research to measure its effects. Additionally, studies investigating the negative impacts from the perspective of local residents have been predominant. However, relying solely on these fragmented perspectives may have limitations in understanding the essence of the phenomenon and formulating effective policies to address overtourism. Through this research, insights into how tourists empathize with certain aspects related to overtourism, as well as how their experiences differ across various attributes, have been revealed. For instance, tourists demonstrated alignment regarding the importance and management outcomes of the 'Preservation of historical cultural heritage.' However, for issues such as the 'Protection of local businesses and artisans' shops' or the 'Regulated number of tourist's retails,' which involve challenges to local businesses due to increased tourism dependence, they relatively undervalued the significance. This suggests a somewhat different stance from other stakeholders, emphasizing the importance of including these aspects in the context of overtourism.

Secondly, this study contributes to the academic discourse on the definition and phenomenon

of overtourism by providing empirical evidence. While overtourism is rooted in the concept of carrying capacity, the contemporary discussions on overtourism are approached from the perspective of sustainable tourism. Consequently, there is a lack of clear boundaries on how to define and interpret overtourism, which has evolved over time. This research extends the scholarly discourse by providing empirical data based on the perspective of tourists, a key stakeholder in overtourism. According to the results of IPA, overtourism attributes related to carrying capacity, such as 'Capacity management of public facilities' and 'Acceptable number of tourists compared to the number of residents,' are understood and highly valued as indicators of overtourism. In contrast, issues related to the sustainability of the local economy due to overtourism, such as rising prices (e.g., Affordable accommodation prices, Affordable tourism prices), excessive dependence on the tourism economy (e.g., Protection of local businesses and artisans' shops, Regulated number of tourist's retails), or environmental sustainability issues (e.g., 'Availability of environmental-friendly tourism products,' 'Regulated city noise'), are perceived as less important in relation to overtourism problems. These findings suggest a perceptual gap in understanding overtourism causes and consequences from the tourist's perspective.

Through this study, the following implications are suggested for cities experiencing overtourism. Firstly, when considering regulations and policies to manage overtourism, there is a need to conduct campaigns targeting tourists for information sharing and awareness improvement. Since tourists perceive the importance of only certain negative impacts of overtourism, campaigns aimed at enhancing empathy and awareness of the significance of management policies among tourists could enhance the effectiveness of formulated policies. For example, tourists perceived the attributes of 'Organized traffic jam and public transportation,' 'Garbage and waste management,' and 'Preservation of historical and cultural heritage' as important. However, they perceived the attributes of 'Regulated number of infrastructures dedicated only to tourists' and 'Regulated number of tourists' retails' as relatively less important in managing overtourism destinations. This implies that tourists may have less understanding of how an excessive number of tourists can negatively impact the local economy and society in tourism destinations. Campaigns targeting tourists to educate them about the interconnection and interaction between overcrowding and the local society could be helpful in informing them about overtourism and its consequences, thereby encouraging appropriate changes in their attitudes and behaviors. Secondly, there is a need to strengthen policy collaboration on sustainable tourism development in understanding overtourism. Approaching overtourism merely through the concept of an excessive number of tourists has limitations in managing the negative impacts it causes. It is crucial for all stakeholders, including local residents, government, and tourists, to understand the positive and negative changes experienced due to overtourism and, based on this understanding, formulate more comprehensive policy directions.

We acknowledge the limitations of our study. Our research focused on Italian domestic tourists with a relatively small sample size. Therefore, the findings may not fully encapsulate the perceptions of tourists visiting Venice. Further research is warranted. Future studies could explore other tourist groups, such as international tourists. Additionally, there is a need for a deeper understanding to examine the effect of perceived attributes of overtourism on policy support behavior from a theoretical perspective in future research.

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