

Special Issue Reprint

Sustainable Tourism – Ways to Counteract the Negative Effects of Overtourism at Tourist Attractions and Destinations

Edited by
Zygmunt Kruczek

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Sustainable Tourism - Ways to Counteract the Negative Effects of Overtourism at Tourist Attractions and Destinations

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Editor

Zygmunt Kruczek



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About the Editor

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Zygmunt Kruczek is a professor with a Ph.D. in physical culture and head of the Department of Geography of Tourism and Ecology at the Faculty of Tourism and Recreation at the University of Physical Education in Krakow. He specializes in research on tourist attractions, regional aspects of the geography of tourism, tourism promotion, and information. He is the president of the Polish Association of Tourism Experts.

Preface

In the tourism literature over the past two years, overtourism has been the most discussed topic in both the media and the scientific community. The excessive presence of tourists leads to congestion in attractive locations, excessive advertising, aggressive commercialization, and consequently a decrease in the level of aesthetic experience of tourists and the degradation of both natural and cultural resources. The effect of excessive visits by tourists is an increase in the prices of services, rents, and real estate, as well as the depopulation of districts exploited by tourism. In cities with a long history, it causes the gentrification of historical areas.

Excessive tourism, as shown earlier, results in exceeding the limits of socio-psychological possibilities, which results in the dissatisfaction of the inhabitants and protests against the development of tourism. Exceeding the capacity limits results in the dissatisfaction of the locals, which in turn affects the "local atmosphere" experienced by tourists.

The aim of this Special Issue is to showcase advances in current research and literature on overtourism and sustainable tourism as a way to eliminate or reduce the negative effects of overtourism. The authors of the articles presented scientific research on the phenomenon of overtourism from various points of view, challenges, and models, presenting its significance for tourism in regions, cities, as well as cultural and natural attractions. The 13 articles contain research on the attitudes of city dwellers towards overtourism, e.g., Krakow and Wrocław, the effects of tourism development in the Tatra National Park, and on the areas adjacent to tourist routes. It looked at night-time tourism and the sharing economy, as well as the possibilities of using business models to manage sustainable tourism. The articles published online are already very popular. They have been viewed by several thousand researchers and have been cited 300 times by other authors.

I would like to thank the authors for their participation in this Special Issue.

Zygmunt Kruczek

Editor

Article

The Attitude of Tourist Destination Residents towards the Effects of Overtourism—Kraków Case Study

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Abstract: Scientific research into the effect of tourist traffic in a tourist area have shown that the excessive concentration of tourist traffic leads to overcrowding in attractive locations, over-advertising, and aggressive commercialization, which lower the aesthetic quality of tourists' experiences and result in the degradation of natural and cultural resources. The effect of excessive tourist numbers is an increase in the price of services, rental fees, and real estate. In historical cities, it causes the gentrification of historical districts. One of the social effects of an increase in tourist numbers is a change in attitude amongst residents towards tourists. This change is dependent on how residents perceive the positive and negative effects of tourism. The appearance of a negative attitude among residents towards tourists is a result of exceeding the social carrying capacity limits, that is, the ability to accept changes as they take place. This article assesses the attitudes of residents and tourist service providers in Kraków with regard to increasing tourist traffic and the ongoing process of change in the cityscape leading to the gentrification of districts most often visited by tourists. On the basis of a study of 518 respondents, including 371 city residents and 147 representatives of the tourist industry (hotel owners, restaurateurs, and tourist service providers), an assessment is made of their attitudes towards the specific problems of tourism development in Kraków. The research results indicate a variety of attitudes among interested parties, thus confirming the research hypothesis that actors display varied approaches with regard to the further development of tourism in Kraków. The conclusions drawn could prove useful in shaping the city's policy on tourism according to the idea of sustainable development, by taking into consideration the current and future needs of all interested parties.

Keywords: sustainability; overtourism; Kraków; Doxey index; attitudes; residents; service providers

1. Introduction

Scientific research into the development of tourism generally looks from the perspective of the positive effects of such development. This research often omits the negative impact of tourism, which may only appear after a long period of time and which can result in uneven development among various groups within the local community. One example of this is the term 'overtourism', developed in the last few years in media reports on the negative impact of mass tourism on host communities and/or the natural environment. The definition of overtourism was formulated in UNWTO documents in 2018 and reads "the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitors' experiences in a negative way" [1]. A tourist area has its limitations that result from the usable area available and its reaction to tourist traffic [2]. A key problem is defining the permissible size of traffic, above which it may be considered excessive. For

cities that are large centers of tourism and are faced with an invasion of tourists, proposed indicators define the optimal level of socio-psychological capacity [3].

Numerous studies have confirmed that the behavior of visitors, the length of their stay, the volume of tourists and the type of tourism are in fact equally as important as the number of tourists [4]. While the influence of tourism on the physical environment is relatively easy to define, it is decidedly more difficult to assess the social effects of an influx of tourists. A concept based on the host community's tolerance towards tourists is not only subjective but is also difficult to measure. The level of tolerance among residents towards an influx of tourists varies depending on local and private interests [5,6].

Overtourism and its related problems can be observed in many European cities, such as Venice, Florence, Barcelona, Rome, Prague, Dubrovnik, and Ljubljana [7]. In Poland, one example of the evolving role of tourism in city life is Kraków, a city that was added to the UNESCO list of Cultural and Natural World Heritage Sites in 1978 [8] and which is a recognized brand in the national and international tourist market. Without a doubt, the growing number of tourists encourages a city's growth, increases its budget, and distinguishes it on the tourism market, but the question arises—what burden does this bring for the inhabitants? The ongoing process of change undoubtedly results in a lowering of the quality of life but also causes a breakdown in social ties and a weakening of the local sense of identity. Residents lose their significance in their little kingdoms, while their place is taken by tourists, to suit whom the public space starts to be adapted to, resulting in the local community feeling like strangers in their own city.

The aim of this article is to assess the attitudes of Kraków residents towards the development of tourism in their city. Here, we verify the hypothesis that the attitudes of residents depend on the degree to which they are engaged both in providing services for tourists and in earning an income from such involvement, as well as their place of residence in relation to the districts most frequented by tourists. The authors' intention is also to apply the results to the G.V. Doxey Irritation model as well as R.W. Butler's Tourism Area Life Cycle (TALC) concept, both of which assume a change in residents' attitudes relative to an increase in the density of tourist traffic.

2. Literature Review

2.1. Overtourism as a Factor in Unsustainable Development

Scientific literature proves that the first use of the term overtourism dates back to the beginning of the 21st century, when it was used to describe the danger of excessive exploitation of natural resources [9]. Later, the term '*turismofobia*' appeared in the Spanish media to describe the reaction of Barcelona residents to the excessive growth of tourism [10]. The notion of *tourist saturation* was also used to describe excessive saturation of destinations due to tourism. It must be added that the phenomenon is nothing new, as the issue has been the subject of discussion in academic circles for many years. As early as the 1970's, special indicators were developed to define the optimal size of tourist traffic for various regions. The literature mentions three basic measurements: absorption indicator, capacity indicator, and flow indicator [11,12]. Meanwhile, Butler published a theory on the evolution cycle of tourist areas (TALC) [13], and Doxey constructed an irritation index illustrating the change in residents' attitudes to tourists [14].

Due to the frequent perception of the negative impact of tourism development, it has become necessary to adopt new scientific terminology. Therefore, the term overtourism has come to be used to describe the negative effect of tourism and has been applied to the problem of excessive numbers of tourists in many cities. The discussion around overtourism has brought attention to the negative consequences of the unchecked increase in tourism. It also points to possible limitations and voluntary compromises aimed at effectively preventing an increase of such problems [15].

In the last two years, the magazine *Sustainability* has published many articles on the topic of overtourism. An excellent review of the literature on this problem was presented by Capocchi, Vallone, Pierotti, and Amaduzzi [16], collating over eighty texts using bibliometric research. Meanwhile, in their

description of the rights of travelers and residents, Perkumien and Pranskuniene [17] also conducted a review of the already abundant literature related to overtourism.

A variety of regulations and formal restrictions on the reception of tourists can be put in place by local authorities or even by the governments of host countries [18]. Reports are appearing in the media of attempts to limit tourist traffic by limiting tourist numbers. In 2019, in Venice, entrance fees to the city were introduced. The phenomenon of overtourism has been studied in many European cities such as Madrid and Palma de Mallorca [19], and its effects have been described in relation to Krakow [8,20] and Ljubljana [7]. Excessive numbers of tourists are observed in many port cities thanks to cruise tourism [21]. However, research in 13 European cities such as Amsterdam, Berlin, Copenhagen, Lisbon, and Tallinn indicates abuse of the term 'overtourism' (overtourism overused) and seven myths attributed to this phenomenon [22].

Overtourism applies not only to cities but also to areas valuable in terms of nature, especially national parks, reserves, mountains, and polar regions. The authorities in the Philippines have decided to close the paradise island of Boracay for six months to clean the beaches and allow the natural environment to regenerate. Similar action was taken by Thailand with regard to the famous Maya Bay beach on Phi Phi Leh island. Overtourism also occurs in national parks, e.g., in the USA and Europe [23].

2.2. Conceptual Research Framework on the Opinions of Residents and Tourists and the Development of a Tourist Region

There are also alternative research concepts, such as the Limits of Acceptable Change—(LAC), which allow for the assessment of the degree to which the effect of tourism can be accepted by local parties interested in its development [24,25]. In periods of increased financial need, residents may have a more tolerant attitude and endure the negative effects of tourism due to the potential economic benefits. Discussion on the LAC concept and other similar approaches has meant that instead of using figures to illustrate the mass scale of tourist traffic, emphasis has been placed on qualitative analysis balancing the benefits and drawbacks of the development of tourism [26]. Various approaches to tourism management have also appeared that go beyond the limits on the number of visitors. The first, supported by the UNWTO, focuses on increasing the tourist capacity in reception areas [1]. Capacity can be increased through, amongst others, the use of intelligent hi-tech solutions or by increasing acceptance in the local community and stimulating entrepreneurship [27]. Other approaches focus on the need to diversify forms of tourism and the building of proper relations between the interested parties involved in tourism. Attention should be drawn to the fact that the benefits and drawbacks are often not evenly distributed among the interested parties [28].

The TALC model (Butler, 1980) and to a lesser degree the Irridex Model (Doxey, 1975) have provided a theoretical framework for many studies, although their popularity has been decreasing in recent years [29,30]. The majority of researchers assume in both these models that the large number of tourists associated with the last stages in tourism development have a tendency to generate unfavorable or negative attitudes amongst residents [31].

An excellent illustration of the change in the attitude of residents towards tourists is the Doxey index, published in 1976 [14,32]. The appearance of negative attitudes among residents towards tourists is a result of the social carrying capacity limits being exceeded, that is, the inability to accept changes as they take place. G.V. Doxey describes the change in residents' attitudes towards tourism at four successive levels, illustrated in Figure 1.

1. The level of **euphoria**: People are enthusiastic and thrilled by tourism development. They welcome the stranger and there is a mutual feeling of satisfaction. There are opportunities for locals, and money flows in along with the tourist.

2. The level of **apathy**: As the industry expands, people begin to take the tourist for granted. The tourist rapidly becomes a target for profit-taking, and contact on the personal plane begins to become more formal.

3. The level of **irritation**: This will begin when the industry is nearing the saturation point or is allowed to pass a level at which locals cannot handle the numbers without the expansion of facilities.

4. The level of **antagonism**: Irritation has become more overt. People now see the tourist as the harbinger of all that is bad (e.g., ‘Taxes have gone up because of the tourists’; ‘They have no respect for property’; ‘They have corrupted our youth’). Mutual politeness has now given way to antagonism and the tourist is ‘ripped off’.

5. **The final level**: People have forgotten that what they originally cherished was what drew the tourist, but in the scramble to develop, they overlooked this and allowed the environment to change. What they now must learn to live with is the fact that their ecosystem will never be the same again. They might still be able to draw tourists but of a very different type from those they welcomed in earlier years. If the destination is large enough to cope with mass tourism, it will continue to thrive.

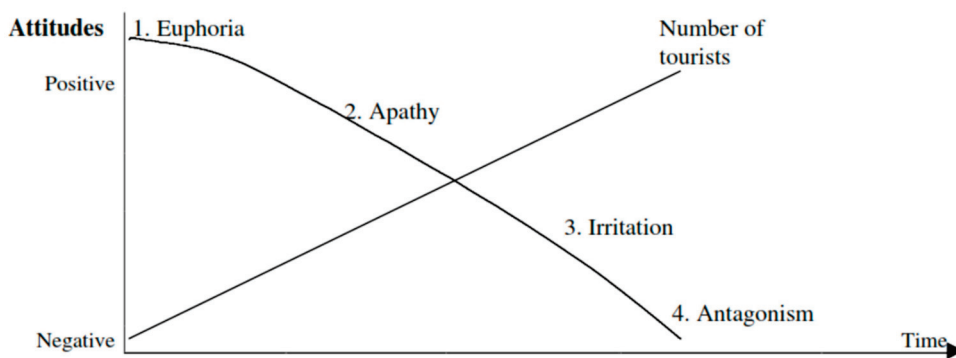


Figure 1. Source: Doxey [29] pp. 26–27.

The Doxey Index has been used to assess the attitudes of residents towards tourists and tourism in Dubai, a city in the Middle East that has experienced dramatic growth in the tourist industry [33]. This research indicated that the tourism industry can continue to develop in the city without causing antagonism amongst the residents. Similar research into the socio-cultural effects of tourism development has been conducted at Balaton Lake in Hungary [34] and on the island of Mauritius [35].

R.W. Butler, who formulated the TALC model (Tourism Area Life Cycle), introduced the evolutionary cycle of a tourist region based on six phases of development of a tourist region (exploration, investment, development, consolidation, stagnation and decline or revitalization), which form a repeating cycle (Figure 2).

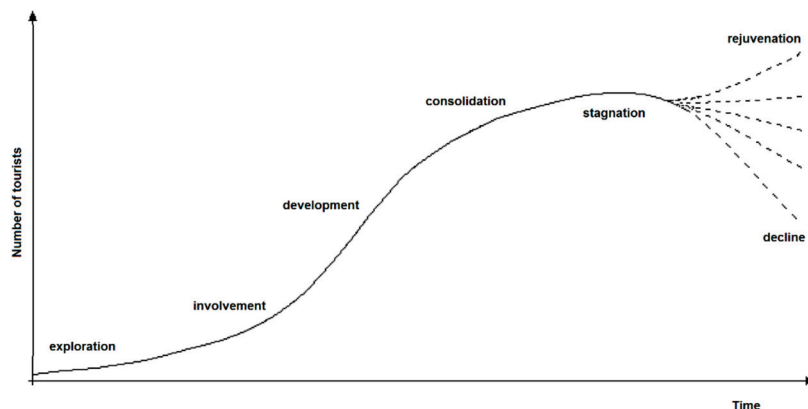


Figure 2. Phases in the Butler cycle in relation to protected areas (Source: [13] (pp. 5–12).

This model is based primarily on a symptomatic variable, that is, the number of visitors to the studied tourist region within one year. R.W. Butler [36] defines sustainable tourism as tourism that is developed and maintained in such a way and on such a scale as to be profitable for an indefinite time, without causing changes to the natural environment in which the tourist region is located. Exceeding the level of ‘sustainability’ makes the success of development and other undertakings and processes impossible. A certain modification to the TALC model for protected areas such as national parks was then developed by Weizenegger [37]. This assumed that in protected areas, e.g., national parks, limits on tourist traffic can be implemented through the imposition of high taxes for exceeding the region’s capacity. This measure is intended to support the aim of protecting the area. In this case, development in such an area would be limited to the first three phases in the Butler cycle, followed by a forced consolidation phase held at the end level of the development phase (Figure 3). This model has been confirmed in relation to the development of tourism in Antarctica [38].

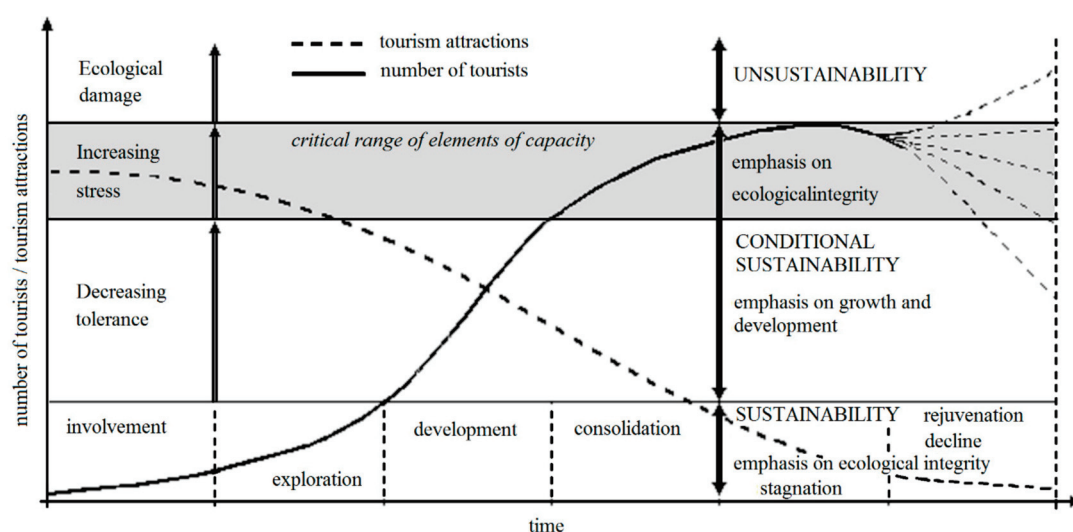


Figure 3. Sustainable development and TALC (Tourism Area Life Cycle). (Source: author’s calculations based on: [34,35] (pp. 119–138)).

3. Materials and Methods

This article deals with the issue of tourism development in cities, a topic often studied by researchers [39]. To achieve the aim of the article, empirical research had to be carried out to verify the questions and assumptions posed. The study was conducted amongst randomly selected residents and amongst businesspeople whose business activity was connected with tourism in Kraków, one of the most frequently visited cities in Central Europe.

Kraków is one of the most recognizable Polish tourist destinations and has been included among tourist metropolitan regions. The Old Town in Kraków and the Wieliczka Salt Mine were added in 1978 to the first World Heritage List of Culture and Nature. Kraków was the European Capital of Culture in 2000. It belongs to the UNESCO Creative Cities Network, was, in 2013, honored as the UNESCO City of Literature, and the European Gastronomic Academy chose Kraków as the European Capital of Gastronomy Culture in 2019. Tourism in Kraków has a very important economic function. In 2018, Kraków was visited by as many as 13.5 million people. In the same year, tourists spent almost 6.5 billion PLN during their stay in Kraków, and the GDP generated by the tourist industry in Kraków is over 8% of the city’s total GDP. Tourism provides Kraków with 29,000 permanent jobs, and taking into account multiplier effects, generates over 40,000 jobs in total [40].

In 2019, Kraków had 780,000 inhabitants and was divided into four main administrative districts, further sub-divided into smaller districts. Together, these 18 small districts, according to the Polish National Territorial Division Register (TERYT), form four main districts: Stare Miasto, Podgórze,

Krowodrza, and Nowa Huta. The most attractive district for tourists is the Old Town (Stare Miasto), which covers the historical urban space of the old town including the royal castle (Wawel), the former Jewish district of Kazimierz, as well as numerous churches and museums. The district principally contains hotels, apartments, restaurants, clubs, theatres, and so forth. This district is also the most affected by tourist traffic, with a visible dramatic rise in the provision of short-term tourist accommodation, resulting in gentrification.

The second district is Podgórze, which was a separate town 200 years ago. It is connected to the city center by bridges and walkways and is slowly absorbing part of the tourist traffic. Recently, several prestigious museums have been opened here, e.g., Schindler's Factory. The third district, which borders the city center to the west, is Krowodrza, a district of parks, gardens, sports facilities, and residential areas. The last and largest district is Nowa Huta, a town built in the social realist style as a dormitory for workers at the huge metalworks. The social realist urban layout of Nowa Huta is a reminder of the city's communist era history and is unique in Europe. The district is highly attractive for tourists interested in post-communist heritage [41].

The research method employed was based on a questionnaire distributed to a randomly selected sample of representatives of Kraków. A common feature of all those included in the study was permanent residence in one of Kraków's four main districts or the running of tourist sector business activity within this area.

The research questionnaire contained nine detailed questions. The initial part of the questionnaire included questions that first classified the respondent as belonging to a specific research group (residents/businesspeople) and then to a sub-group. For businesspeople, the sub-groups were created using the criteria of type of business activity (hostelry, gastronomy, other tourist services). For city residents meanwhile, the participants were classified into a sub-group according to their place of origin and whether they worked in the tourist industry. The respondents were also classified as belonging to one of the four main city districts (Stare Miasto, Krowodrza, Podgórze, Nowa Huta). The second part of the questionnaire included questions aimed at assessing the impact of tourist traffic on individual districts in Kraków and on the daily lives of city residents and people conducting business activity there.

Respondents were also asked to express themselves on specific attitudes and opinions using respondent compliance assessment with regard to proposed diagnostic statements concerning the degree of disturbance caused by tourism within Kraków (according to the methodology proposed by Doxey [14]). An assessment scale was used, so that respondents could choose one of five symmetrically distributed answer options in terms of the positive or negative effect on residents. Selecting the middle answer indicated a neutral attitude to the issue in question, or a lack of opinion on the topic. For some questions, the answers received were quantified, so that a positive answer to a particular phenomenon was given the value 2, or 1 when the positive answer was only partly supported. For negative scores, the value given was -2 unless the answer was only partly negative, in which case it was given the value -1 . A neutral answer was given the value 0. Therefore, an average score above zero for a specific answer type indicated a positive response to the issue. Meanwhile, a negative average value indicated a negative response among respondents overall to a specific issue.

A summary of the average results of residents and businesspeople made it possible to compare the answers given using non-parametric statistical tests. The results are presented in general in the form of the mean arithmetic score value, with the standard deviation ($x_{AV} \pm SD$), and sometimes also with the median value (Me).

In some of the questions used to assess the degree of tourist traffic disturbance in an area, it was also necessary to use a broader point scale, from 0–10. In the interpretation of the results, the assumption was made that tourist traffic disturbance rated between 0 and 5 constituted disturbance that did not exceed the area's critical level of tourist capacity and absorption, however, a score of 6 to 8 indicated a negative influence of tourist traffic on the local population. A score of 9 or 10 indicated a disturbance that not only worsened relations between tourists and residents but also damaged tourism as a whole

in the area studied, leading to its gradual decline. The interpretation methodology applied was taken from the TALC concept [13].

After initial verification of the questionnaires, the answers from the 518 respondents were selected for further analysis, which exceeded the minimum random sample size, estimated to be 386 questionnaires (for an applied level of maximum statistical sample error $\pm 5\%$ and a reliability score of $p = 0.95$).

The data collected were analyzed using statistical analysis, both one-dimensional (in the form of descriptive analysis), and two-dimensional (in the form of analysis of pair dependence for characteristics of respondents) [42]. In some cases, the significance level of differences between the average values obtained was also assessed. For the comparison of two groups with a different distribution of variables to normal, the *U* (Mann-Whitney) test was used [43]. The significance of differences between structural indicators was tested using a Chi-squared test. Verification of statistical hypotheses was conducted using statistical tests, assuming a significance level of $\alpha \leq 0.05$ [44].

Analysis of the research questionnaire was conducted using the alpha Cronbach method (for an assumed limit value of 0.7) and showed that the questionnaire has a high reliability score [45,46]. In terms of the question on the impact of tourism on daily life in the districts, the alpha Cronbach score was 0.86, while for the problems observed in the city, the correspondence of respondents' answers was even higher (the alpha Cronbach factor reached a value of 0.94). Somewhat different indications were given for the general impact of tourist traffic, as although the reliability of questions regarding the impact on the city and region gave an alpha Cronbach of 0.78, at the level of the district it was lower. This, however, is the result of considering the impact of tourism jointly for all four districts, in which a differing level of impact was observed. When each district is taken separately there is a similarity in responses, but at a lower level than for other questions. For example, for the key district of Stare Miasto, the test reliability was 0.72. Overall, the reliability of the questionnaire used can be considered as high, which is the result of initial research that tested the reliability of the research tool.

4. Research Results

A total of 518 respondents took part in the research, including 371 city residents (71.6%) and 147 businesspeople (28.4%). Among the participating businesspeople, a fifth provide hotel services (19.9%), and every thirteenth provided gastronomy services (7.8%). Of the businesspeople, 72.3% provided various tourist services (mostly these were businesspeople providing a range of complementary services to hostelry and gastronomy). Among the residents, half were under 35 years old (51.0%), 35.6% of respondents were between 36 and 55 years old, while every seventh was over 55 years old.

More than half of the participants worked in the tourist sector (51.0%). Over half (56.6%) also stated that they were originally from Kraków. As regards respondents' place of residence, most questionnaires were returned from the Stare Miasto district (44.0%), which is the principal tourist district in the city. The remaining districts were represented in comparable proportions (from 17% to 20%) (Table 1).

Table 1. Respondent structure. (Source: based on own study.).

Respondent Structure			
Businesspeople	28.4%	Residents	71.6%
Type of activity		Age	
Hotel services	19.9%	up to 35 years old	51.0%
Gastronomy services	7.8%	36-55 years old	35.6%
Other tourist services	72.3%	over 55 years old	13.4%
District		Work in the tourist sector	
Nowa Huta	17.3%	Yes	56.6%
Podgórze	20.9%	No	43.4%
Stare Miasto	44.0%	Kraków origin	
Krowodrza	17.8%	Yes	54.8%
		No	45.2%

Assessment of the impact of tourist traffic on participants was conducted in three place categories. The first was the district where the respondents lived or ran their business. The second was the city, and the third was the region. This division made it possible to evaluate answers about the effect of tourism on these three categories separately.

Respondents' assessments of the amount of tourist traffic at the district level, expressed on a scale of 1 to 10, showed an optimal level of traffic at around 5 ($x_{AV} = 5.49 \pm 2.81$; $Me = 5$). However, this is the average score of four separate districts, and it is worth noting that only one district displayed optimal traffic, while the rest are either overburdened by tourism (as in the case of the old town—Stare Miasto ($x_{AV} = 7.43 \pm 2.4$; $Me = 8$)), or have an insufficient number of tourists, such as Krowodrza and Nowa Huta, where tourists are still expected in larger numbers than at present ($Me = 4$).

In terms of the assessment of tourist traffic at the city level, the average score given by respondents was $x_{AV} = 7.57 \pm 1.97$ ($Me = 8$). This means, therefore, that Kraków is struggling with an excess of tourists, but to a moderate degree. Assuming that tourist traffic assessed at between 0 and 5 is a level that does not exceed the critical level of capacity and absorption, it can be said that Kraków has exceeded the limit of tourist capacity, a conclusion that is reflected in the answers of city residents. At the same time, it must be underlined that this is not yet a level that damages the tourism industry in the city, but it does place a burden on residents to a moderate or excessive degree.

However, it must be emphasized that a respondent's direct opinion of tourists does not reflect negative attitudes towards problems caused by tourist traffic in the city. Participants had a moderately positive assessment of the tourists visiting the city ($x_{AV} = 6.57 \pm 2.44$). However, analysis of the results obtained by district shows a varying attitude towards tourists. The lowest results ($x_{AV} = 6.1 \pm 2.78$) were noted in the main tourist district—Stare Miasto. At the same time, the average level of respondents' comfort of life in the city was assessed at $x_{AV} = 6.32 \pm 2.27$, while in the Stare Miasto district it is even lower ($x_{AV} = 5.44 \pm 2.61$), both in relation to the overall result and to the other districts.

In terms of the impact of tourist traffic on the region, respondents showed the lowest divergence of opinion. The impact on the region was assessed to be at the mid-point level between the impact on the city and on the districts and hovered around the moderate level at $x_{AV} = 6.26 \pm 2.01$. This is therefore a higher result than the impact on individual districts (with the exception of Stare Miasto), but is lower than the assessment of the impact on the city as a whole. This may mean that the impact on the city is assessed from the perspective of the impact on the main tourist district, in this case, Stare Miasto.

It is also interesting that respondents' origin, whether it be from the city or from outside the city, had no effect on their assessment of the comfort of life, nor on their expressed attitude towards tourists or their assessment of the impact of tourist traffic on the city ($p > 0.05$). A respondent's place of employment in tourism or outside the sector not only had an influence on their attitude towards tourists ($p < 0.001$), which would appear to be understandable, but also on their assessment of the impact of tourist traffic on the city ($p < 0.001$).

In terms of the differences between the assessment of residents and that of businesspeople providing tourist services in the city, significantly differing scores can be seen for all of the variables analyzed. While businesspeople displayed a lower level of comfort in running their business than the comfort of city life for residents ($p = 0.029$), in the case of their attitude towards tourists, businesspeople returned a significantly higher assessment than residents ($p < 0.001$). As far as the impact of tourist traffic on the city is concerned, it is worth noting that residents reported a significantly higher impact than did businesspeople ($p < 0.001$). This is understandable, however, given that businesspeople received income from tourist traffic, while only every second survey respondent was engaged in the tourism industry.

The results obtained on the attitude of residents towards visiting tourists was verified using a model of changes in residents' attitudes towards tourists according to Doxey [14]. To this end, residents were asked to indicate which attitude corresponds to their attitude towards tourists. The model was also supplemented with an extreme attitude as included in the Doxey model, but not named by him. This expresses a complete deterioration of tourism in the area under study, and thus was referred to as *decline*. During analysis of the results obtained in this area, it can be seen that the answers of the majority of respondents who reside in Kraków districts indicate the first two phases of the Doxey model (that is *euphoria* and *apathy*). These phases are indicated by almost exactly the same percentage of respondents (Figure 4). One exception is the district of Stare Miasto, where just under half of respondents chose the attitude *euphoria*, but which at the same time has the highest percentage of people who indicate their attitude as *antagonism* (13.6%). The youngest district in the city, Nowa Huta, has the best results, but it is also the city district which experiences the lowest impact of tourism.

When the research results are applied to the Doxey model, they show the highest level of negative indicators among residents and businesspeople in the Stare Miasto district, where there is the highest concentration of tourist traffic. Taking into consideration the recommended measurement of the phenomenon of excessive tourism, it can be safely hypothesized that there is a link between the level of acceptance and the features of overtourism [47].

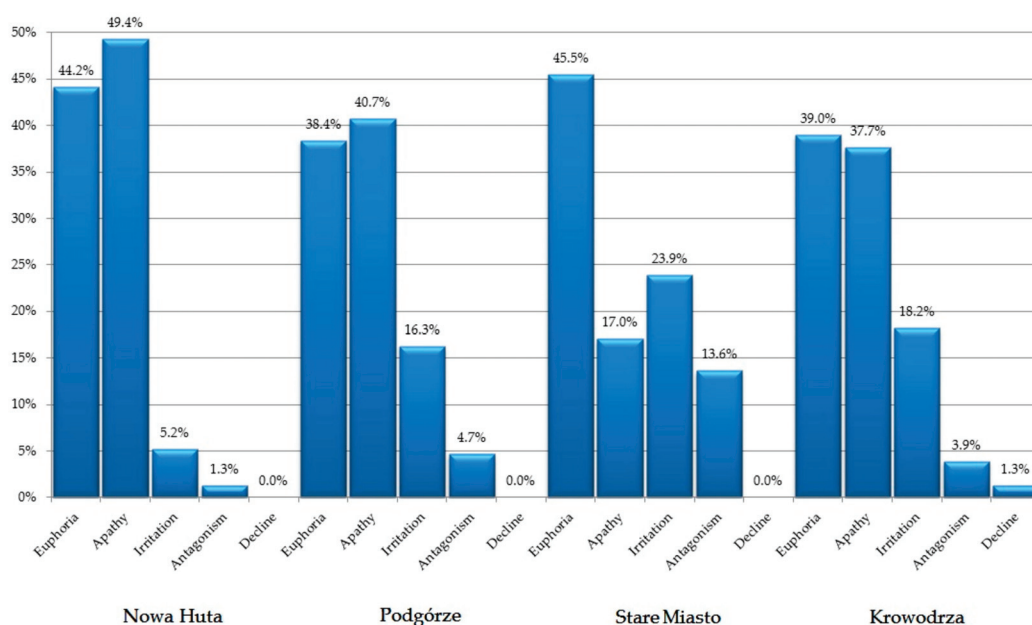


Figure 4. Comparison of the attitudes of residents and businesspeople in the main districts of Kraków. (Source: own study).

Detailed results of the attitudes indicated are presented in Table 2. It is worth noting the differences in the attitudes of residents and businesspeople conducting business activity in the city. While every third resident indicated their attitude to be one of euphoria, expressed in the following terms: *I'm*

happy that tourists come to visit because that means income for the city, new contacts, jobs, prestige ... (33.8%), this attitude was selected by as much as twice as many businesspeople (71.9%).

Among residents, 9.4% of people expressed their attitude as one of conflict, expressed in the following way: At the moment, tourists mainly just cause problems. There are too many of them, which means a lower comfort of life for residents. Something should be done about it, e.g., introduce limit, meanwhile, only 2.1% of businesspeople expressed the same opinion.

Table 2. Average scores according to the Doxey model. (Source: own work).

General	Nowa Huta	Podgórze	Stare Miasto	Krowodrza	TOTAL
I'm happy that tourists come to visit because that means income for the city, new contacts, jobs, prestige	44.2%	38.4%	45.5%	39.0%	42.5%
It's natural that tourists come to visit our city. It has no real effect on me. We should show our hospitality ...	49.4%	40.7%	17.0%	37.7%	31.7%
Unfortunately I see more negative than positive aspects of tourists coming to my city.	5.2%	16.3%	23.9%	18.2%	17.8%
At the moment, tourists mainly just cause problems. There are too many of them, which means a lower comfort of life for residents. Something should be done about it.	1.3%	4.7%	13.6%	3.9%	7.7%
I simply cannot tolerate having tourists in my surroundings!	0.0%	0.0%	0.0%	1.3%	0.2%
Residents					
I'm happy that tourists come to visit because that means income for the city, new contacts, jobs, prestige	43.4%	36.4%	25.0%	32.8%	33.8%
It's natural that tourists come to visit our city. It has no real effect on me. We should show our hospitality ...	50.0%	41.6%	20.0%	41.8%	36.9%
Unfortunately I see more negative than positive aspects of tourists coming to my city.	5.3%	16.9%	33.0%	20.9%	20.0%
At the moment, tourists mainly just cause problems. There are too many of them, which means a lower comfort of life for residents. Something should be done about it.	1.3%	5.2%	22.0%	4.5%	9.4%
I simply cannot tolerate having tourists in my surroundings!	0.0%	0.0%	0.0%	0.0%	0.0%
Businesspeople					
I'm happy that tourists come to visit because that means income for the city, new contacts, jobs, prestige	-	55.6%	72.4%	80.0%	71.9%
It's natural that tourists come to visit our city. It has no real effect on me. We should show our hospitality ...	-	33.3%	13.2%	10.0%	14.6%
Unfortunately I see more negative than positive aspects of tourists coming to my city.	-	11.1%	11.8%	0.0%	10.4%
At the moment, tourists mainly just cause problems. There are too many of them, which means a lower comfort of life for residents. Something should be done about it.	-	0.0%	2.6%	0.0%	2.1%
I simply cannot tolerate having tourists in my surroundings!	-	0.0%	0.0%	10.0%	1.0%

Respondents were also asked to indicate the key problems connected to the impact of tourist traffic on the city, as well as to assess the strength of their impact and the seriousness of the problem on a scale of 0–5 (Table 3). Respondents indicated 10 such areas, although while only seven problem areas were identified in Nowa Huta and Podgórze, as many as 16 were identified in the Stare Miasto district.

In general, the biggest problems in the city caused by tourist traffic were a lack of parking spaces ($x_{AV} = 3.63 \pm 1.49$), traffic congestion ($x_{AV} = 3.41 \pm 1.47$), high rent ($x_{AV} = 3.31 \pm 1.56$), crowded public transport ($x_{AV} = 3.29 \pm 1.37$), high land prices ($x_{AV} = 3.25 \pm 1.63$), air pollution ($x_{AV} = 3.17 \pm 1.67$) and rubbish ($x_{AV} = 3.04 \pm 1.56$), high prices for services and goods in shops ($x_{AV} = 2.79 \pm 1.52$), as well as excessive noise ($x_{AV} = 2.77 \pm 1.72$), and problems regarding short-term rental ($x_{AV} = 2.72 \pm 1.83$).

Respondents were also asked which areas of their lives were affected by the presence of tourists. An interesting set of results was obtained, which are presented in Figure 2. The most positive effect of tourism was seen to be aspects such as the economic situation (cost of living and income) and satisfaction related to professional and business life, as well as a feeling of pride in being associated with the city. It must be noted, however, that the average score is in general boosted by businesspeople, who returned significantly higher scores with regard to the positive effects ($p < 0.05$). Residents meanwhile returned considerably lower scores on the impact of tourism.

Table 3. Problematic issues in the city caused by tourist traffic. (Source: based on own study).

Problematic Issue for the City	Overall	Nowa Huta	Podgórze	Stare Miasto	Krowodrza
lack of parking spaces	3.63 ± 1.49→4	3.26 ± 1.54	3.54 ± 1.38	3.91 ± 1.45	3.49 ± 1.56
traffic congestion	3.41 ± 1.47→4	2.76 ± 1.54	3.14 ± 1.42	3.77 ± 1.38	3.51 ± 1.42
high rent	3.31 ± 1.56→4	2.63 ± 1.63	2.75 ± 1.53	3.89 ± 1.35	3.29 ± 1.46
crowded public transport	3.29 ± 1.37→3	3.27 ± 1.36	3.3 ± 1.39	3.21 ± 1.42	3.53 ± 1.23
high land prices	3.25 ± 1.63→4	2.58 ± 1.71	2.75 ± 1.62	3.76 ± 1.51	3.31 ± 1.42
air pollution	3.17 ± 1.67→4	3.28 ± 1.66	3.11 ± 1.61	3.16 ± 1.71	3.15 ± 1.69
waste pollution (rubbish)	3.04 ± 1.56→3	2.71 ± 1.52	2.81 ± 1.55	3.39 ± 1.52	2.86 ± 1.59
high prices for services and goods in shops	2.79 ± 1.52→3	2.21 ± 1.52	2.19 ± 1.36	3.35 ± 1.43	2.76 ± 1.41
excessive noise on the street	2.77 ± 1.72→3	1.94 ± 1.53	2.16 ± 1.59	3.61 ± 1.51	2.35 ± 1.66
problems with short-term rental of flats	2.72 ± 1.83→3	1.86 ± 1.71	2.3 ± 1.67	3.41 ± 1.77	2.49 ± 1.71
depopulation of buildings in the district	2.41 ± 1.86→2	1.13 ± 1.31	1.75 ± 1.58	3.48 ± 1.72	2.06 ± 1.63
high water usage	2.41 ± 1.51→3	2.21 ± 1.57	2.06 ± 1.43	2.79 ± 1.46	2.18 ± 1.5
excessive number of places to drink alcohol	2.41 ± 1.77→2	2.01 ± 1.62	1.87 ± 1.55	3.07 ± 1.79	1.97 ± 1.63
safety issues (fights, shouting)	2.38 ± 1.62→2	1.83 ± 1.43	1.81 ± 1.33	3.15 ± 1.58	1.88 ± 1.52
noise at night	2.37 ± 1.82→2	1.39 ± 1.36	1.65 ± 1.55	3.37 ± 1.71	1.91 ± 1.66
lack of recreational options in free time	2.31 ± 1.59→2	1.87 ± 1.48	2.03 ± 1.47	2.67 ± 1.65	2.28 ± 1.54
no local infrastructure (shops etc.)	1.92 ± 1.57→2	1.27 ± 1.23	1.58 ± 1.41	2.43 ± 1.64	1.79 ± 1.53

The only statistically insignificant results were obtained regarding the possibility for residents for religious observance and access to cultural sites ($p = NS$). For the remaining aspects of the phenomena studied, significantly differing average values were noticed between residents and businesspeople ($p < 0.05$). Residents more often than businesspeople indicated the negative impact of tourism on city life. One example is the negative impact on transport (in particular parking and getting around the city), as well as the condition of the natural environment in the district and the level of comfort of recreation in free time.

The visual depiction below of the scores given (Figure 5) shows the general attitude of residents and businesspeople towards the impact of tourist traffic on the city. While residents' assessments hover around the 0 mark, that is a neutral attitude towards the impact of tourism, the assessment of businesspeople connected with tourism are significantly higher and show a positive effect, but at a moderate level.

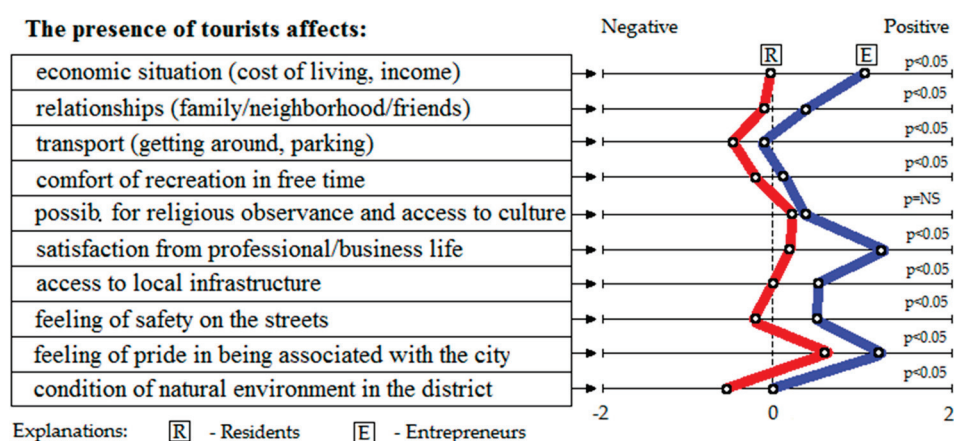


Figure 5. The impact of tourist traffic on particular aspects of respondents' lives. (Source: own study).

5. Discussion

The research results show varying attitudes among residents towards tourism and tourists, even in the Old Town district most affected by the phenomenon, which confirms previous research conducted by the authors using different methods [47]. The propitious attitude of businesspeople involved in tourism towards visiting tourists is more positive than in the case of residents. However, it must be noted that even in the latter group of respondents attitudes vary. The burgeoning of tourism in the most popular tourist district and subsequent gentrification are becoming a clearly visible phenomenon, although limited in terms of area [8]. The exceeding of the socio-psychological capacity is expressed principally in attitudes towards the difficulty in getting around the city, parking and noise but does not influence parameters such as quality of life and satisfaction from professional life, access to culture, or living costs. In fact, the presence of tourists strengthens residents' pride in the attractiveness of the city. It is worth drawing attention to the results for the district Podgórze, which is boosting its attractiveness for tourists and increasing available accommodation, thus becoming an area that is starting to absorb part of the tourist traffic and whose residents and businesspeople only display an attitude of irritation towards tourism to a very limited degree.

The literature draws attention to the fact that the processes of overtourism and gentrification result in destruction of the socio-cultural fabric of a city, lowering the quality of life, and causing an increasing number of residents to take the decision to move out of the historical city center [47,48]. Gentrification results in a change in the character of a part of the city. In most cases, this is true for districts originally inhabited by local tenants which then become dominated by residents of higher social and material status than the original residents. Kraków as a whole does not have a problem with a drop in the number of residents. However, negative population trends affect the first district, Stare Miasto. Year after year, there is a drop in the number of people registered as permanently resident. This trend has continued uninterrupted since 2004, when the number of those registered was 49,000, while in 2018 there were only 31,600 people registered [8,49]. This is a drop in registered persons of 36.5% over 13 years. This is partly due to the operation of P2P platforms, in particular AirBnB. In October 2019, the platforms AirBnB and HomeAway had almost 6900 premises available for short-term rental. After Warsaw, this is the second highest amount among all Polish cities, but is lower than direct competitors i.e., Prague and Budapest and the most popular European capitals [48]. In reality, however, when this number is taken in relation to the population of permanent residents, it is shown that the intensity of the phenomenon in Kraków is extremely high. This ratio is almost 9 premises for every 1000 residents, comparable to Prague and Amsterdam, and is higher than the results for cities such as Rome, Lisbon, and Barcelona. The strength of P2P websites is shown in tourist traffic research results for Kraków for 2019, according to which 34.1% of foreigners booked accommodation in the city via booking.com, and 29.7% via AirBnB [49–51]. Once the former residents have been pushed out, their place is taken by visitors who do not identify with the local community and do not take responsibility

for the cultural heritage of the area. For this reason, recommended models have been developed for managing the resilience of cities [52] in terms of the local community, the economy, and infrastructure.

An excessive concentration on specific city districts may lead to an increase in living costs, a reduction in retail options for residents, the transformation of houses and flats into tourists apartments, and other impacts limiting the lifestyle of local residents. Such phenomena can easily be observed in the Kraków Old Town district (together with Kazimierz) and require the development of tools to minimize the effects of the intensification of this process, which as a consequence may lead to the extreme negative stage of P. Russo's [3] vicious circle in the development of tourism, as described in the literature, and a crisis in tourism on the basis of the TALC tourist area life cycle [13]. The results of the study, together with desk research on Kraków tourism statistics, allow for an interpretation of selected criteria for the position of Kraków, as referred to in the models mentioned above.

The level of compatibility of the set of criteria for the decrease in tourism (Table 4) allow for a forecast to be made that also is a result of the specifics of Kraków as a historical medieval city. This forecast suggests that the development of tourist traffic in Kraków will not lead to further expansion of tourism, especially into districts that lie at a greater distance from the city's principal attractions. This will increase the contrast between the geographical distribution of benefits and of costs related to the functioning of the tourism industry in the city overall.

Table 4. Compatibility of criteria with regard to the decline of tourism in Kraków. (Source: own study).

Tourism Decline Criterion	Compatibility
Negative changes in the number of tourists	no
Negative changes in the number of overnight stays provided	no
Drop in the average length of stay	no
The occurrence of seasonality	no
A decrease in the proportion of tourists visiting the city for the first time	no
A decrease in the profits of local tourist firms	no
A low and decreasing level of accommodation bookings	no
Lack of adequate facilities or infrastructure to meet tourists' needs	no
Practical difficulties related to tourist traffic	yes
Problems with the local community's attitude towards tourists	yes
An excessive concentration of tourist traffic around main attractions	yes
High accommodation prices in the city center	yes
A decrease in the profits of firms located in the city center	no
Exceeding of tourist attraction capacity	yes
A drop in the number of jobs in tourism services	no
Change in the residential profile to one of short-term stays in some parts of districts	yes
Rental rates	yes
Congestion, noise	yes

The research confirms the initial hypothesis put forward. The actual attitudes of Kraków residents depend on the degree of involvement of residents in providing tourist services and obtaining income from such services, as well as on the place of residence in relation to the districts most crowded with tourists in the tourist destination.

It is also worth noting that the research confirmed that the historical part of the city is currently in the first phase of excessive development of tourism, illustrated by saturation in the supply of tourist sites and accommodation, limited resources (land, buildings, streets, parking spaces, etc.), and the

palpable level of irritation in the community. The fact that residents and businesspeople from outside the tourist districts do not experience the side effects of overtourism may also in the long term give birth to conflicts between the city center, which bears the costs of the tourist industry, and neighboring local communities.

6. Conclusions

In the process of the further development of tourist traffic, one challenge for historical cities such as Kraków is management of the destination, jointly understood as: an integrated marketing message, dispersion of tourist traffic, easing conflict between residents and visitors or between various groups of competing service providers, regulating access to recognized tourist areas, tools for the gathering of monetary funds, organizational structures, as well as successfully involving residents in providing services for visitors.

The trends and structure of the tourism market require changes in the approach to tourism development from quantity to quality, without disturbing the state of relative balance experienced by residents and the urban space (especially cultural heritage). At the same time, tourist traffic management must quickly and effectively react to changes by implementing the concept of agile tourism, which can be defined as adapting organizational culture and reacting quickly to market changes [53].

The strategic actions proposed by the World Tourism Organization [1], which are intended to combat the negative phenomena associated with modern-day tourism, and the broad analysis of studies conducted for the European Parliament [54], both focus mainly on having an influence on tourist traffic. Only few recommendations relate to communication with residents. However, the opinions and attitudes of residents expressed in our research point to the necessity for intensive dialogue with local interested parties.

This action should, however, cover two distinct areas, (1) minimizing the negative attitude towards tourism and creating conditions for engaging a broader section of the local community in providing tourism and tourism-related services, and (2) minimizing the conflicts between businesspeople that arise as a result of changes in the supply model [53]. The resulting consensus between residents and local service providers regarding development of the city through tourism should have the effect that each group accepts the loss of part of their individual benefits for the good of common values for the city community as a whole, which should also make it possible to achieve the principles of sustainable development. The greater the conflict between interested parties, the more difficult it will be to manage the city as a tourist destination, and the greater the risk of the decline in not only tourism, but also of the tourist reputation of the city.

One answer to the problems that occur as a result of expansion of the tourism industry is most certainly responsible tourism. Goodwin [54] held that responsible tourism tackles the socio-economic and environmental problems and opportunities which arise as a consequence of tourism activities. He notes the need to drive toward socially and economically responsible tourism, environmental responsibility, ecotourism, and conservation.

The necessity of building positive relations via responsible tourism is also indicated by Camilleri [55]. His paper demonstrates that the real essence of responsible tourism lies in the implementation of laudable behaviours. This may be the direction indicated by Hall [56], who emphasizes that responsible behaviours transcend attitudes and genuine organisational commitment, not only in policy formalisation. Camilleri indicates that responsible tourism has led to improved relationships with social and regulatory stakeholders, effective human resources management, better market standing, operational efficiencies and cost savings, along with other benefits [57,58].

Attention is drawn in the latest publications by Milano and all [59] and Dodds and Butler [60] to the problems of measuring the phenomenon of overtourism and implementing solutions to prevent its negative effects. The differences in attitudes among businesspeople are most likely the result of differing business models (e.g., hoteliers, restaurateurs, or businesses involved in the night economy).

Achieving unanimous agreement on implementing tools that can limit overtourism would therefore appear to be impossible and would be subject to lobbying by various groups of interested parties.

This research points to a phenomenon of varying perceptions of the weight of traffic in individual districts in a tourist destination. Identification of a variety of behaviours amongst residents and businesspeople in particular districts has provided data on the perception of overtourism among different interest groups. The empirical research cited here has broadened prior knowledge on overtourism in cognitive terms. This includes both issues of the conflicting aims of residents and businesspeople in terms of the expansion of tourism in the city, as well as the differences in the attitude towards the phenomenon from the point of view of residents in key tourist districts and residents of districts not directly connected to tourism. The value added of the research was also the successful use of methodological assumptions in the form of creative methods of measuring the excessive impact of tourist traffic.

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Article

How Overtourism Threatens Large Urban Areas: A Case Study of the City of Wrocław, Poland

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Abstract: Excessive tourist traffic concentration in cities of high tourist attractiveness often leads to overtourism, manifested, among others, by overcrowding in appealing areas and means of transport, rising prices, or degradation of natural and cultural resources. The effects of an excessive number of tourists include an unfavourable change in the local community's attitude towards tourists. The paper determines the extent and forms of overtourism symptoms in Wrocław, Poland. The research allowed for the identification of negative and positive effects of tourist traffic in Wrocław as perceived by three groups of respondents: experts, Wrocław residents: key experts from the scientific, administrative, planning, and business communities; people directly involved in tourist services; and students of tourism. The crucial part was direct research, conducted in November 2019 with a questionnaire technique. The results confirm symptoms of overtourism in Wrocław, but the threat is not significant. The article shows specific potential overtourism threat factors; the respondents' opinions did not significantly differ between the groups. The presented findings and conclusions may be useful in developing the tourism policy of this and other cities, especially regarding sustainable development of tourism and the potential threat imposed by overtourism. The methodology may be used in similar comparative studies in other cities.

Keywords: sustainable tourism; overtourism; urban tourism; Wrocław city; Poland

1. Introduction

The aim of the study was to identify the background and factors contributing to the overtourism phenomenon in a big urban agglomeration of high tourist attractiveness. The research object was Wrocław, a city of over 600,000 inhabitants, located in the west of Poland (Figure 1), a popular tourist destination for people from various countries. This is a city with a still growing reputation.

The tourist resources and potential of Wrocław are based primarily on its centuries-old and highly diversified cultural heritage and unique architecture as well as a rapidly developing meeting industry infrastructure. This determines the key forms and types of tourist traffic in the city space (such as cultural tourism, city breaks, and business and conference tourism). The number of tourists visiting the city is constantly and dynamically increasing. According to estimates [1,2], in 2018, 5.35 million tourists were registered in Wrocław, with a constant increase in the group of foreign tourists and an overall increase in the number of tourists of +7% in the period of 2016–2018. The number of tourists utilizing the accommodation facilities in Wrocław increased by as much as 40% in the period of 2014–2018, with the concentration of tourist traffic flows in May–August (at the level of 52% of the registered traffic) [3].



Figure 1. Geographical location of Wrocław. Source: own elaboration based on Google Maps.

Wrocław was ranked “Gamma–” in the prestigious international ranking of the British Loughborough University, *The World According to GaWC 2018*, (Globalization and World Cities Research) [4], which denotes a high position among the world’s leading cities. In the Polish Premium Brand 2019 classification, Wrocław was ranked first as a province capital city, enjoying the best reputation among Poles [5]. It was also placed 95th of the 174 cities assessed in the ranking of the world’s smartest cities published in 2019 in the annual report of IESE Business School University of Navarra, *Cities in Motion Index* [6].

On the basis of the available diagnoses [1], we made the initial assumption that there were symptoms of overtourism in Wrocław, which might intensify in the years to come. We intended to establish the degree of overtourism threat and to determine factors increasing and decreasing the threat, as perceived by people working for the benefit of tourism and living in Wrocław.

Overtourism is an objective phenomenon that emerges as a result of tourism market activity and socioeconomic policy. Its negative consequences affect mainly the tourists themselves and the residents of a given area, although they may, to a certain extent, be approved by entrepreneurs involved in tourism. Three main types of activities related to this phenomenon can be identified. The first one is preventing the emergence of overtourism. These are preventive measures involved in the development strategies of cities and regions. The second type of actions entails measures to eliminate or reduce the adverse effects of overtourism. Here, special action plans are needed, usually long-term ones. The third type is adaptation activities, whereby one wants to adjust the functioning of a given area to excessive tourist traffic, accepting its existence. Each of these types of action requires a preliminary multidirectional diagnosis of overtourism, recognition of its specific elements, as well as an early identification of risks and their potential consequences. In this paper, we focus on this third aspect. The examined city has no conclusive overtourism data, measurements, or assessments. The available

scarce analyses relating to the description of the tourist phenomena in Wrocław which can be seen as symptoms of overtourism are prognostic in their character [1,2]. Simultaneously, the analyses in question directly indicate the content (Strengths, Weaknesses, Opportunities, Threats: SWOT analysis), and even specific operational objectives and a catalogue of actions within the planned tourist policy of the city, which are aimed at reducing the overtourism phenomenon [1]. This indirectly proves the need to verify the real condition of the overtourism phenomenon in the city space. There is not enough evidence to infer that this phenomenon has already become a real threat. An ongoing discussion of experts (being also Wrocław residents) reveals suggestions of potential discomfort caused by the growing tourist traffic in Wrocław. The city authorities consider whether to stimulate further tourist traffic development or perhaps to inhibit it [1]. Therefore, a closer examination is becoming increasingly important, including verification and assessment of the opinions and feelings of main tourism stakeholders in Wrocław. In recent years, Wrocław has taken steps to stimulate some areas of the city in order to increase the significance of the tourist function. This created incentives and opportunities for tourist traffic growth. It is thus worth seeking an answer to the question of whether this direction should be further followed in the coming years.

2. Literature Review

Overtourism is an issue of interest for politicians, managers, researchers, and tourists. It is typically discussed in the context of sustainable development, and, specifically, sustainable tourism. Although the concept of sustainable development remains fairly ambiguous [7], it has been gradually implemented in various economic sectors, including tourism industry, where it has led to the idea of sustainable tourism.

The issue of sustainable tourism has been analysed by many researchers, both in the theoretical field [8–15] and in case studies aimed at illustrating its practical dimension [16–19]. Butler [10] presented sustainable tourism as “tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an infinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well-being of other activities and processes”. Sustainable tourism is a way of organizing and managing the tourism industry [14,20,21] in which determining the acceptable level of tourist traffic growth is a very important assumption [14].

Having that in mind, one can observe not only an intensification of the effects of classical tourism dysfunctions but also the emergence of new, unfavourable consequences of tourist traffic mismanagement, including what is known as overtourism.

Though not a new phenomenon [22–27], overtourism has recently become a “buzzword”, appearing in quite numerous scientific discourses, popular scientific presentations, or mass media, including news. Along with the growth of tourism popularity and hypermobility, the burning issue of “tourism saturation” [25] has emerged. This phenomenon is often discussed as it pertains to large urban agglomerations, such as Barcelona, Venice, or Berlin, whose residents openly protest against what they call “tourism flooding”, “tourism invasion”, or even “tourism pollution”. In some tourist destinations, an unflattering atmosphere has aroused around tourists, which is referred to in scientific literature as “tourismophobia” [25,27,28].

Overtourism, now constituting a global problem [25], has been defined as “the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitors experiences in a negative way” [29]. Milano et al. [26] define it as “the excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have caused permanent changes to their lifestyles, denied access to amenities and damaged their general well-being”.

Despite a quite agreed-upon approach to the definition framework, overtourism is a complex phenomenon [26] and it does not simply stand for the number of tourists visiting a particular destination but for the issue of tourist capacity [24]. Since the phenomenon of “overloved cities”

results from short-sighted tourism policy and poor management focused on generating maximum possible income [30], it causes a number of annoying consequences, e.g., overcrowding, degradation of both cultural and nature sites, low quality of tourists' experience, residents' dissatisfaction due to the increase in the prices of services, apartments, and real estate, and gentrification of the cities [24].

In the scientific literature, the problem of overtourism has been described many times in the context of big cities and well-known tourist destinations. Besides the flagship examples of Barcelona, Venice, Florence, Amsterdam, and Berlin, the following cases have also been mentioned:

- Cambodia, Costa Rica, US, France, Dubai, Zambia, Sri Lanka, China [31];
- Palma de Mallorca, Paris, Dubrovnik, Kyoto, Bali, Reykjavik, Thailand [25];
- Majorca, Galapagos Islands, Kyoto, Iceland, Costa Rica, Favelas in Rio de Janeiro, Portuguese urban cities, Byron Bay—Australia, Greenland [26];
- Cairo, Delhi, Manila, Bangkok, Moscow [32];
- Rome, Prague, and in Poland, among others: Zakopane (Krupówki Street), the Tatra Mountains (Morskie Oko lake), Kraków, Kazimierz Dolny, Śnieżka mountain, Wieliczka Salt Mine, or the Auschwitz-Birkenau Memorial and Museum [24,33].

Implementing potential solutions for the consequences of overtourism is a complex task that requires long-term strategic planning. It has been noted that “there is a pressing need to set a sustainable roadmap for urban tourism and position the sector in the wider urban agenda” [29]. The United Nations World Tourism Organization (UNWTO) [29] has proposed 11 strategies that may help limit the overtourism consequences:

- promote the dispersal of visitors within the city and beyond;
- promote time-based dispersal of visitors;
- stimulate new visitor itineraries and attractions;
- review and adapt regulations;
- enhance visitor segmentation;
- ensure local communities benefit from tourism;
- create urban experiences that benefit both residents and visitors;
- improve city infrastructure and facilities;
- engage and communicate with local stakeholders;
- engage and communicate with visitors;
- establish monitoring and response measures.

The elements of the strategies limiting the negative impact of overtourism indicated by UNWTO [29] are included in the conceptual assumptions of tourism development in Wrocław up to 2023 [1] in the following aspects: the city tourist mission, strategic areas of tourism development and expectations of stakeholders, as well as the adopted strategic and operational objectives together with selected activities.

According to Séraphin et al. [27], branding is a very important tool to prevent the effects of overtourism by creating the desired image of a given tourist destination, e.g., by “appealing to target audience’s emotional aspirations” or educating tourists [27]. The question arises as to how many destination marketing organisations use this educative function of branding to induce desired behaviours in tourists. What exactly would its efficiency depend on [34–40]?

Kruczek [24] indicates that overtourism is a “side effect” of mass tourism, affecting mostly (but not only) local communities and the natural environment. The need to move away from traditional mass tourism has been reflected in the demands for a paradigm change from the so-called 3S tourism (Sun, Sand, Sea) to 3E tourism (Entertainment, Excitement, Education) (e.g., [41]), bringing about sustainable tourism (e.g., [8,14]), various forms of alternative tourism [42,43], or ecotourism [44,45].

The greening of mass tourism [46,47] and the large-scale promotion of sustainable forms of travelling can prove to be effective ways not only to avoid the effects of overtourism but also to

implement a more sustainable policy in cities, to improve the quality of life of host communities, and to raise the quality of the tourism experience.

The approach selection and strategy clarification require determination of whether overtourism is only a potential threat to a given area (destination) or a reality already. In the former case, preventive strategies should be pursued to inhibit any imbalances; in the latter situation, strategies to mitigate or eliminate the adverse effects of overtourism are essential. In any case, it is necessary to provide a diagnosis, preferably through repeated direct research in a particular location. This requires ongoing research and observation in places at risk of or already affected by overtourism, especially from the perspective of parties concerned with the phenomenon. The aim is to properly recognize the expectations and feedback of residents, the tourist industry, local authorities, and tourists themselves.

The presented paper is based on such research, which reveals the opinions of key experts, people working for the benefit of tourism, and residents, i.e., important groups of stakeholders in tourism development.

Wrocław is conveniently located in terms of tourist traffic routes and transport connections, has an interesting past, a wealth of unique monuments of history, and recognized tourist attractions. It is also a place of important events and meetings. These are among the reasons why Wrocław is one of the Polish centres attracting tourists from various countries; it is estimated that the city is visited by more than 5 million people each year [2]. It should be noted that no studies on threats of overtourism have been carried out in Wrocław so far; therefore, the survey undertaken here (limited to a specific group of respondents, treated as experts) may be considered as the first approach to diagnosing the overtourism problem.

3. Material and Methods

The research carried out was twofold. Initially, the desk research method was applied, the analysis of secondary and primary data (subject literature, strategies and plans for tourism development in Wrocław [48,49], reports from the tourist traffic survey, Statistics Poland data, website data). The authors reviewed scientific publications on conditions of tourism development in urban entities and agglomerations, processes of sustainable development of tourism economy in large cities, and the effects of tourism concentration (including overtourism) in urban space.

Direct research was of key methodological importance. It was conducted in Wrocław in November 2019 as a questionnaire survey and aimed at a preliminary recognition of the investigated overtourism phenomenon. The research was performed in three stages. The first stage was a pilot study (questionnaire test) involving 10 key experts: representatives of Wrocław city authorities and local government (directors of tourism development offices), business communities (including representatives of tourism industry associations), academic communities (of recognized position in the research of tourist phenomena), and planning institutions (actively occupied with creating the sphere of tourism in Wrocław). The second stage was to collect opinions (on the basis of a survey questionnaire) of people directly involved in tourist services (90 persons: tour guides and tour leaders, also affiliated with the industry associations, as well as organizers of the incoming tourism to Wrocław), whom we treat as experienced observers and tourist experts with established views on tourist phenomena taking place in urban space. The third stage of the survey (survey questionnaire) involved students of tourism (60 persons: Wrocław residents), as a group of additional experts, having in-depth knowledge of tourist traffic, as well as a more critical view of the current phenomena in tourism. It is important that the respondents (experts) were residents of Wrocław.

Purposive sampling was applied with the consideration of the respondents' suitability for assessing the potential overtourism. It should be emphasized that the essence and purpose of the research was not to measure the entire population, as it was a qualitative study aimed at identifying and describing the phenomenon of overtourism on the basis of the opinions of people actively involved in tourism services or constantly observing the market for these services. The sample size in the survey was

not substantial since the key variables in the selection of respondents were their competences and experience which would guarantee deepened opinions on the manifestations of overtourism.

Direct research with key experts was carried out by using the computer-assisted web interview method; in surveying people directly involved in providing services to tourists (tourist experts), we employed official meetings organized by the Wrocław authorities to present directions of tourism development. The additional experts, a group of students, were selected from among the best students of tourism (master's degree).

The research was based on a questionnaire with 13 groups of variables. The variables included:

- the impact of tourism on the environment, economic development, community, tourist assets and infrastructure, commuting and transport, city tourist offers;
- symptoms of a negative tourist traffic impact on the city space (uneven development of nontourist districts, disparities in the development of districts, pauperisation of nontourist areas);
- tourism features influencing the characteristics of Wrocław;
- the residents' level of satisfaction with living in Wrocław;
- phenomena related to sharing economy, especially creating an offer for temporary apartment rental in Wrocław;
- the image of the city in the eyes of its residents;
- the phenomenon of moving out of Wrocław or its districts as a result of increased tourist traffic;
- the city's gentrification processes.

The purpose of the empirical research conducted in this manner was to identify the negative and positive effects of tourist traffic in Wrocław, particularly in terms of sustainable development of tourism as well as the potential threats to this process resulting from overtourism.

The statistical analysis of the survey results was conducted by using the R 3.5.3 software [50]. The response rate diagrams were obtained in the likert [51] package in R. In order to present a comprehensive picture of the results, the following calculations were performed: the mean rate of positive and negative indications for the main research issues for the groups of tourist experts and additional experts (hereinafter referred to as other experts) (M_{ro} —mean rate of other experts' responses) and key experts (M_{re} —mean rate of key experts' responses), the coefficient of variation for other experts (V_o) and key experts (V_e), as well as the mean point values (M_{pv1-5} or M_{pv1-7}) of opinions for particular detailed questions, expressed in the ranges of 1–5 and 1–7.

The analysis of the significance of differences in the rates of particular responses was also carried out and verified with a Fisher's exact test, with the statistical significance level of $\alpha = 0.05$. In turn, the significance of differences in the mean point values ascribed to particular responses was verified with the Wilcoxon test, with the statistical significance level of $\alpha = 0.05$. An analysis of the correlation of total scores was performed for 5 content-related questions from the survey questionnaire. The total scores were determined by summing up all responses of a respondent separately for each of the indicated questions and then scaling them to the [0;100] range by using the following formula:

$$\frac{\text{sum of points} - \text{minimum sum of points}}{\text{maximum sum of points} - \text{minimum sum of points}} \times 100$$

In drawing conclusions, the methods of deduction and comparative analysis with the technique of describing diversity and similarities were applied. In order to simplify the problem presentation, the obtained data were aggregated, limiting the number of presented observations to key results only. The authors also relied on their own observations and experiences as professional and active participants in the system of planning, managing, organizing, and servicing the tourist traffic in Wrocław (observation participant method).

4. Research Results

A total of 160 respondents (including 10 key experts) for whom Wrocław was a place of residence and work (85%) participated in the study. As already indicated, the sampling was purposive and qualitative. The survey was carried out in the same period (November 2019) for the three types of respondent groups.

Almost half of the surveyed residents were aged 24 years or less (46.25%), 16.25% were aged 25–45 years, and 37.5% were aged 45 years or more. A vast majority (67.5%) of the participants worked in the field of tourism, representing several service categories: organization and servicing of tourist traffic (52.5%), accommodation and catering services (15%), and tourism-related services (26.88%) (Table 1).

Table 1. Structure of respondents.

Wrocław Residents	
Permanent residence	20.00%
City of professional activity	15.00%
City of residence and work	65.00%
Age	
15–24 years	46.25%
25–44 years	16.25%
45–64 years	25.62%
≥65 years	11.88%
Type of Activity	
Tourist traffic organization and services	52.50%
Hospitality services	6.25%
Catering	8.75%
Transportation services	4.38%
Other tourist services	26.88%
Other services	1.25%

Source: own elaboration.

The assessment of the impact of tourist traffic on the survey respondents (Wrocław residents) was carried out with reference to seven types of city functioning spheres; this division reflects the areas of potential overtourism impact on urban agglomerations indicated in the literature. The respondents' evaluations of the nature and degree of tourist traffic intensity impact on Wrocław, expressed on a 5-degree scale, indicate that symptoms of negative impact of tourism are noticeable but in a widely varying degree. Negative opinions ranged from 10% to 50% among key experts and from 7% to 34% among other experts (Figure 2). In terms of all seven investigated variables (Figure 2), the mean score for the opinions confirming the overtourism symptoms observed by the respondents was $M_{ro} = 66.0\%$ ($V_o = 12.9$) for other experts and $M_{re} = 68.6\%$ ($V_e = 24.4$) for key experts. The mean rate of opinions denying the existence of such symptoms equalled $M_{ro} = 26.1\%$ ($V_o = 53.5$) among other experts and $M_{re} = 27.1\%$ ($V_e = 55.1$) among key experts with regard to the perception and feeling of the impact of tourist traffic on the functioning of the city. The values of the coefficient of variation indicate significant differences in the indications in both studied groups in terms of the intensity of the respondents' indications for particular variables. It can be presumed that the magnitude of the diversity of opinions in the surveyed populations of other experts and key experts may be derived from and correlated with their area of residence and age. However, in this case, such relationships and correlations were not subject to the statistical analyses.

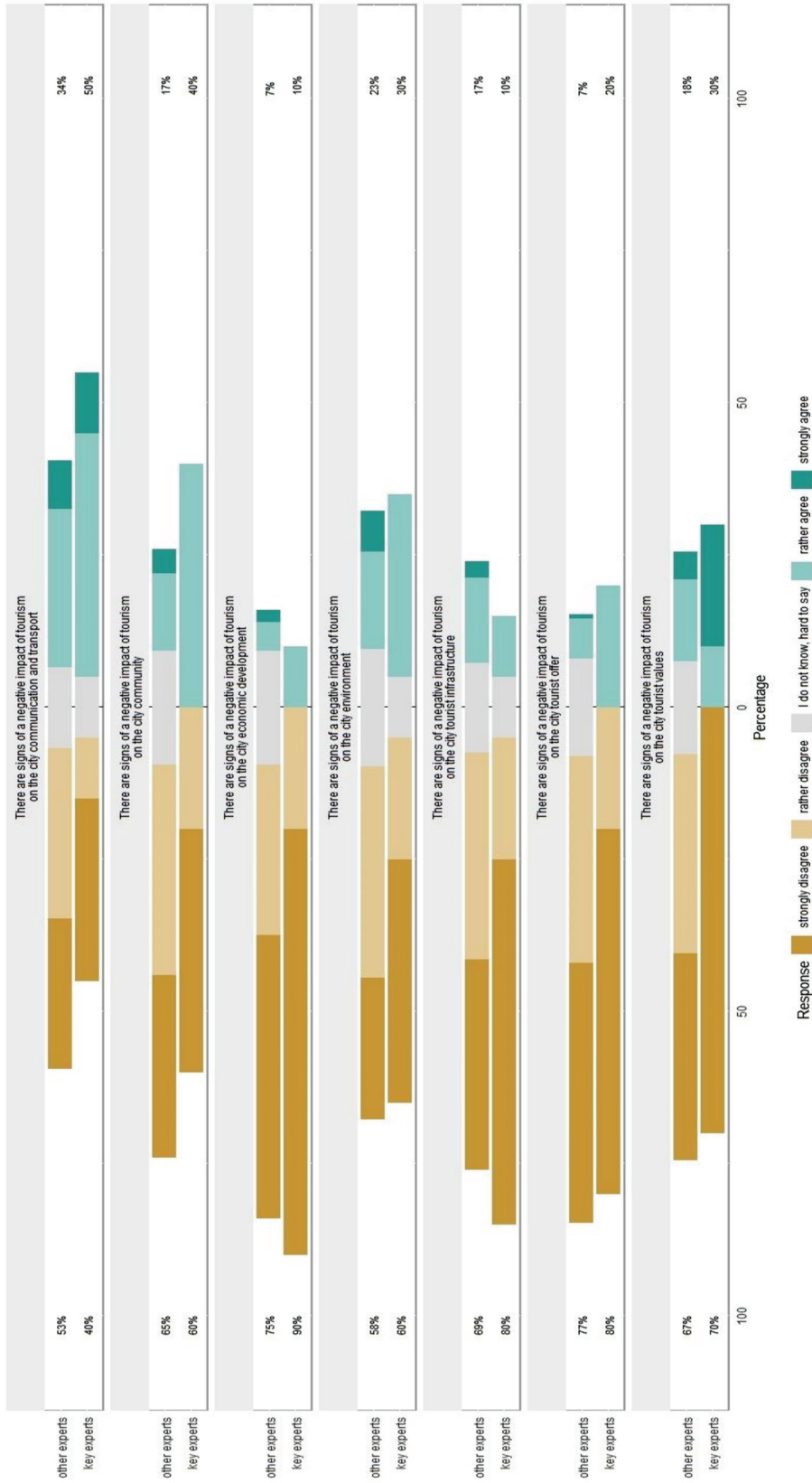


Figure 2. Comparison of other experts' and key experts' attitudes regarding the negative impact of tourism on the functioning of Wrocław. Source: own elaboration.

It is worth noting the manifestations of overtourism perceived by the respondents (mainly congestion, noise, queues for services) in relation to the negative impact of tourism on (M_{pv} in a scale of 1–5):

- commuting and public transport: 50% key experts, 34% other experts ($M_{pv} = 2.66$);
- the life of the city community: 40% key experts, 17% other experts ($M_{pv} = 3.25$);
- the natural environment of the city: 30% key experts, 23% other experts ($M_{pv} = 2.47$);
- the city tourist assets: 30% key experts, 18% other experts ($M_{pv} = 2.21$).

At the same time, the respondents widely denied opinions about the negative impact of tourist traffic on:

- the city tourist infrastructure: 80% key experts, 69% other experts ($M_{pv} = 2.13$);
- the city tourist offers: 80% key experts, 77% other experts ($M_{pv} = 2.21$);
- the city economic development: 90% key experts, 75% other experts ($M_{pv} = 1.85$) (Figure 2).

The results of the research allow for a careful conclusion that the respondents tended to believe that tourism had a positive impact on the city functioning (mean of positive opinions: 66.2%) but at the same time they began to notice the phenomena which might have a negative impact on the Wrocław urban space, with the constantly growing tourist traffic (5.35 million in 2018, with an increase by 11% compared with 2017) [2]. However, the range of negative assessments, i.e., those that strongly emphasized the threat of overtourism, should be considered as relatively small.

The respondents were also asked to indicate some key problems related to the impact of tourist traffic on the city as well as to assess the strength of the impact and the severity of the problem on a scale of +3 to −3 (Figure 3). The results indicate that among both other experts and key experts, positive opinions prevailed in relation to particular issues reflecting the probable difficulties that might occur in the city as a result of the concentrated tourist traffic. However, the differences between the mean values of negative and positive indications (determined on the basis of the responses) were slightly significant in this case. In general, as indicated by the respondents, the biggest problems of the city due to tourist traffic (M_{pv} on a scale of 1–7) were the following: lack of parking lots—56.6% of indications ($M_{pv} = 4.66$), excessive air pollution—55.6% of indications ($M_{pv} = 4.40$), too high housing prices—53.1% of indications ($M_{pv} = 4.34$), city traffic congestion—53.7% of indications ($M_{pv} = 4.53$), excessively increasing catering prices—42.5% of indications ($M_{pv} = 4.22$), too little greenery—41.9% of indications ($M_{pv} = 3.91$). In both groups, definitely distinctive positive indications, pointing at favourable features of the impact of tourist traffic on the socioeconomic development of the city, included: attractiveness of the city for tourists—91.3% of indications ($M_{pv} = 6.12$), high growth rate—71.2% of indications ($M_{pv} = 5.11$), intensive functioning of the urban community—67.5% of indications ($M_{pv} = 5.05$). Interestingly, the opinions of key experts were more critical but in several points coincided with the views of other experts. The detailed data for the groups of other experts and key experts are presented in Figure 3.

The mean values of the responses confirming the negative impact of the tourist traffic on the socioeconomic situation of the city were $M_{ro} = 32.5\%$ ($V_o = 47.2$) for other experts and $M_{re} = 39.0\%$ ($V_e = 50.6$) for key experts. The mean result for opinions denying the existence of such symptoms equalled $M_{ro} = 46.6\%$ ($V_o = 44.1$) among other experts and $M_{re} = 38.1\%$ ($V_e = 69.2$) among key experts.

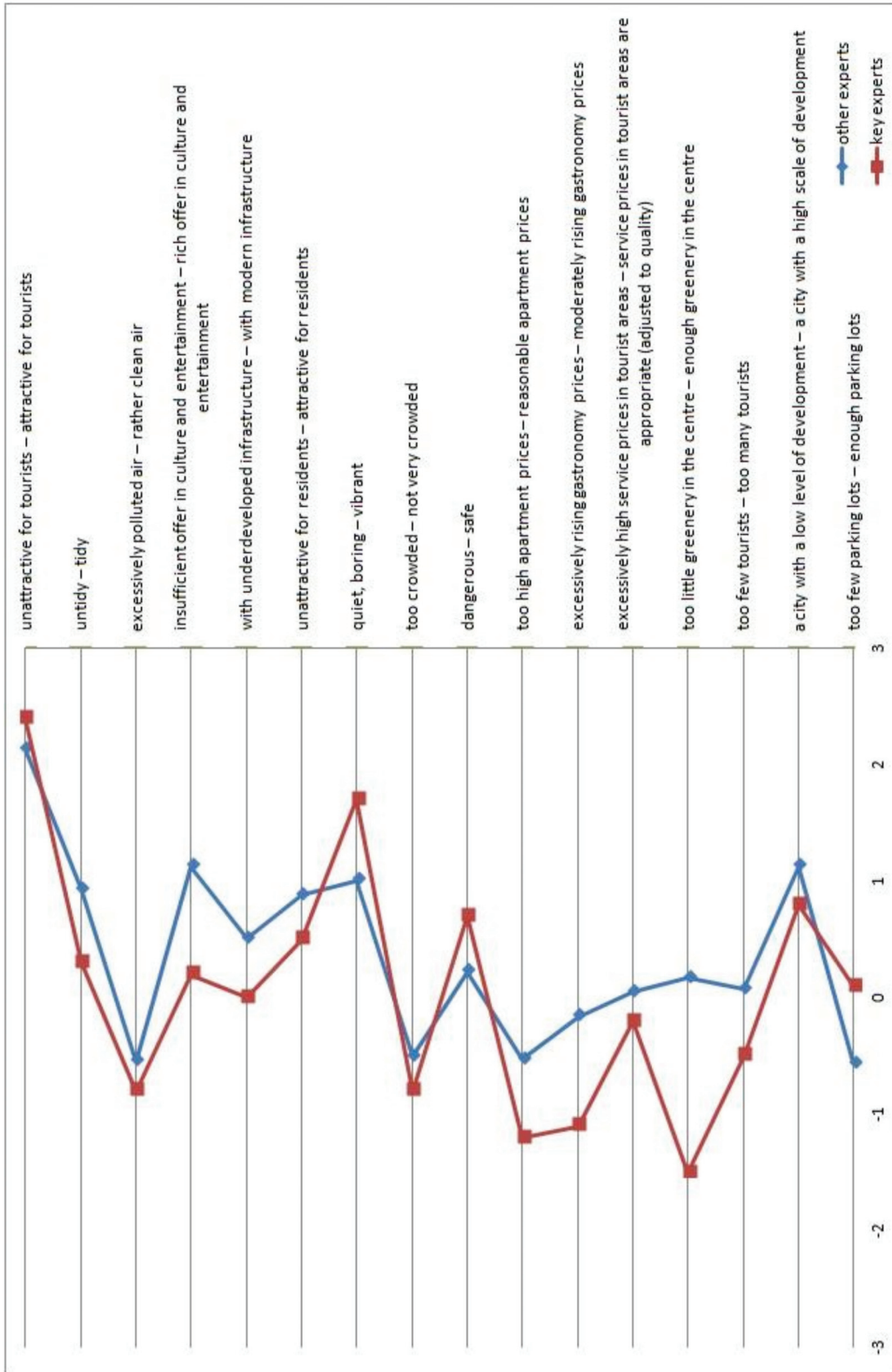


Figure 3. Problems in the socioeconomic development of Wrocław caused by tourist traffic in the opinion of key experts and other experts. Source: own elaboration.

The dysfunctionality of tourism in the context of negative impact on local communities in areas visited by tourists is currently a serious sociocultural problem, especially in cities and areas of high tourist traffic concentration. Examples of negative interference of tourism with the local environment, in particular with the residents, can also be observed in Wrocław. The identification and analysis of the symptoms, of varying intensity, is of particular importance for determining the strategic directions of the city development, including the reduction of overtourism. The research results indicate that this problem has already been noticed among those who live and work in Wrocław. Almost half of the respondents confirmed the perception of problems in the city functioning that constituted direct or indirect consequences of tourism. Namely, $M_{ro} = 46.4\%$ ($V_o = 45.7$) of other experts and $M_{re} = 43.3\%$ ($V_e = 50.2$) of key experts confirmed and $M_{ro} = 27.4\%$ ($V_o = 55.3$) of other experts and $M_{re} = 34.4\%$ ($V_e = 61.8$) of key experts denied their existence.

The issues most frequently pointed out by both the surveyed other experts and key experts that evidently reflected the already noticeable signs of a conflict between tourists and residents included: limited parking capacity for own means of transport—indicated by about 80% of the surveyed other experts and key experts, with the mean point values of positive and negative indications for both groups at the level of $M_{pv} = 4.16$; excessive noise—nearly 70% of the opinions in both groups confirmed this observation ($M_{pv} = 3.61$); rent and services becoming too expensive in the areas of residence—67% of confirming responses among other experts and 60% among key experts ($M_{pv} = 3.77$). Apart from the dominant opinions of other experts and key experts confirming the symptoms of the tourist traffic impact on the local community, an interesting finding is the residents' declaration of their willingness to move to more modern regions and housing estates of Wrocław—53% of confirming responses among other experts and 40% among key experts ($M_{pv} = 3.37$). One may presume that this case is not related to the negative impact of tourist traffic but to the willingness of daily functioning in the areas currently fulfilling a residential function in the city, at the same time being modern housing estates with a comprehensive socioeconomic infrastructure fully equipped and adapted to the needs of residents. In addition, this observation can be linked to the respondents' opinion on the city safety issues: the sense of security among the city permanent residents turned out moderate. The research revealed an almost even distribution of the respondents who described the city as safe (40.0% of indications) or unsafe (31.2% of indications) (Figure 3). Almost 30% of residents assessed this issue neutrally. Despite such ambiguous views of the residents, with regard to their own safety, most respondents did not notice any issue: they felt safe, as evidenced by nearly half of the subjects—46.9% ($M_{pv} = 2.81$) (Figure 4).

Among the remaining distinctive opinions of respondents who denied specific problems in the functioning of the Wrocław inhabitants, one should mention absence or limitation of retail and service infrastructure—54.4% ($M_{pv} = 2.63$) and the lack of objections to sharing daily life in the city with tourists—38.1% ($M_{pv} = 2.85$). Detailed results are shown in Figures 3 and 4.

The respondents' opinions regarding the current image of Wrocław from the perspective of tourist traffic features are important (Figure 5). It is remarkable that in no other case did the responses of key experts and other experts turn out to be as convergent as in the assessment of the city image. Strongly distinctive, unanimous views of the respondents on this issue were indications confirming the positive impact of tourist traffic on the city revenue—90.6% of the indications ($M_{pv} = 4.37$), satisfaction with tourists coming to Wrocław—89.4% of the indications ($M_{pv} = 4.35$), and satisfaction with the city development through tourist activity—86.9% of the indications ($M_{pv} = 4.28$). It is worth emphasizing that the respondents defined the city image generally in positive terms—mostly above 70% of the indications.

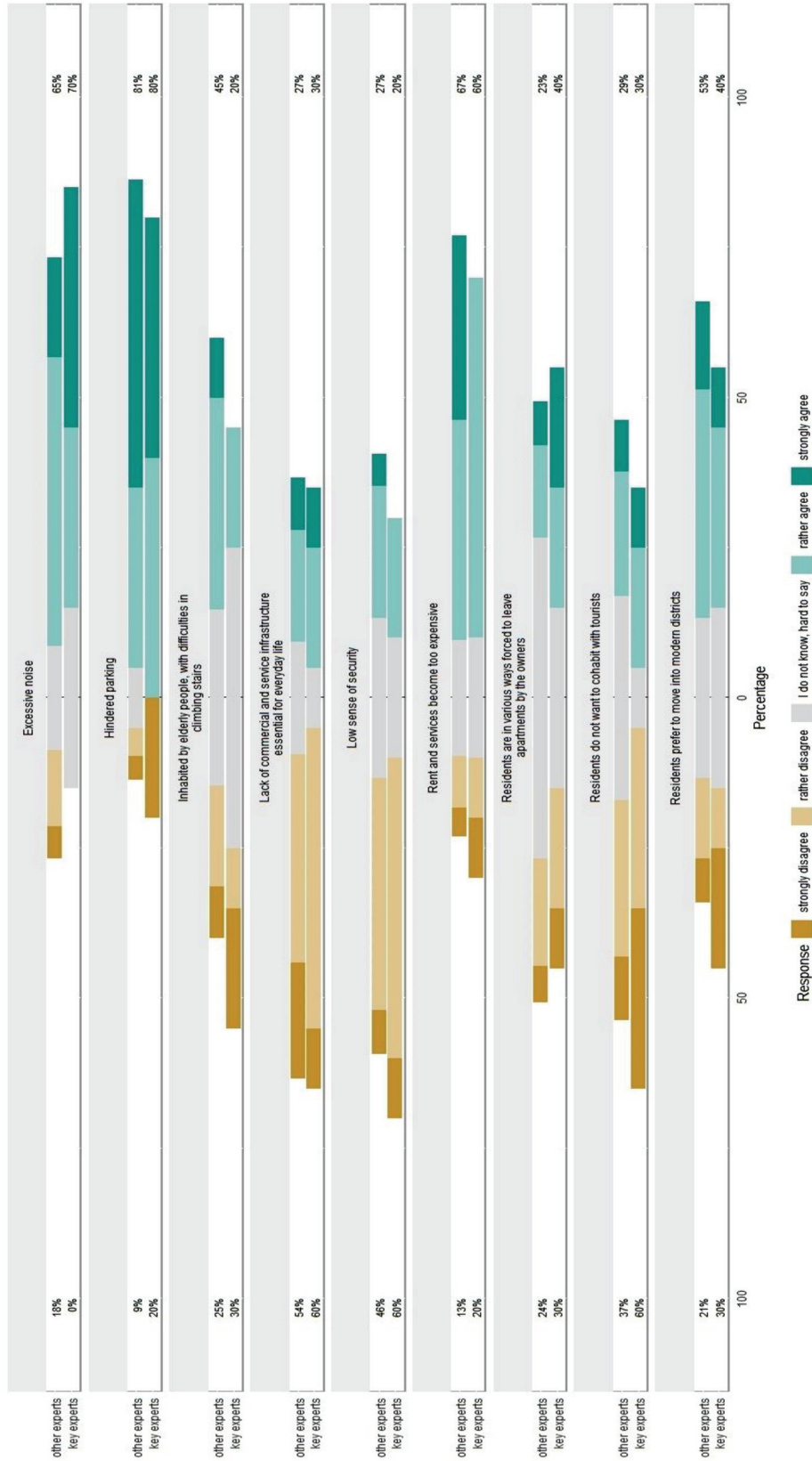


Figure 4. Problematic issues in Wrocław caused by tourist traffic in the opinion of key experts and other experts. Source: own elaboration.

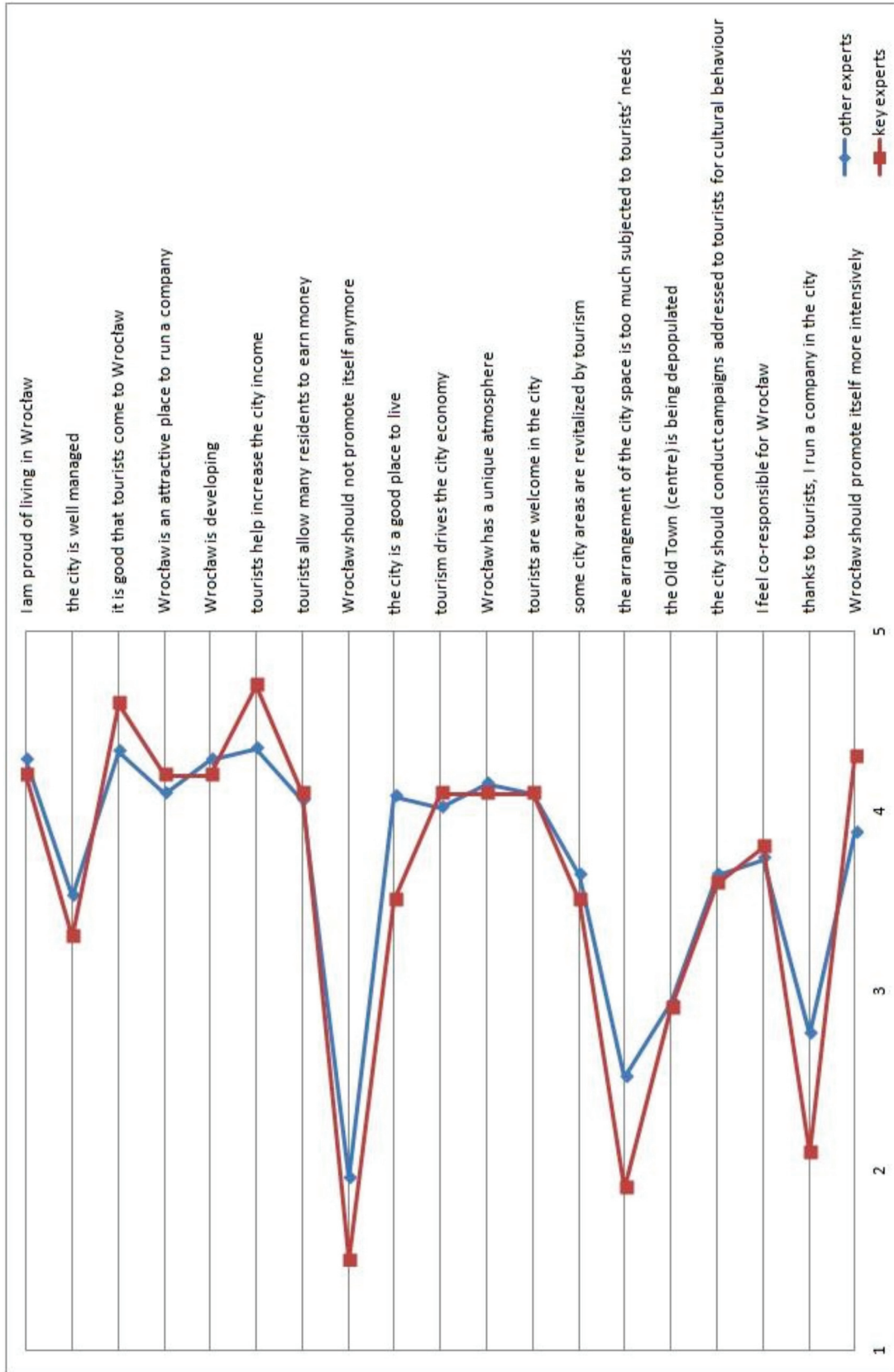


Figure 5. The tourist image of Wroclaw in the opinion of key experts and other experts. Source: own elaboration.

In addition, the respondents were strongly in favour of greater and more intense promotion of the city—almost 80% of responses ($M_{pv} = 4.07$), and they did not perceive any excessive subordination of the urban space to tourists' needs—58.7% ($M_{pv} = 3.52$). The respondents' opinion contradicting the statement provided in the survey was the denial of the impact of tourist traffic on running a business in the city—about 47% of responses ($M_{pv} = 3.04$). This may indicate a moderate influence of tourism on the economic activity of Wrocław residents, but at the same time it confirms the current observations that the predominance of tourism in the local, regional, or national economy does not necessarily account for the economic potential and strength of the area.

In the assessment of the image of Wrocław, determined by 19 variables (Figure 5), the mean result for opinions confirming its features observed by the respondents was $M_{ro} = 65.5\%$ ($V_o = 37.0$) for other experts and $M_{re} = 62.6\%$ ($V_e = 47.5$) for key experts. The mean result for opinions denying the positive qualities of the city image equalled $M_{ro} = 15.0\%$ ($V_o = 100.3$) among other experts and $M_{re} = 26.3\%$ ($V_e = 107.6$) among key experts.

An interesting picture of the respondents' views was revealed with regard to the problem of buying out flats and building new apartments by entrepreneurs and the fact that residents rented rooms and apartments to tourists (Figure 6). The mean results for opinions confirming the presented symptoms were $M_{ro} = 48.7\%$ ($V_o = 34.1$) among other experts and $M_{re} = 48.2\%$ ($V_e = 35.7$) among key experts. The mean rates of negative responses to these statements equalled $M_{ro} = 25.0\%$ ($V_o = 35.9$) for other experts and $M_{re} = 30.0\%$ ($V_e = 47.1$) for key experts.

The most distinct statements obtained from respondents in this respect clearly included opinions confirming both positive and negative views of this phenomenon. However, the response rates confirming or denying particular elements of the described phenomenon did not in any case exceed the values of 70% or 40%, respectively, in the group of other experts and 80% or 50%, respectively, in the group of key experts. They also did not show any significant differentiation between the two groups. Specifically, the respondents noted rather positive consequences or symptoms of such housing management, in particular in terms of expanding the accommodation base and offer—66.3% of responses ($M_{pv} = 3.61$), stimulating housing estates—63.1% of responses ($M_{pv} = 3.48$), and increasing the earning opportunities for residents—61.9% of responses ($M_{pv} = 3.53$). Only in two cases of opinions expressed by respondents was the negative dimension of this process observed. Both other experts and key experts indicated the negative consequences of conducting such activity in Wrocław, in the form of increased prices of residential facilities—66.9% of responses ($M_{pv} = 3.76$) and increased living costs for inhabitants—51.3% of responses ($M_{pv} = 3.50$). Despite the positive perception of this phenomenon in most opinions, the rates of responses regarding intervention in or restriction of such housing management in the city were almost evenly distributed (50% in each case). In addition, in this case, similarly to other respondents' assessments of the city image, functioning in the city, or the perceived problems of Wrocław socioeconomic development, there was a strong diversity of indications in particular groups of respondents, expressed in high values of the coefficient of variation. More detailed information on the specific response rates is presented in Figure 6.

The distribution of the response rates among other experts and key experts was statistically significantly different in the case of the statement "There are signs of a negative impact of tourism on the city tourist values" (Figure 2) ($p = 0.009345$), "too little greenery in the centre" vs. "enough greenery in the centre" (Figure 3) ($p = 0.02412$), and the question "Are you satisfied with living in Wrocław?" ($p = 0.03932$). The mean point value for the responses to the statement "too little greenery in the centre" vs. "enough greenery in the centre" (Figure 3) for other experts and key experts was statistically significantly different ($p = 0.0107$).

On the basis of the obtained results, it should also be noted that 72.5% of the respondents were satisfied with living in Wrocław and did not intend to move out in the nearest future or change their place of residence (66.25%), despite the increased tourist traffic. However, it should be clearly emphasized that almost 34% of the surveyed were already planning such a migration, which may be caused by the difficulties or limitations in everyday life in the city.

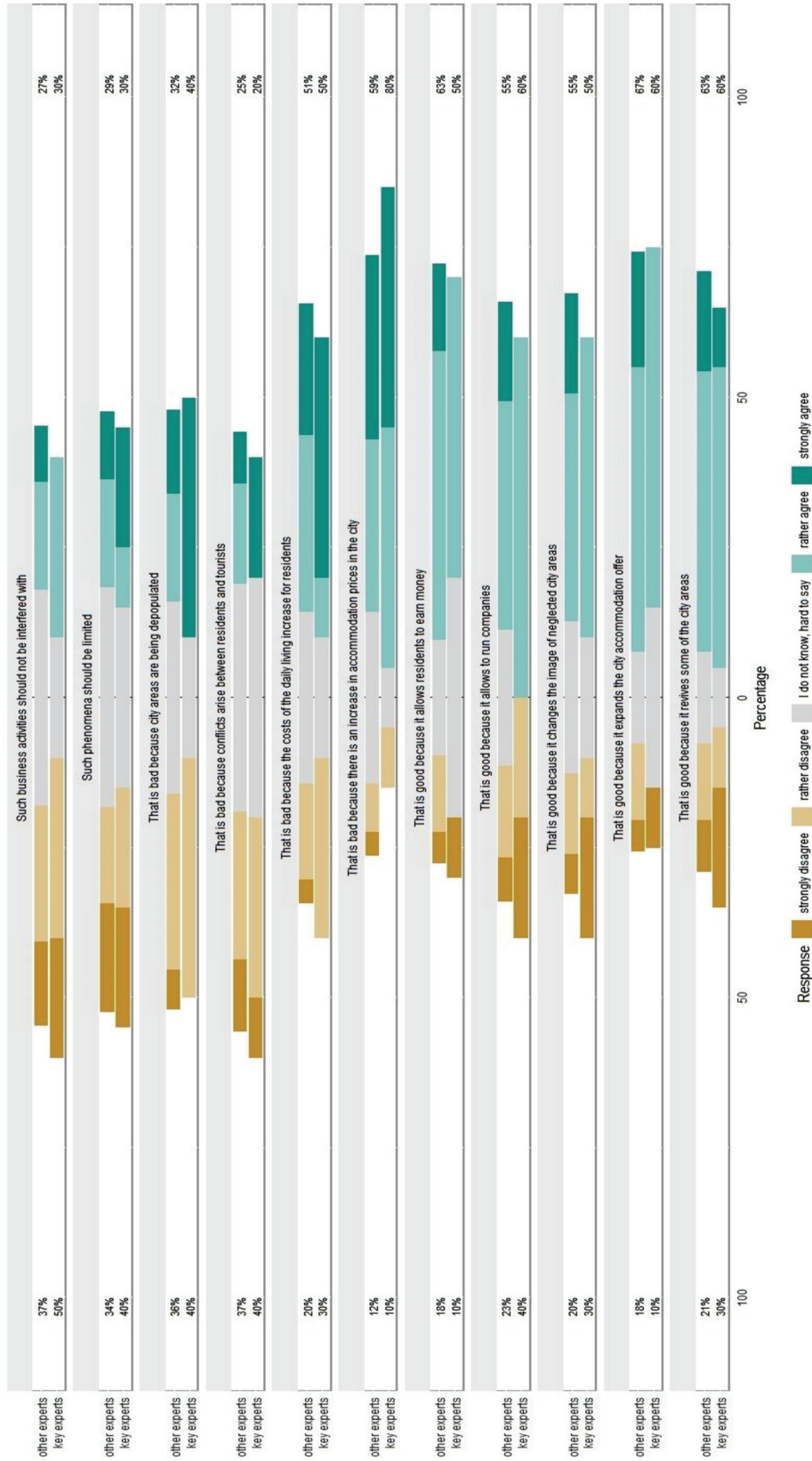


Figure 6. The purchase and construction of apartments by entrepreneurs and renting rooms and apartments by residents for tourists in the opinion of respondents. Source: own elaboration.

Only about 30% of the respondents were familiar with the concept of gentrification processes, which can result from overtourism. It is highly probable that the lack of respondents' knowledge of this phenomenon could have contributed to many positive opinions on housing policy and management in Wrocław. At the same time, the basic reasons for the lack of such knowledge should undoubtedly be sought in the lack of contacts or any observations in this respect by the surveyed experts (residents), who mostly lived outside the city centre (nearly 85%), where the symptoms of gentrification are typically not present.

Figure 7 illustrates the results of the correlation analysis of the studied variables. The values of the rank correlation coefficients ranged from -0.30 (statistically significant, $p = 0$) for total scores for the variables presented in Figures 2 and 5 to 0.32 (statistically significant, $p = 0$) for the variables presented in Figures 3 and 5. Statistically significant low correlations were reported for the pairs of survey questions indicated as variables in pairs presented in Figures 2 and 5, Figures 2 and 4, Figures 3 and 5, and Figures 4 and 6.

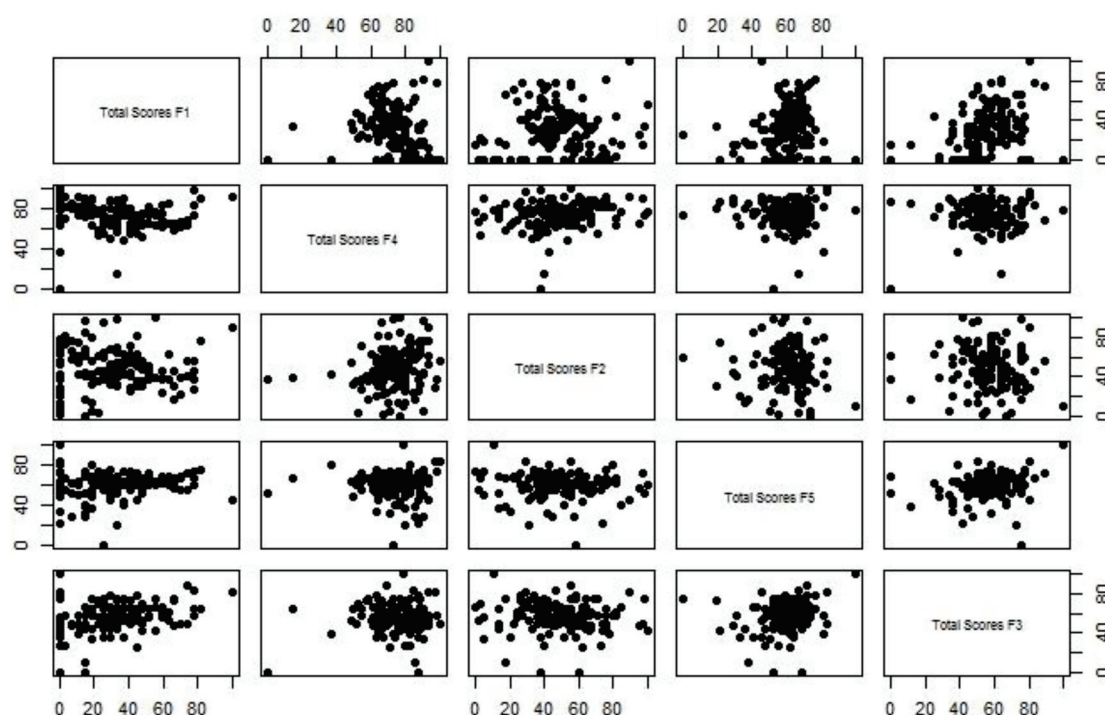


Figure 7. Correlation analyses of the studied variable responses to the survey questions. Source: own elaboration.

Other correlation coefficients for the studied variables did not exceed 0.15 and were not statistically significant (Table 2).

Table 2. Rank correlation matrix for the studied variable groups.

	Figure 1 Scores	Figure 4 Scores	Figure 2 Scores	Figure 5 Scores	Figure 3 Scores
F1 scores	1.00	-0.30	-0.09	0.15	0.30
F4 scores	-0.30	1.00	0.32	0.00	-0.09
F2 scores	-0.09	0.32	1.00	-0.12	-0.15
F5 scores	0.15	0.00	-0.12	1.00	0.27
F3 scores	0.30	-0.09	-0.15	0.27	1.00

Source: own elaboration.

Identification of risk factors and assessment of the degree of overtourism threat to urban agglomeration units face a number of methodological problems, including those stemming from the limited possibilities to obtain source data based on the opinions of city residents exposed to overtourism. In turn, the main problem with the interpretation of the overtourism phenomenon is the need to assess risk factors and the level of overtourism threat from various perspectives of tourism stakeholders (inhabitants, entrepreneurs, local authorities, others), whose opinions are frequently contradictory.

5. Discussion

The scientific community emphasizes that the processes of excessive concentration of tourist traffic cause disruption or degradation of the sociocultural space in cities and may decrease the quality of life or encourage inhabitants to move out of the city or to other districts not burdened with intensive tourist penetration [24,52,53].

The results of the presented research point at a convergence, though at different levels, of respondents' assessments of the characteristics of tourist traffic negatively affecting the functioning of Wrocław and its inhabitants.

The study allowed for the identification of symptoms indicating the already perceived negative effects of excessively growing tourist traffic on the functioning of Wrocław inhabitants. These include increasing costs of daily living, insufficient number of parking lots, city congestion (especially in recreational areas), excessive noise, excessively rising gastronomy prices and high service prices in tourist areas plus a limited access to them, too high and steadily rising accommodation prices, excessive air pollution, or first symptoms of inhabitants' migration. Similar indicators of negative effects of excessive tourist traffic in urban entities of recognized tourist attractiveness have been indicated, among others, by Innerhofer et al. [54], Kruczek [24], and Milano et al. [26].

The present study, although limited in scope (owing to the sample size resulting from the purposive and qualitative sampling), confirms the preliminary diagnosis that the first symptoms of overtourism in Wrocław are already observed and may intensify in the following years. At the same time, the problem does not currently cause any significant concerns among the respondents (key experts or other experts).

In the context of the research results, several courses of action can be pointed out with due caution (resulting from the limited number of participants), which might limit or decelerate the overtourism phenomenon in Wrocław. Namely, it is essential to:

- develop a strategy to prevent and reduce overtourism as part of a horizontal city development policy;
- include tourism in the city spatial development plans in an interdisciplinary manner;
- diversify the tourist traffic in the city space, i.e., stimulate tourism in subsequent Wrocław districts (less attractive for tourists than the central area of the city);
- diversify and extend the tourist season to reduce tourist traffic seasonality;
- expand the transport system and urban infrastructure, with strict enforcement of the law with regard to the availability of dedicated spaces for servicing tourist traffic (parking lots, pedestrian routes, etc.);
- develop a local policy for temporary property rental, taking into account a well-balanced tourist offer and respect for the needs of residents;
- moderate the development of tourist services and products in cooperation with businesses and networks, taking care of the quality of services and comfort of both tourists and residents;
- limit acts of vandalism, devastation, aggression in points of contact between tourists and residents through a monitoring system, and the activities of municipal services (municipal guard, police);
- enhance the environmental awareness of tourists, residents, and entrepreneurs.

The proposed directions of action could also be implemented into organizational practice by other cities, especially European ones, with a comparable scale of tourist phenomena as in Wrocław and threatened by overtourism; at least, they could serve as a reference point for comparative analyses.

The attitude towards overtourism among Wrocław inhabitants who are not directly involved in tourism and people who do not draw income from this economic sector has not been covered in this study and remains a problem for further research. The attitudes of residents and tourist business community representatives towards excessive concentration of tourist traffic have been interestingly depicted by Szromek et al. [55] and Kowalczyk-Anioł and Zmysłony [56] in the example of Krakow agglomeration. Analyses of opinions of various types of tourist traffic stakeholders towards the phenomenon of overtourism (including those pointing to a conflict of interests among tourist stakeholders) were also conducted in relation to other Polish cities of high tourist attractiveness, among others, Zakopane and Kazimierz Dolny [57]. The findings of these studies can be a reference point for an in-depth assessment of overtourism in Wrocław.

Kowalczyk-Anioł and Zmysłony [56] indicate that the problem of overtourism, according to those managing urban tourism, does not exist until there emerges a sudden crisis in the relations among the local community, tourists, and the authorities. Thus, the phenomenon of overtourism and its symptoms (including those identified for Wrocław) may, according to the authors, also concern other cities in Poland with similar tourist attractiveness, similar tourist resources and potential, or similar level and degree of saturation of tourist traffic. Such urban centres at risk of overtourism, with due caution in the assessment, already include Gdańsk and Poznań [57].

6. Conclusions

1. The tourist development of Wrocław now constitutes a challenge for all tourist traffic stakeholders, including the city authorities. The management of the Wrocław agglomeration, an interesting tourist destination, should focus on finding a concept of sustainable development, using forms of sustainable tourism, and based on measures to prevent or at least mitigate the effects of overtourism. This postulate should also apply to other agglomerations supporting their development through the use of tourism. The tendency of stakeholders to measure success by means of tourism growth [58] is the issue that one should rethink at first while solving the problem of overtourism.
2. The threats identified in the study that result from the increased tourist traffic are consistent with those implied in the strategy for the development of tourism in Wrocław, especially with regard to the observed increase in the volume of tourist traffic; concentration of tourist traffic in the city centre, with insufficient use of the potential and resources of other Wrocław regions; growing inefficiency of the transport system (an uncontrolled rise in the number of cars, permanent traffic jamming); growing environmental risks (air pollution, resulting in the discomfort of resting in the city); and the deficit of investments in tourist infrastructure and a modern tourist information system, limiting the tourists' sense of security [1].
3. We point at the need to examine and evaluate the development strategies of other cities with a developed tourist function in Poland and Europe. The aim of such investigations may be to verify the local authorities' awareness of factors indicating the threat of overtourism in the space of a given city.
4. The trends and characteristics of the tourism market observed in urban tourism demand a change of tourism development planning towards a qualitative rather than a quantitative approach. The latter is often misinterpreted as one of the biggest "overtourism enablers" [22], bound with a currently very popular (and lucrative for a few "pockets") inclination to sustain the tourism growth [59,60].
5. The concept of tourism economy development adopted by the Wrocław authorities is focused on maintaining an adequate volume of tourist traffic, changing its structure, extending the length of stay, and reducing seasonality, which would allow for a more sustainable development of the city and for controlling tourism from the position of the city authorities [1]. It is worth mentioning that

according to Milano et al. [25], “city administrators and destination managers must acknowledge that there are definite limits to growth. Prioritising the welfare of local residents above the needs of the global tourism supply chain is vital. Prime consideration must be given to ensuring that the level of visitation fits within a destination’s capacity”. In this context, the step that should be taken by the city authorities as part of overtourism prevention and implementation of sustainable development principles in tourism is to define the carrying capacity of Wrocław.

6. Besides, it is necessary to emphasize the creation of modern and well-designed public spaces (expansion of tourism beyond the city centre), which would improve the quality of the tourist offer and would effectively address the dangers of excessive concentration of tourist traffic and gentrification phenomena in the city centre. Szromek et al. [55] postulate tourist traffic management that would allow for quick and effective responses to changes, by implementing the concept of agile tourism, defined as adjusting organizational culture and quickly responding to market changes [61].
7. There are different levels of knowledge about factors and processes shaping tourist traffic in urban agglomerations. Undoubtedly, we should recommend the need for a broad dialogue among all stakeholders of the tourist traffic regarding the positive and negative tourist factors that affect the city functioning. A broad dialogue of circles making use of tourist traffic and all other inhabitants should become a standard of action in all city entities and should be inspired by the city authorities or the local scientific community.
8. The search for synergy of interests among tourism stakeholders should become a priority for the entire tourist environment, by meeting the needs and expectations of residents, who should be fully involved in the development of tourism, along with education that includes the ability to perceive the phenomenon of overtourism and understand it properly. The potential increase (which has been diagnosed in other cities) in conflicts of interest between tourist entrepreneurs and local residents as a result of uncontrolled growth of tourist traffic leads to difficulties in managing the urban agglomeration and may affect the tourist image of the city in the future.

7. Limitations and Further Research

The conducted survey research, and, previously, an in-depth analysis of the subject literature and available sources of data on tourist traffic and overtourism (in Wrocław, as well as other cities) induce the following conclusions:

- The research provides an added value as it made it possible to effectively use methodological assumptions in the form of accepted methods of measuring excessive concentration of tourist traffic, with the obvious reservation as to the quantitative scale of the survey—here, the number of respondents.
- The results can be applied as a reference point in further research in the field of overtourism in Wrocław or other cities with a similar scale of tourist traffic and level of attractiveness and with a similar potential of resources serving the development of the sphere of tourism with the application of the sustainable development concept.
- Monitoring tourist traffic from different perspectives should be a strategic challenge and goal for local politicians, managers, researchers, and other stakeholders.

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Article

Overtourism and Medium Scale Sporting Events Organisations—The Perception of Negative Externalities by Host Residents

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Abstract: The main purpose of this study is to investigate the influence of non-mega sporting events on the perception of negative externalities of host residents. The detailed aim of the study was to examine whether the inhabitants of the city feel the negative effects of organizing sporting events (communication problems or inappropriate behavior of supporters) and do they believe that these events increase the level of crime in the city or, despite these inconveniences, they are satisfied with the organization of sporting events in their place of residence. The case study is the city of Poznan and two, well-known events in this agglomeration. The first one is the Poznan Half Marathon—medium scale mass event, the second one is Cavaliada—elite international equestrian event. The theoretical part of this article presents the meaning of sporting events organization for tourism industry and indicates the positive and negative effects this kind of tourism brings to host cities. The whole refers to the theoretical foundations of the term of “overtourism”. The second part of the manuscript presents empirical research results, between 774 active and passive participants, which was conducted by the method of diagnostic survey. The results of this research show that both athletes as well as fans of the Half Marathon said that the Poznan Half Marathon event causes bothersome communication problems in the city and some other social problems. The inhabitants only experience minor inconveniences that felt as a result of organizing sporting events in the city. The negative impact of Cavaliada was very low. For checking the differences between the two examined groups of respondents: Half Marathon fans and Cavaliada fans, Chi-square test and U Mann Whitney’s test was used. The participants feel bothersome communication problems that cause the Half Marathon and have an average level of dissatisfaction higher than the average level of dissatisfaction of Cavaliada participants. Moreover, the participants in the Half Marathon have an average level of satisfaction with the organization of sports events in Poznan significantly lower than the average level of satisfaction of Cavaliada participants. Therefore, an elite equestrian sporting event is less burdensome for its residents and gives them more satisfaction.

Keywords: non-mega sports events; overtourism; sports tourism; quality of life of hosts; social impact of sports events; sustainability

1. Introduction

1.1. Negative Implications of Sporting Events and Overtourism

Sports tourism is a deeply interdisciplinary phenomenon. As mentioned above, it affects both residents and tourists in the economic, ecological, social and cultural dimensions. It also impacts positive and negative in psychological, institutional, political and planning levels. However, the larger the event, the greater the impact. Weed and Bull [1] claims that three key components interact to create value in sports tourism: the places involved, the activities undertaken, the motivations to participate. Places where tourists stay and their activities have specific characteristics (beautiful scenery, attractive landscapes, monuments etc.) which are a subject of various interpretations [2–4]. On the other hand, the number of tourists and their activities can destroy sociocultural, physical or economic resources and reduce the quality of tourist's satisfaction. That is why, determining and respecting the carrying capacity of destinations becomes a necessity in tourism planning [5,6]. Popular tourist destinations around the world have reached a tourism tipping point. To describe these tourism disturbances (not only in sports tourism), the term overtourism, tourism phobia, overcrowded locations or visitor pressure has rapidly been popularized [7–11]. The perception of city tourism has changed dramatically. Destinations are being saturated with visitors. The critical point begins at the place where there is an imbalance between the perception of positive and negative effects of tourism for the inhabitants [11,12]. Infrastructure like roads, public transportation, cultural attractions and other services which were created primarily for local use, suffer under increasing number of tourists. The growing popularity of transport services, online accommodation and a desire to see the authentic, everyday city life has meant that tourism activities become further intertwined with local life, also outside of the main tourist areas in cities [13,14]. Such developments have led to calls from residents to deal with tourism growth and protests have been observed for example in popular destinations like Venice or Barcelona. Although this problem is most evident in European cities, similar sentiments have also been reported elsewhere, such as tropical islands, backpacker ghettos or even slums [13,15]. Despite of the growing popularity, "overtourism" is still not clearly defined [13]. The term describes destinations where hosts or guests, locals or visitors, feel that the quality of life and the quality of the experience in the area has deteriorated unacceptably. Moreover, "overtourism" describes the situation in which the impact of tourism exceeds ecological, physical, social, psychological, political and economic capacity thresholds and causes the loss of authenticity and imply a significant risk to the future attractiveness of a destination. There are many examples where the cultural and natural heritage of a place is at risk or where costs of living and real estate have substantially increased and caused a decline in quality of life. It is the opposite of responsible tourism which is about using tourism to make better places to live in and better places to visit [16]. The uncontrolled development of tourism can cause significant damage to air and water quality, landscapes, seascapes, as well as the living conditions of residents, causing economic inequalities and social exclusion, as well as many other issues [17]. Dissatisfaction with overtourism on the part of local residents might mobilize forces to prevent tourism from developing and increasing at its destination. The dissatisfaction of visitors can reduce the number of visits to the destination, thus harming its economic sustainability [11].

Sports tourism is not always manifest in the mass movement of large numbers of tourists. Many authors (Hautbois, Djaballah, Desbordes; Hall; Hallmann; Barclay; Taks; Lee; Taylor; Preuss; Kim, Jun, Walker, Drane) have studied the influence of mega sporting events on all the above-mentioned planes of human life, both residents of reception areas and passive participants of sporting events, fans and athletes. They describe sports event organization as a mechanism used to tackle social problems. Of course, sports tourism contributes significantly in the development of a society [18–26]. Unfortunately, to the authors knowledge, there are no in-depth studies that would indicate a significant, negative impact of organization non-mega sporting events on environmental, social life of residents or culture of the place. Residents are an important part of the success of a sporting event and their opinion is significant, even if we are talking about small sporting venture. However, according to Kim

and Petrik or Ohmann [27–29], there is a certain degree of inconsistency in the use of the perception of residents to measure the impact of the event due to the fact that it often lacks objectivity because of the subjective feature's views of residents. However, Jönsson [30] refers to the credibility of local opinions in the field of social impact assessment. He finds it difficult to investigate because their perception may change over time. Performing a longitudinal study would allow assessment over a period of time, thus recording any changes in perceptions by residents. It is also important, for the commercial success of any touristic region, to monitor the satisfaction of visitors or so-called tourist social ability [6].

1.2. The Benefits of Sporting Events Organisation

Sports tourism is not only a sum of sport and tourism. It is a complex phenomenon, similar and different from sport and tourism individually. It is multifaceted and exists under a variety of forms and names [1,31–34]. Sports tourists travel to observe sporting activities, to participate in sport and to visit sports attractions (stadiums, sports museums, recreation areas, etc.). Depending on active or passive participation and motivational factors, sports tourists encounter different experiences as the ultimate value they are seeking [35–38]. Mega and small scale sports tourism has the potential to contribute to the social, cultural, economic and infrastructural development of the host country or city. Visitors generate tremendous activity through different forms of expenditure on sporting and non-sporting activities. Cities provide them with a number of multifunctional, complex, multiuser environments. They are able to simultaneously receive domestic and international tourists but also business tourists and people visiting friends and relatives (VFR) [13].

The organization of sporting events is widely recognized as a method of promoting touristic cities and addressing seasonality in destinations [39,40]. They are the most obvious manifestation of sporting activities, gathering two groups of participants: competitors and spectators. Events usually offer a lot of entertainment opportunities for residents and visitors [41] and are seen as one of the most sustainable economic growth strategies for cities, as a driver for economic recovery of great value [42]. The fact that cities tend to have good infrastructure facilities and already host a diverse and dynamic population is obvious and suggests that they will better cope with increasing tourist numbers than other, well-known destinations [13]. Most of the literature follows the relevance of sporting events stems directly from their impact on local, regional and national economies [43–45] and distinguishes between the economic, sociocultural and environmental impacts of sporting events [46–50]. They stimulate the dynamic development of tourism in cities. The phenomenon is very wide and many researchers are trying to carry out scientific analyses to check whether the positive or negative effects of organizing a sports event in a given tourist destination prevail [51–53]. According to Hall [19], the impact of sports tourism affects changes in the value systems of individuals, local communities or entire societies caused by sports travel, changes in types of behavior of tourists and the local population, their social structures, lifestyle and level of quality of life. Due to the effects of a given sporting event are also called its “legacy”—what will remain after it, especially for the local community [19,54–56].

The organization of sporting events includes numerous benefits on an economic, social, cultural and environmental level as new investments, new employment and increased tourism figures and tax revenues [48,57–62]—Table 1. Positive example is new material benefits building: new roads and highways, ultramodern sports stadiums or the development of small sports and tourists' infrastructure in smaller towns. We can observe also some non-monetary effects like improvements to a country's or destination's image abroad and among the fans coming to events [20,63]. It can translate into its tourist attractiveness or promotion of the sport and healthy lifestyle among citizens. An important aspect is also the organizational competence acquired during the preparation of the event [64,65]. Sporting events can have the positive influence on local residents' quality of life, people who believe in the importance of physical activity and the ability to shape their own social environment, increase sports participation, enhance social cohesion or generate interest in a foreign culture [25,28,66,67]. Positive environmental impacts could only have a place when new sports infrastructure is built on devastated land [58,68].

Table 1. Potential effects of sport tourism events.

Type of Impact	Positive	Negative
Economic	<ul style="list-style-type: none"> —financial benefits of organizing major sporting events (supporters' expenses, sports sponsorship, advertisers, etc.) —financial benefits resulting from the development of tourism after the event (e.g., thanks to improving the image of the region) —development of public as well as tourist and sports infrastructure 	<ul style="list-style-type: none"> —excessively high costs of organizing large sporting events —crowding out phenomenon —too high investment costs in infrastructure, the problem of "white elephants"
Sociocultural	<ul style="list-style-type: none"> —increased sense of national pride —integration of the local community —development or strengthening of regional identity <ul style="list-style-type: none"> —intercultural communication —diffusion of forms of sports cultures —the impact of sports tourism on the development of different forms of tourism, <ul style="list-style-type: none"> —sports heritage, e.g., development of sports volunteering —the possibility of changing a healthy lifestyle as a result of observing others —opportunity for entertainment (increase in the level of happiness and quality of life) —development of sports museums—potential tourist attractions in the future <ul style="list-style-type: none"> —the opportunity to present regional cultural heritage. 	<ul style="list-style-type: none"> —difficulties in the normal operations of the local community—traffic jams, congestion, price increases, acts of intentional vandalism (reduced quality of life), etc. —resettlement of the local population —globalization of sport (loss of regional sports cultures due to the domination of others) —improper behavior of supporters, e.g., presenting nationalist attitudes —the impact of sports tourism on the development of different forms of tourism, e.g., sex tourism
Ecological	<ul style="list-style-type: none"> —the possibility of implementing sustainable development programs—increasing public awareness (assuming its promotion by competition organizers) —revitalization of urban space (parks, health paths, etc.) 	<ul style="list-style-type: none"> —noise —littering of areas of outstanding natural value, sometimes protected areas —transformation of natural areas for sports infrastructure —increased emission of toxic substances

Source: Malchrowicz-Moško [8].

The effects have been observed at a number of Olympic Games. "Barcelona effect" is worth mentioning in this place as an example of a positive legacy of sporting events. Due to excellent organization and promotion of the Olympics Games, the city became recognizable across the whole world as a business center and, mostly, a touristic destination. Although the Olympic Games left Barcelona deficit, the capital of Catalonia benefited by the event in a long-term perspective [64,68]. Over the years this impact is positive but also negative. Specifically, the city's residents experience inconvenience related to the influx of tourists [67,69–72]. Barcelona has clearly become a major urban tourist destination and a cultural tourism center [73,74]. The 1992 great event led the city to present many dimensions which make up its personality and at the same time served to modernize them and open them to the future [74]. Currently, the city is the main recipient of international tourism income in the country. Barcelona's shops and stores receive over 15% of the total expenditure of foreign visitors in Spain, which is the second-largest tourist destination in the world, after France [66–76].

1.3. The Costs and Negative Impacts of Sporting Events Organisation

In most cases, negative (Table 1) legacies are often neglected when planning and evaluating an event [77]. Sporting events could also produce excessive spending, increased taxes and higher costs of living for residents [25,78,79]. Even if social and cultural impacts are more difficult to measure and manage [53,80,81] cultural conflicts between residents and tourists are seen. Moreover, security risks, hooliganism or traffic problems seem to be among the most relevant negative impacts for residents [19,25,46,49,51,79]. Another issue is the well thought-out and planned construction of a new sports tourism infrastructure. If this is not possible, it can cause environmental damage to the host community [46,51] and many people gathered at an event generate air and water pollution, an increased amount of waste and noise levels [46,79,82].

The opposite of Barcelona's example is the Summer Olympic Games in Montreal in 1976, when the most often cited the legacy of, is debt. The Olympic Stadium was supposed to cost \$250 million but ultimately it cost \$1.4 billion. The city did not pay off until November 2006—30 years after the closing ceremony [73,75]. Haynes [83] gives examples (not positive for tourism) of the 1984 Los Angeles Games and the 2000 Sydney Olympic Games. In Los Angeles, although hotels were occupied at that

time, the Disney resort, Universal Studios and the Six Flags Magic Mountain all reported reduced interest from tourists [83]. During the 2000 Olympic Games in Sydney, the hotel occupancy in Sydney and Adelaide was high but in hotels elsewhere in Australia was significantly lower [84]. The British media presented this trend as a major problem for tourist attractions and hotels in central London in 2012 when a few weeks before the event, it turned out that a third of hotel rooms in London were unsold [83,84]. It is estimated that during the 2002 South Korea FIFA World Cup, the number of current foreign tourists was the same as the number of tourists who visited during the same period the previous year [85]. The Atlanta Olympic Games experienced crowding out effects, concluding that, in a part of the city a short distance from the Olympic Park, many hotels and restaurants a significant reduction in income [85]. The host of the Singapore Formula One Grand Prix have noted the same problem. Retailers and restaurateurs near the track have complained about a fall in custom as residents avoid the area [86].

Authors Wilson and Liu [84] conducted factor analysis which revealed six negative impact factors: travel inconvenience (the most negative), price inflation, security and crime concern, risk of disease and pollution and the last factor—damage to the environment. Respondents did not have a clear opinion on the impact of the event on the deterioration of the quality of services. It was found that travel inconvenience and price inflation were significantly but negatively related to the intention to travel [84]. Of course, the organization of major sporting events carries the risk of price inflation, vandalism, terrorism, pollution and environmental problems. Therefore, the negative effects of great events cannot be ignored. But the above-mentioned impacts could be very intensive but depend on the size of event. Large-scale sporting events are globally attractive to tourists as well as the media [47,87] but negative impacts are more visible.

Most research in this problem has focused on mega sporting events (MSEs). There is little research on organizing smaller non-mega sports events (NMSEs) that reflects on how these smaller types of events can potentially contribute to benefits and losses residents of local people [22]. For example, Djaballah, Hautbois and Desbordes checked how local governments make sense of small scale sporting events' social impacts. Their case study were local sports officials from 25 medium French cities [88]. The analyzed small scale events are mainly perceived by researchers as a stimulator of tourism development and a chance for the general development of cities and regions [88,89]. Many studies are primarily concerned with identifying motivations and benefits for active or inactive participants of events (and less often for residents) [90–95] but in the context of impact on destinations, the authors write about protected areas [96]. Recently, there have also been publications in which attention is devoted not only to modern sporting events but also to historical sporting events in the field of impact on the local society [97,98]. Sports events are very often the most important goal in the tourism strategies of many cities. Major sports events not only attract participants and spectators but also have the capacity to change the image of cities and encourage future tourism which have an influence on economies, local communities, sociocultural context and ecology for many years after the event has been staged [99]. In the last two decades, there has been a lot of research addressing a variety results [100–103] of mega spectator sporting events [18].

The subject of the presented manuscript closely refer to this special issue, especially that in the tourism literature, overtourism in connection with sporting events organization has been discussed. The effect of excessive tourism is an increase in the aggressive commercialization, price of services, rental fees and real estate and depopulation in cities and districts exploited by sports tourism. In cities with a long history, it causes the gentrification of historical areas. Overtourism as a negative phenomenon observed during the organization of sports events results in the limits of socio-psychological capacity not only residents being exceeded but also tourists. That is why we see the link between our research and this special issue, especially that so many cities are seeking the right to organize big events such as the Summer or Winter Olympic Games, the FIFA World Cup, the Formula One Grand Prix hoping for far-reaching changes benefit their host community [104]. Small scale sporting events, if respectively designed and implemented in practice, also have potential to benefit hosting communities [105–109]

but are not so burdensome for residents. However, the larger the event, the greater the impact, which is why in the event planning process, consideration should be given to developing contingency solutions for major risks [110].

The purpose of this manuscript is to pay attention to the negative effects of organization medium and small scale sporting events from the perspective of a participating resident, since such events have not yet been studied. Indeed, what impact do they have on the perception of participating inhabitants? Whether the inhabitants of the city feel the negative effects of organizing sporting events (communication problems or inappropriate behavior of supporters) and do they believe that these events increase the level of crime in the city or, despite these inconveniences, are they satisfied with the organization of sporting events in their place of residence? How are these impacts perceived by participants who are also residents of the city?

Structure of the paper is as follows. The first part shows the literature review of negative implications of sporting events and overtourism, the costs and benefits of sporting events organization. The second part presents the method description—diagnostic survey by the authorship questionnaire submitted to the host's participants ($n = 774$) of the two, well-known events in Poznan: Half Marathon: medium scale mass event and Cavaliada and elite international equestrian event. The second part of the article presents results of this empirical research. Finally, we present the results of this empirical research, our findings and discuss their theoretical and managerial implications.

2. Aim of the Study

The main purpose of this study is to investigate the impact of non-mega sporting events on the perception of negative externalities of host residents. The detailed aim of the study was to examine whether the inhabitants of the city feel the negative effects of organizing sporting events (communication problems or inappropriate behavior of supporters) and do they believe that these events increase the level of crime in the city or, despite these inconveniences, they are satisfied with the organization of sporting events in their place of residence. Two, different ranks of sporting events organized in Poznan (one of the largest Polish cities and the most important sports centers in Poland) were selected for the empirical research. The first one is the Poznan Half Marathon—medium scale mass event, the second one is Cavaliada—elite international equestrian event.

3. Research Design and Data Collection

The authors of the presented research selected two sporting events of different sporting ranks, which took place in the city of Poznan—the capital of the Greater Poland region. The first of the surveyed events, the 6th Poznan Half Marathon, was an event in the field of mass sports, in which both amateur and professional athletes participated. The event is mainly national in nature but in recent years it has become international. It is also an event that has become a permanent feature in the sports calendar of the city of Poznan. The second surveyed event was the third edition of Cavaliada, which is an international equestrian event. The event consists of three parts: Cavaliada Sport, for top-level professionals; the Cavaliada Show, which also featured numerous amateur riders; and the Cavaliada Fair. This event has been successfully organized in the capital of Greater Poland for several years and has an international reach. The study was attended by residents of the Poznan agglomeration.

4. Research Tool

The method of a diagnostic survey was applied, which was the standardized interview technique with the use of the questionnaire tool during selected events. In order to carry out the research, an authorship questionnaire was prepared for the study. The division of Freyer and Gross (2002), who distinguished four types of orientation among the motives of participation in sporting events [111], was the basis for the development of the author's questionnaire survey. Based on existing literature and the results presented, it has been recognized that there is still an unexplored area in terms of the influence of non-mega sporting events on the perception of negative externalities of host residents.

The questionnaire had 25 questions. The first part of the questionnaire focused on socio-demographic variables (Table 1). The second part of the survey focused on motives to participate in researched events. The third part of the questionnaire was designed for people who were residents of Poznan. The last part was designed for sport tourists. For the purpose of the study, we have focused only on two parts of the questionnaire (first and third).

The authors of the article received an official permission from the organizers to conduct research when the runners were finishing the race and personally filled out during the conversation with the runners. In the case of Cavaliada equestrian competition, permission was obtained only for research among fans. Authors of the article personally talked with the residents of the city: sixth Half Marathon fans and runners and Cavaliada fans. The questions examined the impact of sporting events on residents living conditions and concerned inhabitants' opinion of selected events about their negative influence of broadly understood quality of life (communication problems, noise, behavior of supporters, increase crime). The research instrument was validated before the examined event—during the 5th Poznan Half Marathon.

5. Data Analysis

When determining the number of recipients, information from the organizers on the expected number of participants in the event was used to make the sample selection in a way that ensured the best possible representativeness of the results obtained. The scheme of simple random sampling without replacement was used. In calculations the formula for sample size for finite population was used. The assumption was made that the maximum error of estimate (e) at 95% confidence level should not exceed 4%.

Descriptive statistics (percentages, means and standard deviations) were calculated. In order to further analyze the obtained result, respondents were asked to define the intensity level of the inconvenience associated with the organization of a sporting event in their city on a 10-point Likert scale (Table 3, Table 4, Table 5). The differences between responses were tested among the groups with a Chi-square test for independence. Statistical significance was set at $p < 0.05$. When the distribution of the analyzed feature in both groups differed significantly from the normal ($p < \alpha$), therefore the nonparametric test was used—U Mann Whitney test. All statistical analyses were conducted using Statistica Software 10.0 (StatSoft Inc., Cracow, Poland, 2011).

6. Participants and Results of the Research

6.1. Socio-Demographic Characteristics of Surveyed Participants (Athletes and Supporters).

The survey was attended by residents of Poznan: active (athletes) and passive (sports fans) participants of events. A total of 774 respondents took part in the survey: 210 Half Marathon athletes, 256 Half Marathon fans and 308 “Cavaliada” fans who were simultaneously inhabitants of the city of Poznań. There has been deliberate selection of respondents, who are participants in the event. The population questioned was chosen compared to its knowledge of the event to be able to identify simultaneously its positive and negative aspects. However, we have excluded residents who are disinterested in the event who may express a more negative outlook but who are not necessarily able to testify to the positive effects of the event. It was considered that their opinion would be objective, from the perspective of both residents and tourists. The table below present the socio-demographic profile of the respondents. A sample of 774 respondents: 315 men and 459 women participated in the event voluntarily and completed a questionnaire. The participants of the research were mainly between 18 and 25 years old (39.7%—307) and 26–35 years old (30.7%—238). Among the surveyed residents of Poznan, people with higher education constituted the vast majority of 41.8% (324), 27.9% (216) possessed secondary education and 18.1% (140) were people with incomplete higher education. A greater percentage of them—48.8% (378) was professionally active and over 29.7% were students (230). The socio-demographic characteristics of respondents are presented below (Table 2).

Table 2. Socio-demographic characteristics of surveyed participants (athletes and supporters).

Socio-Demographic Characteristics of the Respondents	Half Marathon Athletes (N = 210)		Half Marathon Supporters (N = 256)		Cavaliada Supporters (N = 308)		All Respondents (N = 774)	
Sex	N = 210	%	N = 256	%	N = 308	%	N = 774	%
Men	139	66.2	91	35.6	85	27.6	315	40.7
Women	71	33.8	165	64.5	223	72.4	459	59.3
Age	N = 210	%	N = 256	%	N = 308	%	N = 774	%
<18	10	4.76	20	7.8	84	27.3	114	14.7
18–25	84	40.0	113	44.1	110	35.7	307	39.7
26–35	93	44.29	77	30.1	68	22.1	238	30.7
36–50	20	9.52	26	10.2	39	12.7	85	11.0
51–70	3	1.43	20	7.8	6	1.9	29	3.7
71 and more	0	0.0	0	0.0	1	0.3	1	0.1
Education level	N = 210	%	N = 256	%	N = 308	%	N = 774	%
Primary education	7	3.3	16	6.3	49	15.9	72	9.3
Vocational education	5	2.4	17	2.7	11	3.6	33	4.2
Secondary education	47	22.4	74	28.9	95	30.8	216	27.9
Incomplete higher education	36	17.1	44	17.2	60	19.2	140	18.1
Completed higher education	115	54.8	115	44.9	94	30.5	324	41.8
Employment status	N = 210	%	N = 256	%	N = 308	%	N = 774	%
School pupil (<18 years)	16	7.6	28	10.6	88	28.6	132	17.0
Student	62	29.5	87	34.4	81	26.3	230	29.7
Professionally active	125	59.5	126	49.2	127	41.2	378	48.8
Unemployed	4	1.9	12	4.7	7	2.3	23	3.0
Pensioner	3	1.4	3	1.2	5	1.6	11	1.42

Source: Own work on the basis of test results, N = 774.

The results of the research were divided and presented in three groups. The first two groups of results are presented in Table 3, Table 4. They contain the opinion of the participants of the 6th Poznan Half Marathon: athletes (210) and fans (256).

Table 3. Negative effects of organizing sporting events in Poznan in the opinion of residents—Half Marathon Athletes.

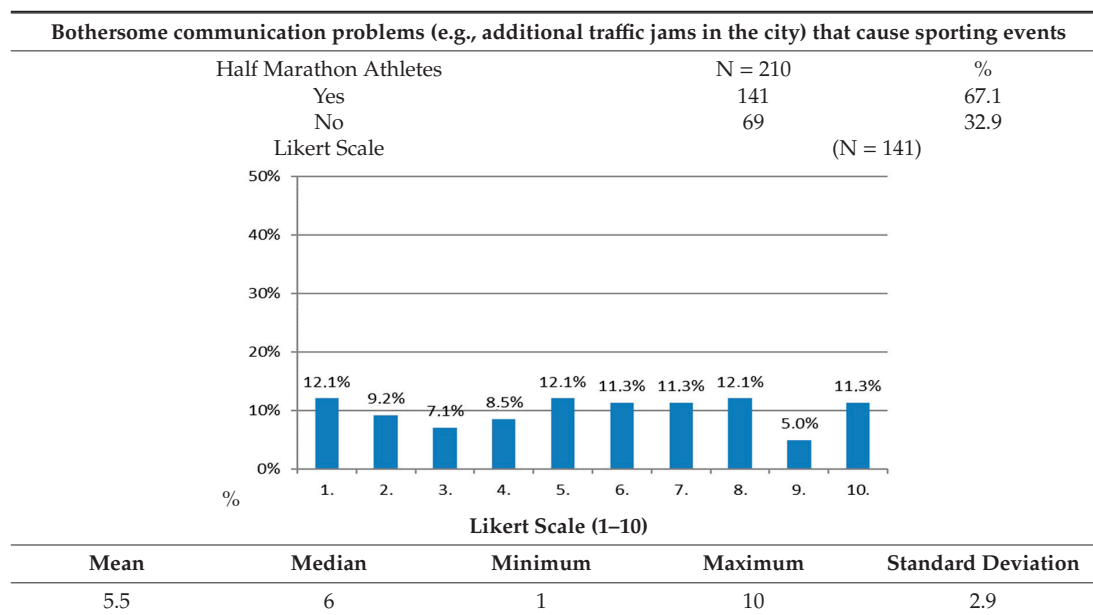


Table 3. Cont.

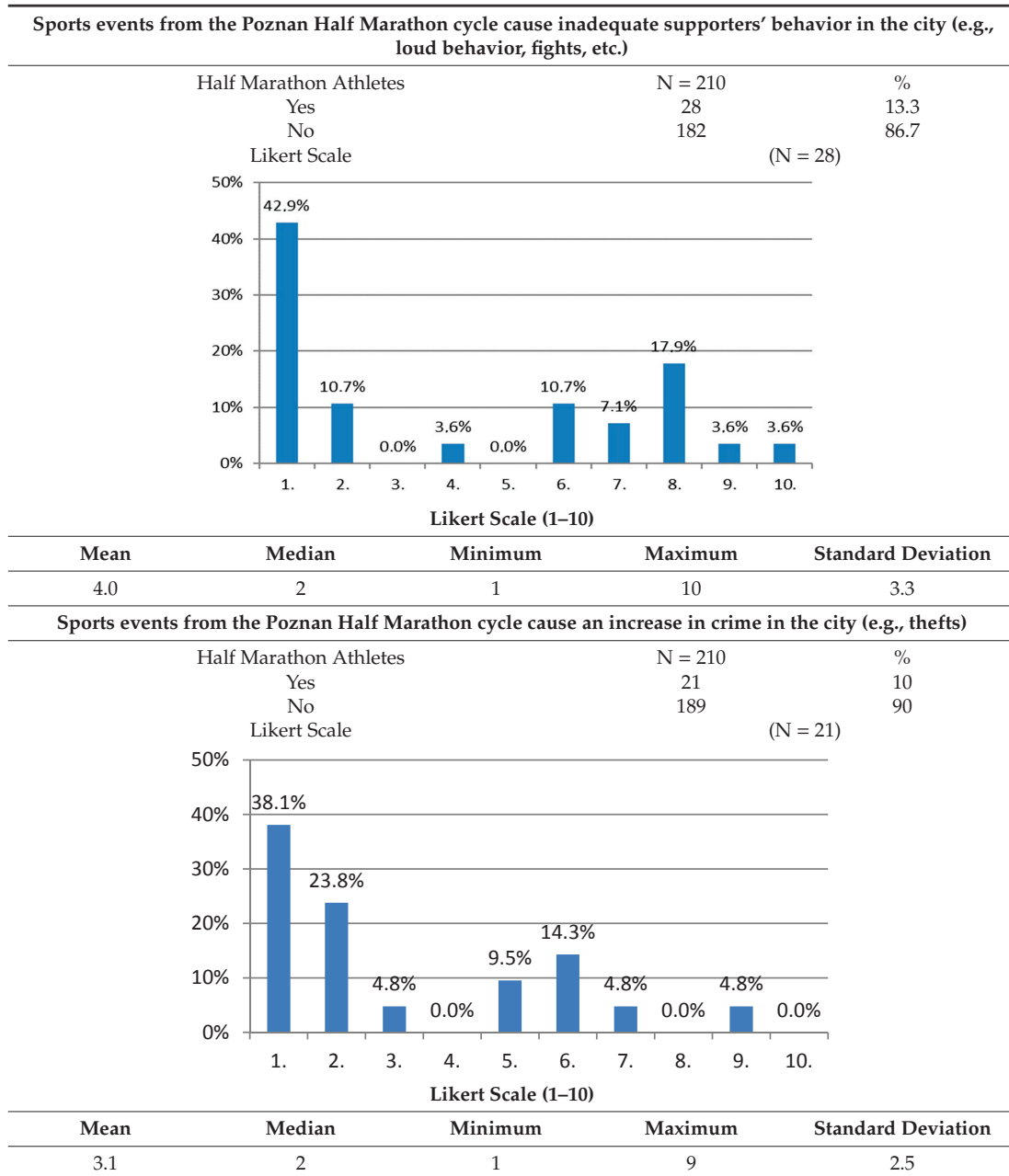
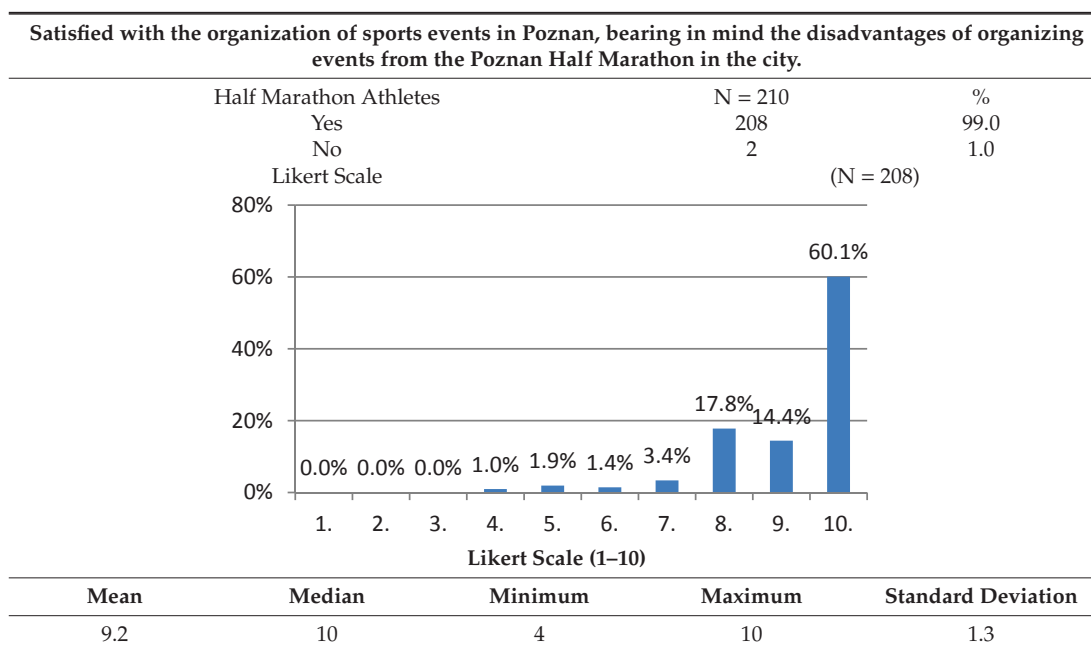


Table 3. Cont.



Source: Own work on the basis of test results, N = 210.

Table 4. Negative effects of organizing sporting events in Poznan in the opinion of residents—Half Marathon Fans.

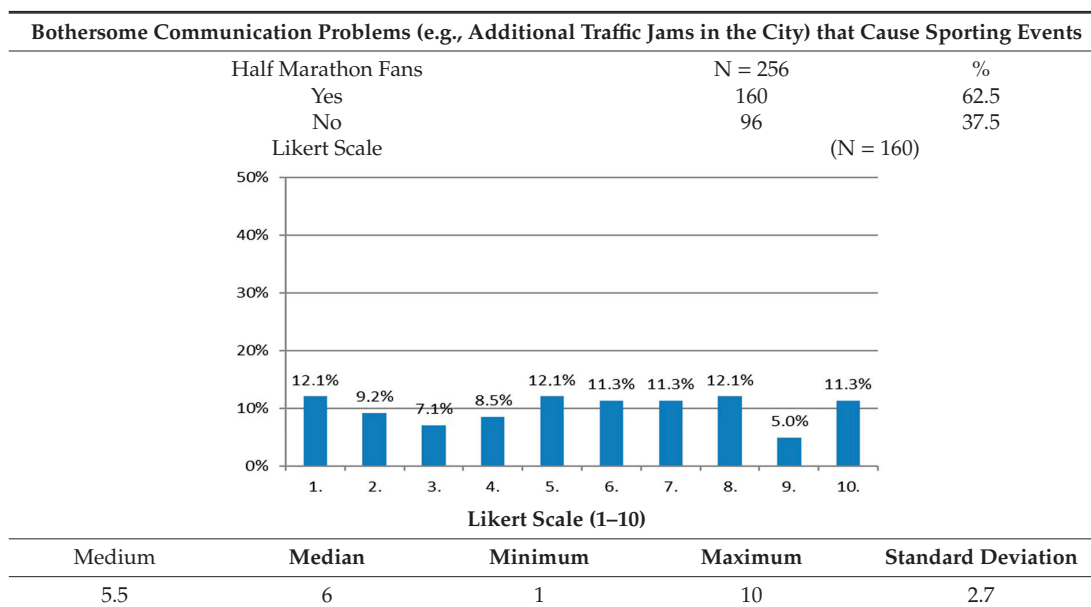


Table 4. Cont.

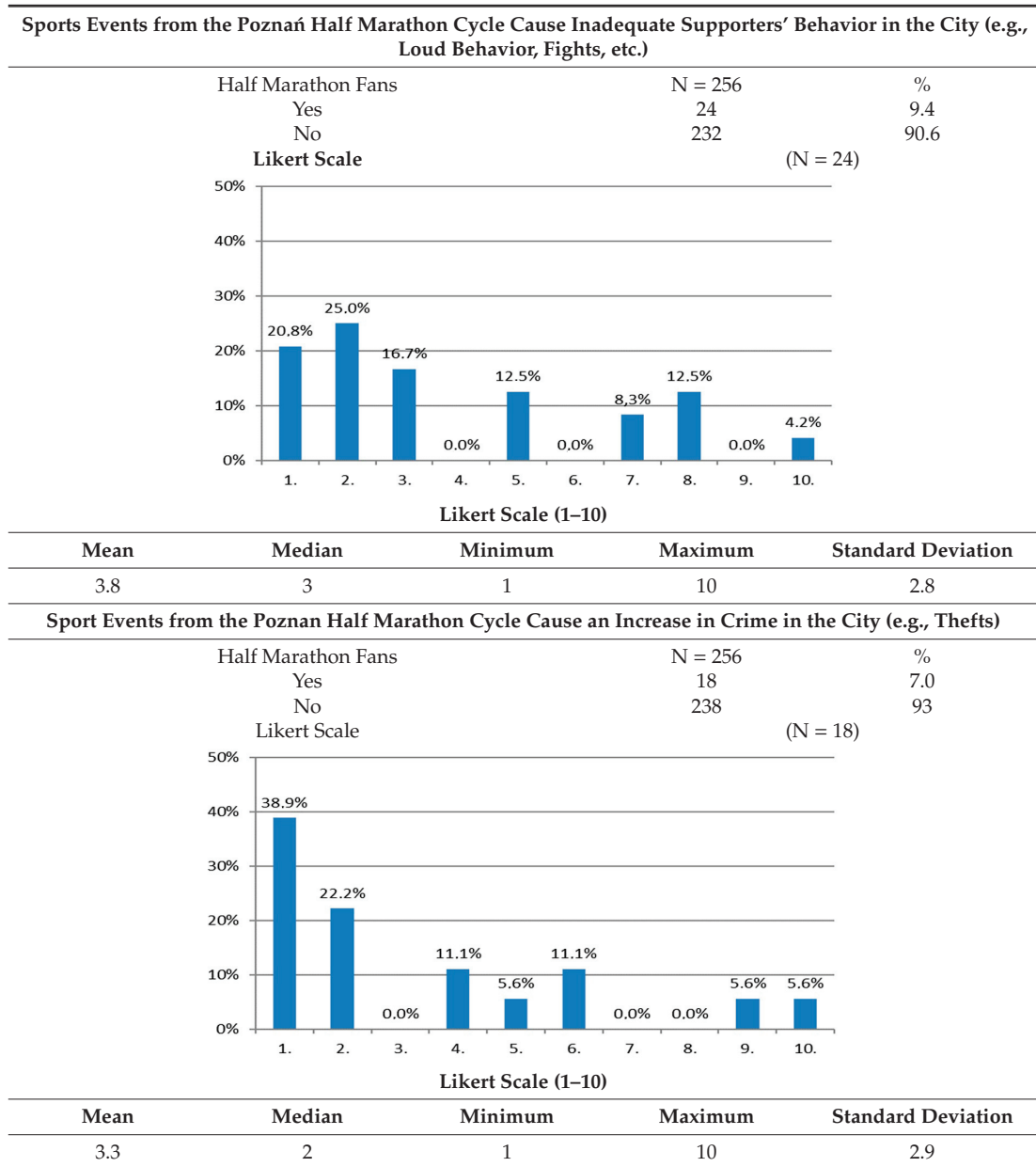
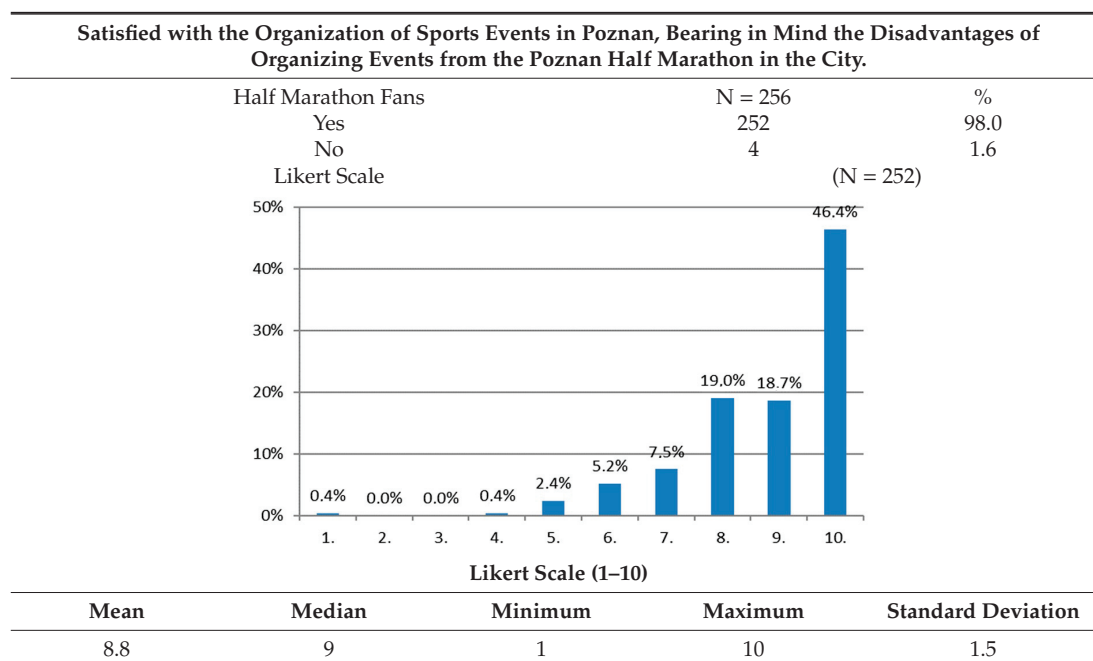


Table 4. Cont.



Source: Own work on the basis of test results, N = 256.

It turned out that as many as 67.1% of the athlete’s respondents said that the Poznan Half Marathon causes bothersome communication problems in the city. Only 32.9% had a different opinion on this subject. In order to further analyze the obtained results, 141 respondents who said YES were asked to define the intensity level of their discomfort in the communication problems caused the 6th Poznan Half Marathon Organization on a 10-point Likert scale (answer scale: 10—very high, 1—very low). The respondents concluded that the Poznań Half Marathon causes communication problems in a city with an average level of 5.5 points.

The research has shown that more often than every tenth person (13.3%—28) stated that the Poznan Half Marathon causes inadequate behavior of fans in the city and concluded that the Poznan Half Marathon causes inadequate supporter behavior in the city on average at 4 points on a 10-point scale. However, the majority—86.7% had a different opinion. According to 128 participants, the fans behave properly.

Exactly every tenth person (10%—21) said that the Poznań Half Marathon causes an increase in crime in the city. It turns out that as many as 9 out of 10 researched people had a different opinion on this subject. These 21 respondents concluded that the Poznań Half Marathon causes an increase in crime in the city on an average of 3.1 points on a 10-point scale. Moreover, as almost 99% of the surveyed residents of the Half Marathon athletes found that they were satisfied with the organization of the Poznan Half Marathon in their place of residence. Only 1% (2 people) had a different opinion and stated that they were not satisfied with the organization of the Half Marathon in Poznan at the level of 9.2 points on a 10-point scale. It proves high social support for this sporting event among the examined group of people and even if the disadvantages are perceived by the local community—they are most likely not very onerous and short-lived (of which the respondents probably realize).

Research on the 6th Poznan Half Marathon supporters ($n = 256$) found that 62.5% said that the Half Marathon caused bothersome traffic jams in the city but 37.5% (160) thought differently (Table 4). The supporters decided that the Half Marathon causes traffic jams in the city with an average severity of 5.5 points on a 10-point Likert scale. Moreover, less than 10% of the surveyed fans found that the Half Marathon caused inadequate behavior of the fans in the city. However, 90.6% of supporters had different opinions. The scale of inappropriate behavior of fans was estimated at 3.8 points on average ($n = 24$).

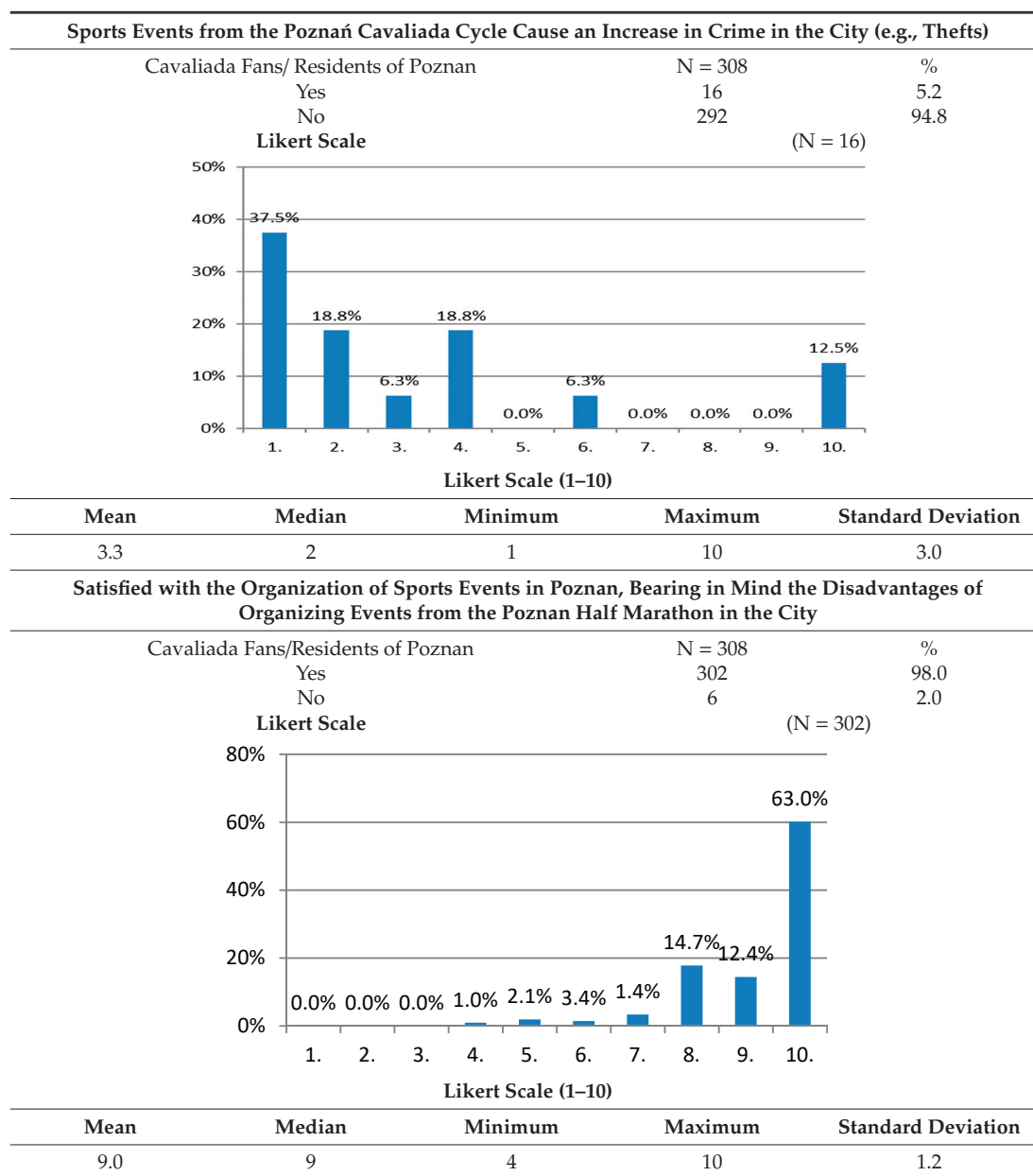
Only 7% of surveyed fans found that the Half Marathon causes an increase in crime in the city. Most of them (93%) had a different opinion. Fans who rated the rise in crime in the city ($n = 18$) thanks to a Half Marathon at an average of 3.3 points on a 10-point scale. The supporters' responses were almost unanimous and 98.4% ($n = 252$) attest to their satisfaction with the organization of the Half Marathon in Poznan. Only 1.6% (4 people) of supporters were not satisfied with this. The fans' satisfaction with the organization of the Half Marathon in Poznan were on average at the level of 8.8 points.

Authors have researched 308 Cavaliada—an international equestrian event—supporters. Studies have shown that 31.5% of them (97 people) think that the event causes onerous communication difficulties on average at 4.5 points on Likert scale (Table 5). In the case of Half Marathon fans, 62.5% of respondents answered yes (average level—5.5 points). Therefore, the Half Marathon made public transport much more difficult than Cavaliada.

Table 5. Negative effects of organizing sporting events in Poznań in the opinion of residents—Cavaliada Fans.

Bothersome Communication Problems (e.g., Additional Traffic Jams in the City) that Cause Sporting Events				
Cavaliada Fans/Residents of Poznan		N = 308	%	
Yes		97	31.5	
No		211	68.5	
Likert Scale (N = 97)				
Mean	Median	Minimum	Maximum	Standard Deviation
4.5	4	1	10	2.7
Sports Events from the Poznan Cavaliada Cycle Cause Inadequate Supporters' Behavior in the City (e.g., Loud Behavior Fights, etc.)				
Cavaliada Fans/ Residents of Poznan		N = 308	%	
Yes		19	6.2	
No		289	93.8	
Likert Scale (N = 19)				
Mean	Median	Minimum	Maximum	Standard Deviation
4.2	3	1	10	3.2

Table 5. Cont.



Source: Own work on the basis of test results, N = 308.

Respondents were asked a question: “Does Cavaliada cause inappropriate behavior of fans in the city (e.g., loud behavior, fights e.g.)?” and 6.2% of them said Cavaliada caused inappropriate supporter behavior in the city (on average 4.2 points on Likert scale). In the case of the Half Marathon, 9.4% of supporters said yes. Only 5.2% of Cavaliada fans said that this event increase in crime in the city (on average 3.3 points). In the case of the Half Marathon, 7% of supporters said yes. The supporters declared their satisfaction with the organization of the Cavaliada event in Poznan. Only 2% (6 persons) of supporters were not satisfied with this. The fans’ satisfaction with the organization of the Half Marathon in Poznan were on average at the level of 9.4 points. The fans’ satisfaction with the organization of the Half Marathon in Poznan were on average at the level of 8.8 points.

From the point of view of the conducted analysis, it proved important to check the difference between the two examined groups of respondents: Half Marathon fans and Cavaliada fans, among those who answered YES—the average level of dissatisfaction significantly different between the

analyzed groups (Likert scale 1–10). For this purpose, Chi-square test and U Mann Whitney's test was used:

6.2. *Bothersome Communication Problems (e.g., Additional Traffic Jams in the City) that Cause Sporting Events*

Checking if the fractions of the people who answered YES to this question differ significantly between the two analyzed groups—Chi-square test. Fractions differ from each other in a statistically significant way: p -value = 0.000 (<0.05). There is a relationship between the type of event and the answer to the question being analyzed. The distribution of the analyzed feature in both groups differs significantly from the normal ($p < \alpha$), therefore the nonparametric test was used—U Mann Whitney test. The average level of dissatisfaction differs significantly between the analyzed groups: $p = 0.004$ (the average in the samples was: for the Half Marathon 5.53, for Cavaliada—4.54). For the one-sided test: $p = 0.004/2 = 0.002$. Then it can be assumed that the participants of the Half Marathon have an average level of dissatisfaction higher than the average level of dissatisfaction of Cavaliada participants.

6.3. *Sports Events from the Poznań Half Marathon Cycle Cause Inadequate Supporters' Behavior in the City (e.g., Loud Behavior, Fights, etc.)*

Checking if the fractions of the people who answered YES to this question differ significantly between the two analyzed groups—Chi-square test. Fractions do not differ from each other in a statistically significant way: p -value = 0.153 (>0.05). It cannot be assumed that there is a relationship between the type of event and the answer to the question being analyzed. The distribution of the analyzed feature in both groups again differs significantly from the normal ($p < \alpha$), therefore the nonparametric test was used—U Mann Whitney's test. The average level of dissatisfaction is not significantly different between the analyzed groups $p = 0.990$ (the average in the samples was, for the Half Marathon 3.83, for Cavaliada 4.16)

6.4. *Sports Events from the Poznan Half Marathon Cycle Cause an Increase in Crime in the City (e.g., Thefts)*

Checking if the fractions of the people who answered YES to this question differ significantly between the two analyzed groups—Chi-square test. Fractions do not differ from each other in a statistically significant way: p -value = 0.362 (>0.05). It cannot be assumed that there is a relationship between the type of event and the answer to the question being analyzed. The distribution of the analyzed feature in both groups again differs significantly from the normal ($p < \alpha$), therefore the nonparametric test was used—U Mann Whitney's test. The average level of dissatisfaction is not significantly different between the analyzed groups $p = 0.971$ (the average in the samples was: for the Half Marathon 3.28, for Cavaliada - 3.31).

6.5. *Satisfied with the Organization of Sports Events in Poznan, Bearing in Mind the Disadvantages of Organizing Events from the Poznan Half Marathon in the City*

Checking if the fractions of the people who answered YES to this question differ significantly between the two analyzed groups—Chi-square test. Fractions do not differ from each other in a statistically significant way: p -value = 0.730 (>0.05). It cannot be assumed that there is a relationship between the type of event and the answer to the question being analyzed. The distribution of the analyzed feature in both groups again differs significantly from the normal ($p < \alpha$), therefore the nonparametric test was used—U Mann Whitney's test. The average level of satisfaction differs significantly between the analyzed groups: $p = 0.000$ (the average in the samples was: 8.82 for the Half Marathon, 9.25 for Cavaliada). For the one-sided test: $p = 0.000/2 = 0.000$. Then it can be assumed that the participants of the Half Marathon have an average level of satisfaction significantly lower than the average level of satisfaction of Cavaliada participants.

7. Discussion

A review of the literature on the problem shows that there is little research on the impact of small sporting events on the quality of life of residents. In addition, studies on the relationship between mega sporting events and the place where they are organized have a relatively short history and the first studies appeared after 1984 under the influence of LIO in Los Angeles [108,109]. Over the next 30 years, there were research results showing the relationship between events and their host [23,111–114]. In Poland, the first such research and reports began in 2007 when the results of the selection of the host of Euro 2012 was announced [115]. This gave impetus to get interested in the subject. There were few studies that referred to economic [115–119], tourists [24,120,121] and sociological [122] issues. All these studies refer to the analysis of the relationship between a sporting event and the place where it takes place and includes the effect, impact and influence of the mega event on the host [121]. Street running has already been analyzed from the side of runners' profiles and their motivation to participate in events [90,91,123]. Moreover, it was emphasized that the venue for the organization of running is increasingly important for sustainable development. For example, the effects of organizing running events in national parks were researched [96,97,124]. The impact of running events on local communities in the context of health promotion was also examined [100] but the results of the research on the negative impact of running events on the urban community have not been met before in the literature. There are not so many studies that concern small and local events and their negative or positive impact on residents [22,105,125,126]. Many authors at that time took up the issue of sports tourism, which is related to the organization of sporting events [107,127–130]. Sports tourism, if well organized, has the potential of creating more positive economic, social and cultural benefits to the host community. This is a kind of tourism that has recently been used to enhance the city's identity and appeal to businesses and travelers. Most cities' bids to host sporting events in order to achieve urban regeneration with revenues being generated from TV licenses and other areas. However, cities also face difficulties while trying to assess the impacts of these events when set against the costs incurred. This applies to the organization of major sporting events in popular tourist destinations. That is why many authors dealt with issues in this area, especially social impacts of hosting major sport events. Kim and co-authors [25] were trying to develop a complex scale to evaluate the perceived six social impacts of a large-scale sport tourism event. There were economic benefits; community pride; community development; economic costs; traffic problems; and security risks. Their questionnaire was tested among community of host's residents for the Formula One Korean Grand Prix in South Korea. They wanted to understand how residents view the impacts of a large sporting tourism event [25]. Liu, using Shanghai Formula One as a case study, examine the impact of mega sporting events on host city image from the international students perspective [131]. Leisure facilities and service were the most positive image impact in the opinion of the respondents. International students disagreed that Formula One would result in security problems or any crime. They had doubts about any negative impact on their daily life or environment. Lunhua & Haiyan [132] investigated residents' perceptions of the social impact of the Formula One Chinese Grand Prix and examined the relationships between the perceptions of social impact and four sets of variables. The results showed one dimension of negative impact (environmental and cultural problems) which was significantly associated with involvement in sports industry, community attachment and identification with the event. Moreover, Liu [133] developed a scale to measure the legacy of psychic income associated with the Olympic Games. The research collected from Beijing residents during the 2008 Beijing Games, identified a seven-factor of a scale of measuring psychic income (SPI) with 24 pertinent items retained. A study conducted by Balduck et al. [134] contributes to this line of inquiry by assessing the impact of the arrival of a stage of the 2007 Tour de France in Ghent. Exploratory factor analysis revealed seven impact factors. The most highly perceived benefits were cultural and image benefits whereas the most highly perceived costs were excessive spending and mobility problems. But Yi-De Liu [26] wrote that improving residents' quality of life (QoL) is one main reason to host major events. Also, event legacy has been emerging as a key outcome associated with the hosting of an event. Based on a case study of

Liverpool as the 2008 European Capital of Culture (ECOC), the research indicate that the most highly perceived benefits were image, identity and cultural legacies. However, respondents were less likely to perceive the legacy of economic and tourism development on their QoL. The study underlines also the importance of legacy planning as a holistic program from the early stages of event process [26].

However, presented examples of conducted research concern large sporting events and show that no one studied the impact of the organization of less known, medium scale sporting events on residents on the perception of negative externalities by host residents. The authors of the present paper did not reach the results of the research, which would show an assessment of the impact of the organization of non-mega scale sports events on the quality of the hosts' lives. With reference to the Faulkner and Tideswell studies [135], the perceptions of community members are important and, furthermore, obtaining responses from a diverse group of residents is essential in representing the varied perceptions. For example, Bynner [136] stated that longitudinal data is needed to study the transition process involved, the effects of societal change and the policy impact.

8. Final Conclusions

The theoretical part of this article presents the meaning of sporting events for tourism industry and indicates the negative and positive effects this kind of tourism brings to host cities. The whole refers to the theoretical foundations of the term of "overtourism." The second part presents results of empirical research was conducted by the method of diagnostic surveys during two sporting events of different sporting rank, which took place in Poland and represented various sports disciplines—running and horse riding. The case study is the city of Poznan and two, well-known events in this agglomeration. The first one is Poznan Half Marathon—mass sports event, the second one is Cavaliada—elite equestrian event. A total of 774 respondents took part in the study, resident hosts who took part in the studied events. The main goal of this study was to investigate the impact of non-mega sporting events on quality of the host's life. The detailed aim of the study was to examine whether the inhabitants of the city feel the negative effects of organizing sporting events (communication problems or inappropriate behavior of supporters) and do they believe that these events increase the level of crime in the city or, despite these inconveniences, they are satisfied with the organization of sporting events in their place of residence. This phenomenon can also be referred to the social exchange theory (SET) to analyze the perceptions of residents. Many authors [135,137–139] have continuously drawn on this theory. For example, Homans [137], the author of SET has been applied it to variety of leisure disciplines, to understand the views of local residents with regard to tourism. Harrill [139] states that SET involves the trading and sharing of resources between individuals and groups. Ap [140] things that not only highlights the exchange of resources but has also been expanded to include the mutual benefits that all exchange participants can get. In applying this to tourism, research by Teye et al. [141] indicates that perceived benefits associated with host community improvement led to support of residents. Moreover, Waitt [142] has found that enthusiasm of the residents and support varied according to how tourism events were perceived either positively according to the benefits derived or negatively with respect to any costs incurred from what they supplied. It is essential that event organizers and affiliates consider the local voices about the sport tourism event.

The results of the presented research show that both athletes as well as fans of the Half Marathon said that the Poznan Half Marathon causes bothersome communication problems in the city. Cavaliada, as an international equestrian event, causes onerous communication difficulties only in the opinion of 31.5% of researched respondents. Therefore, the Half Marathon made public transport much more difficult than Cavaliada situated in one place—Poznan Trade Centre. It also turned out that in the opinion of most of the researched fans and athletes, the surveyed events did not cause inadequate behavior of fans in the city or an increase in crime in the city and people are satisfied with the organization of these events. It turns out that the inhabitants, despite minor inconveniences that are felt as a result of organizing sporting events in the city, must also see the benefits. The negative impact of Cavaliada was very low. For checking the difference between the two examined groups of

respondents: Half Marathon fans and Cavaliada fans, Chi-square test and Mann Whitney's test was used. The participants feel bothersome communication problems that cause the Half Marathon and have an average level of dissatisfaction higher than the average level of dissatisfaction of Cavaliada participants. Moreover, the participants of the half marathon have an average level of satisfaction with the organization of sports events in Poznan significantly lower than the average level of satisfaction of Cavaliada participants. Therefore, an elite sporting event is less burdensome for its residents and gives them more satisfaction. They do not think the event will harm them. However, they are aware of social exchange and profits for the city. The conclusions and reflections resulting from these studies can be used by organizers of non-sporting events and be their inspiration. Importantly, the inhabitants play an important role in the development of sustainable tourism, because they are cultural agents and the social group in which tourism is provided and local hospitality is a key element of the tourism product [143].

The paper provides data that may be useful for support marketing events such as half marathons. The popularity of sporting events participation fulfills a number of important sociocultural functions in the modern world. The most important include enabling sports tourists to build a sense of connection and integration with other people, thanks to which sports events become a postmodern form of participation in social life. Further research should go towards recognizing the importance and impact of small sporting events on people's lives and their environment. These types of events are definitely less recognized but their growing popularity indicates great importance for the development of cities and regions, tourism and economics.

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Article

The Sharing Economy and Sustainability of Urban Destinations in the (Over)tourism Context: The Social Capital Theory Perspective

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Abstract: This article contributes to the discussion on the sustainability of the sharing economy by adopting the Social Capital Theory to expand explanations of the sharing economy's role and scope of relations with local communities in the context of overtourism. As mutual relationships have not been fully recognized through a theoretical perspective, the article aims to examine the sustainability of the process of the sharing economy impacting urban tourism communities in light of Robert Putnam's approach to Social Capital Theory. On the basis of a selective systematic review, the article discusses the sustainability of the sharing economy through the lens of bridging and bonding social capital. We argue that a new configuration of social capital, i.e., a sharing platform-modified social capital, arises from the unsustainable and disruptive power of the sharing economy implemented by virtual platforms, thereby contributing to an overtourism syndrome. However, from a medium- and long-term perspective, the sharing economy also impacts the bridging nature of social capital, which should lead to a more sustainable balance in its structure. This initial framework for understanding the impact of the sharing economy on sustainability of local communities provides an alternative approach to studying residents' perceptions and attitudes towards tourism in the areas affected by overtourism.

Keywords: sustainability; sustainable development; Social Capital Theory; sharing economy; collaborative economy; overtourism; tourism; urban tourism; gentrification; tourism impact

1. Introduction

The so-called sharing economy (SE) and overtourism are both coincidental and complementary phenomena. Since they have been simultaneously experienced by communities in the growing number of, mainly urban, destinations, academic studies as well as industry-related and governmental insights associate or join them together as disruptive, unsustainable forces undermining long-term tourism development and community well-being [1–10]. This recent wave of research has complemented the existing discussion on the sustainability of SE [11–15].

Nevertheless, although complementary, both phenomena are of a different nature and scope. SE refers strictly to social relations which are embedded in and also fuel and transmit social capital [16–18]. Accelerated by technological development, it develops globally and transforms even more spheres of human and economic activity, strongly emphasizing its presence in the tourism industry, especially

in accommodation, transport, catering and tourism experiences [19,20]. As the SE's impact is widely discussed through the prism of accommodation platforms [20–23] we mostly consider this sector of the tourism industry. Overtourism, in turn, is a place-specific and industry-related mechanism. As a temporary and 'explosive' phenomenon, it condenses all the aspects of visitors' activity and the tourism industry in affected destinations, including the experiences or services distributed or accessed by sharing. Thus, when these two phenomena are studied together, we can discuss tourism as a domain of the SE, and the 'sharing' aspects of overtourism.

Yet, due to an early phase of their evolution and the eruptive nature of their expansion, mutual relationships of both phenomena have not been fully recognized, leaving a gap for further research. Even so, many researchers claim that the SE contributes to overtourism by jointly pushing urban gentrification processes, depopulation of city centers and other processes of social exclusion [3,24–28]. In light of this, in this article we consider overtourism in the context of studying the impact of the SE expansion on local communities. The emerging overtourism syndrome may be one of first striking examples of the problems in which the SE is directly involved. Thus, the externalities resulting from the SE in (over)tourism context on the community level could be a laboratory for SE's influence in general.

Although sustainability issues involving the SE have been discussed quite often in the tourism development context [1,24,26,29], these studies were contextual, based on the case studies, and also related to various conceptual frameworks (or none, if not indicated by the authors). The majority of them identify and characterize the positive/negative impact of the SE on local communities by referring to respondents' opinions or figures indicating a certain stage or level of the phenomenon [3,4,30,31]. Theoretical studies investigating the process of the SE impact itself through the prism of concrete theoretical frameworks can hardly be found. Apart from the Social Exchange Theory (SET) [28], which is frequently utilized as a field research framework, the presence of other theories is very limited [32,33]. Thus, there is a need for conceptual studies which could explain the links between sustainability and the SE impact on the local communities in the tourism context in a complex way, framed by a clearly-defined theory which goes beyond tourism-specific concepts.

This viewpoint article addresses the gap in the theoretical discussion on the expansion of the SE in the urban communities affected by overtourism. As the SE refers to social relations, and well-being and quality of life are recognized as crucial indicators of the social dimension of sustainable development [34,35], the article aims to conceptualize the impact of the SE on urban destinations through the lens of Putnam's [18,36] approach to Social Capital Theory (SCT). However, both the SE and overtourism affect the density of social capital, thereby triggering calls for sustainable solutions. Discussing the impact of the SE on local communities in the tourism context would allow us to compare the prevailing discussion on the sustainability of the SE and propose a new perspective for interpretation and research on the subject. Thus, we argue that the SCT contributes to gaining a more complete picture of the conjunction of the SE, overtourism and a local community's (un)sustainable development.

The article contributes to the discussion on sustainability of the SE by adopting the SCT framework to expand explanations on its role and scope of impact on local communities in relation to the overtourism syndrome. As the tourism industry is one of the spheres where the SE is diffusing, and it is estimated to expand into other market and social activities [7,13,20,37], one can argue that the overtourism context should be considered as a laboratory for studying the sustainability of its impacts in general. The article also contributes to the discussion on overtourism by focusing on the impact of the SE on local communities, instead of only identifying the effects of these changes.

The latter parts of the article are organized as follows. First, we explain the method applied. Then, the SE is briefly introduced in the sustainability and the tourism contexts. After that, we focus on the relations between overtourism and the SE. Next, the review of the sustainability of the SE in the tourism context is presented. The following part discusses the principles and the evolution of the SCT. In the results section, we juxtapose the literature review results concerning the sustainability of the SE with the SCT perspective. We conclude by implementing a new configuration of social capital and its consequences for local communities in the context of overtourism.

2. Materials and Methods

Our considerations are based on a review of the existing literature on the subject. We adopted a two-step selective systematic review of the papers indexed in Web of Science and Scopus databases. In the first step, we conducted two separate procedures focusing on search terms 'overtourism'; and 'sharing economy' or 'collaborative consumption' indicated in the article titles, abstracts or keywords. The aim of the analysis was to recognize their definition range and the main research threads referring to both phenomena. No year limit was used. Because of the research aim and the large number of document results (98 records referring to overtourism and 2135 records referring to the sharing economy), we limited the review to the most frequently cited documents.

In the second step, we focused on the articles referring to overtourism/tourism development and the SE, both referring to sustainability. Thus, the following search terms were selected: 'overtourism' or 'tourism'; 'sharing economy' or 'collaborative consumption'; and 'sustainability' or 'sustainable development'. The search resulted in 25 documents. The selection procedure consisted of initial scanning in line with the criteria used in the second step. Moreover, the specification of the theoretical/conceptual framework of the study was an additional criterium. In effect, nine papers were omitted. The organized final list of selected 16 papers is specified in Appendix A. The review focused on an analysis of the content of each paper in order to synthesize different perspectives and identify the scope of the SE impact on the sustainability of local communities.

The selected papers were published in the years 2016-2019. They refer to various theoretical frameworks and concepts. Indeed, the Social Exchange Theory proved to be the most popular concept [3,28,38,39], in combination with neoclassical economics [32]. However, besides a single paper designed as a theoretical dispute on the regulation of the SE, they all use the theory for empirical reasons such as to measure residents' perceptions, and not to recognize the links between the SE and communities. According to SET, the attitude of the residents relies on the assessment "of the expected benefits or costs obtained in return for the services they supply". In general, the residents will support the development of a phenomenon or activity, if they perceive more positive impacts (benefits) than negative impacts (cost) from it [40]. The Social Representation Theory is an alternative concept, applied by von der Heide et al. [31]. It refers to a system of symbolic representations—which could be conceptualised as "a history of mentalities" instead of objective reality—shared both by individuals and society. This system is the foundation of the individuals' building their perception of one's self as a part of a group [41]. The other works are based on tourism-specific concepts: tourism degrowth theories [42], the social carrying capacity concept [4], Doxey's [43] Irridex model and Butler's [44] Tourism Areal Life Cycle Model. Alternatively, they design their own research frameworks [25,30,45]. Two literature reviews conclude the set of literature.

Moreover, in the conclusion part, we used more general literature referring to both tourism development and social capital. A literature review on overtourism and the SE points to some attempts to recognize the relations between the SE and on local communities; however, it is performed without any reference to social capital. As social capital is the key adhesive of communities, we argue that it should be included in this discussion to gain a more complete picture of the conjunction of the SE, overtourism and local community (un)sustainable development.

3. The Sharing Economy Interplay with Sustainability

There is no agreement among scholars about what the SE is and how it refers to other types of modern forms of economic models [19,46,47]. In its narrow and primary meaning, the SE refers to the short-term use of less-frequently used assets by various actors within a network economy, enabled by the development of the Information and Communication Technologies (ICT). Nowadays, the SE has encompassed a variety of different products and services, which are distributed or accessed to by sharing or through collaborative practices [48].

Having in mind terminological controversies, the variety of the SE concepts and related terms [19,20,49], we follow Acquier et al. [50] and Netter et al. [48] to adopt a broad

understanding of the SE term. We consider the SE as an umbrella construct that encompasses business-to-business, business-to-consumer and peer-to-peer initiatives—driven both for-profit and non-profit motivations—which are based on and combine at least three following foundation cores [50]: (1) the platform economy, in terms of intermediating decentralised exchanges among peers through digital platforms; (2) the access economy, in terms of sharing under-utilized assets to optimize their use, offering services instead of products; (3) the community-based economy, in terms of coordinating initiatives through non-contractual, non-hierarchical or non-monetized forms of interaction. We elaborate on each of these cores below.

The SE networks are strictly associated with digital technologies, which are both a driver towards and the essence of the SE [51–54]. The ICT has made sharing convenient and transparent as well as open to many individuals and businesses, regardless of their size and location. The term “platform” refers to an intermediary acting to create access or to manage exchanges, payments and evaluations among peers or companies [13]. The platforms are the structures which enable transactions by connecting two contracting parties for the purchase of commodities or the provision of services [55].

The SE is rooted in social relations, as the access economy and the community-based economy are among the foundation cores of the SE. Thus, the issue of its sustainability in general (not only in the tourism context) has been raised as a characteristic of the SE phenomenon. Originally, the SE has been popularized as a more sustainable form of consumption [56–58]. However, with the development and proliferation of the SE models and platforms, the debate around their impacts on sustainability has been growing and critical voices have become more sound [13,47,50,59,60]. Moreover, because of the newness of the SE concept, descriptive and explanatory studies dominated literature and report reviews [1,12,37,61–63] or the internet and social media monitoring [13], supplemented by research projects based on the primary sources analysis and case studies of selected industries or platforms [33,56,64,65]. On the basis of the transition theory, Martin [15] claims that the SE can have positive impacts on sustainability because it creates economic opportunities, but it can also increase unsustainability by reinforcing the forms of neoliberal capitalism. Similarly, Geissinger et al. [13] stress that sustainability impact of the SE is hard to operationalize and measure objectively because of the ambiguous and diverse nature of the SE. This fact allows some marketers of the SE platforms to conduct ‘share-washing’ of their activities on official and social media [13,61].

Because of its specific characteristics and systemic problems—in particular, its functioning in the global-local nexus [66–68]—tourism is an industry that is particularly exposed to sharing practices [19,20,47,69]. Dredge and Gyimóthy [19] identify the existing collaborative opportunities in the food, travel services, health and wellness, currency exchange, travel companions and support, accommodation and work space, transport and education industries. Based on the object of exchange, Gössling and Hall [20] grouped the sharing market in tourism into three building blocks: asset, services and opinion. They refer to accommodation, transport, food, information, advice and evaluation, travel visualization, virtual travel and advocacy. Their common characteristic is the exchange process being facilitated by an app or website intermediary. Palgan et. al. [70] classify the sharing platforms operating in accommodation industry according to a type of exchange. They distinguish between a commercial exchange (business-to-customer exchanges), rental (peer-to-peer flats rented directly from owners or managed as timeshares), reciprocal exchanges (home swaps) and free accommodation (guests are accommodated without commercial interest). However, Airbnb is the most eminent and discussed example of the sharing economy business model in tourism, which has changed the global value chain’s logic and has become a symbol of the disruptive power of the global economy and local communities living in popular tourism destinations [21,69,71–73]. As the impact of the SE on the accommodation sector has opened the widest and the most lively discussion among scholars [20–23], our considerations refer mostly to this area of the tourism industry.

4. Overtourism as a Context of the SE's Impact

Overtourism is a recent syndrome experienced in a growing number of destinations, prominently affecting towns and city centers with well-known cultural assets and popular amenities [26,29,74,75]. Milano et al. [76] define it as the excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have enforced permanent changes to their lifestyles, access to amenities and general well-being. In a narrow context, overtourism refers to the physical characteristics of cities and is just about managing tourist flows to stop them from increasing above the maximum carrying capacity thresholds in time and space, in central or in historic quarters. However, its complex and disruptive nature has led researchers and governance practitioners to perceive overtourism in a wider context and through a more sophisticated lens. Goodwin [77] notes that the destinations experience overtourism not only when "hosts or guests, locals or visitors, feel that there are too many visitors", but also when they feel "that the quality of life in the area or the quality of the experience has deteriorated unacceptably". Koens et al. [26] coined a much more comprehensive definition, specifying that overtourism is "an accumulation of different impacts and perceptions that relate both to tourist behavior as well as actions by, and encounters with stakeholders as well as changes to the social, economic and physical environment" (p.5). In this wider meaning, overtourism refers not only to the tourist number, but to the wide range of over-developed tourism impacts, including supply side and boosterism policies based on tourism functions. Thus, it is the quality of the residents' life which is at stake in the overtourism struggle, discussed in the literature in the wider context of sustainability [45,77,78].

Resultantly, calls for mitigating the negative consequences, conflict management, more sustainable tourism development strategies or even degrowth proposals have been raised in tourism academic discourse [79–81]. Nevertheless, researchers stress that overtourism as a destination-specific phenomenon is resistant to "one-size-fits-all" solutions [26,77].

In general, the changes which effect overtourism and the sharing economy are generated by various megatrends [82]. It is the cities where the strongest intensity and impact of the megatrends on tourism can be observed. In particular, it refers to the factors evoked by both the technological (eg. digital transformation) and economic megatrends (eg. globalisation) [83,84]. Despite complex, multifaceted and dynamic nature of both phenomena that makes them slip out of clear definitions and objective measurement, we can state that overtourism and the SE are complementary phenomena (Appendix A). As tourism is a spatially-concentrated phenomenon—as evidenced sharply in the destinations affected by overtourism—the impacts of the SE, also an uneven dispersal activity at the community level areas are one of the most frequently discussed topics in relation to the development of tourism. Researchers mostly agree that the relationship between overtourism and the SE is not only spatial; this relationship is also causal. However, the academic papers can be divided into three perspectives of that causality (see Table 1). The first one consists of works which consider the SE as an enabler or component of overtourism, i.e., as a factor contributing to overtourism. In this context, the SE is perceived in an oversimplified way, contributing to selected dimensions of overtourism defined in a wider meaning or accelerating them, like the spatial saturation of overtourism, the shortage of available living space and the increase in rents. The soundest thread of the studies in this perspective deals with the measuring of residents' perceived impacts of overtourism and/or the proliferation of the SE and their attitudes towards tourism and the tourists associated with these impacts. The second perspective presents a two-way nature of relationships, indicating that both phenomena are not only coincidental but also fueled by a feedback loop mechanism, leading to a more comprehensive phenomenon, i.e., gentrification. The third perspective, which deals with the SE as an effect of overtourism, is not strongly represented in the literature. The studies link overtourism to a growing number of tourists or international party-goers, fueling the expansion of non-institutionalized forms of tourist accommodation. Nevertheless, there are also studies which do not fit in only one category as they take a multi-view approach. Additionally, there are papers which present literature overviews of the existing approaches and concepts on the subject.

Table 1. Perspectives of the sharing economy (SE)—overtourism relationship.

Dimension	SE Perceived/Studied as
The SE contributing to overtourism	The SE as a cause of overtourism [77,80,85–87] The SE as a factor of consolidating/speeding overtourism [29,42] Making use of private accommodation as a consumer authenticity and localhood trend [26,29,47,77,88–90] Proliferation of the SE accommodation as a factor leading to deterioration of residents' perception/attitudes towards tourism/tourists [2,3,28,31,80]
The SE collating overtourism	The SE and overtourism accommodation as inter-fueled factors of gentrification [26,45,74,85,89,91] Additional facets of residents' annoyance and potential local conflicts [27,45,92]
The SE resulting from overtourism	The SE proliferation as an outcome of exceeding tourist numbers [74] The SE as an outcome of a growing number of night-time party-goers [91]

Due to the multidimensional nature of both phenomena, and their early level of evolution, it is hard to verify the validity of classifications presented in Table 1. Consequently, it is necessary to adopt one of these three perspectives to carry on with considerations by allowing for a more in-depth study of the phenomenon. Therefore, taking the above into account, this article adopts the second perspective, although it is not the most frequently used one. First, this approach partially overlaps with the first one, implying a much broader range of consequences. We perceive the SE as being rooted in the social relations among individuals and within neighborhoods and, thus, as being endowed with the ability to leave a deeper and longer lasting mark on communities which could not be easily—if there is any easy issue at all in the overtourism syndrome—mitigated or inverted. Second, the SE is a trend that is not only spreading in tourism, as this industry could just be a transfer platform to other sharable and collaborative activities. In this context, we situate our article in a sociologic study, adopting the city as a spatial scope of research, and tourism as a research context within the dynamic framework of overtourism in which social relations occur and social capital is changing.

5. The Sharing Economy and the Sustainability of Local Communities in the Overtourism Context: the Literature Overview

Focusing on the global tourism industry, Gössling and Hall [20] analyze the sustainable impacts of the SE. Focusing on economic sustainability, the authors emphasize that the platforms facilitate opportunities for individuals and firms to contribute to the economy, and thus they empower small firms and micro-entrepreneurs, who run start-ups with limited marketing resources. They also create innovations and new jobs and thus foster value chains. However, market concentration, rating and ranking dependencies increasing economic inequality between competitors and revenue concentration by platforms are all evidence of the negative impact on sustainability in the context of global tourism.

The sustainability of the SE at the destination/community level is discussed with reference to social, economic and environment domains of sustainability [93]. This is reflected in our literature overview presented in Table 2. (the issues are listed according to the descending number of indications and importance). The social and economic focus dominates, which results from the dominance of the studies focused on residents' perception and attitude measurements. In fact, pursuant to the sustainable development assumption that the development should proceed in line with the needs of the current generations while maintaining the present conditions and opportunities also for the future generations, local residents must be recognized as one of the main stakeholders of the process of tourism development, and their well-being and quality of life as the crucial indicator of this development [34,35,94,95]. Thus, the resident negative perceptions of and attitudes towards the SE are

interpreted as a manifestation of unsustainability, and the positive opinions and reactions to the SE as a manifestation of its sustainability.

Table 2. The impact of the SE on the sustainability of local communities in the tourism context.

Positive Impact/ Favoring Sustainability	Negative Impact/Favoring Unsustainability
Social domain	
[C] Improvement in the neighborhood; Encouragement of home maintenance [2,38][I] Opportunities for cultural exchange between tourists and residents and cultural learning [2,20,31,38] [I/C] Triggering the development of a variety of cultural and leisure activities involving local residents [3,28,38] [I] More authentic interactions between residents and tourists [31] [C] Bringing “new life” into neighborhoods [2,3,28] [I] Empowering of women as entrepreneurs [20] [C] Fostering community pride [2,3,32,38] [C] Enhancing greater destination loyalty of tourists [31]	[I/C] Decrease in affordable housing/long-term property rentals; Shortage of available living space [4,20,25,31,33,45] [I] Evictions; Tenants forced out of apartments or losing old-known neighbors; Displacement of low-income or frustrated residents [20,25,28,31,33,42,45] [I] Constantly changing neighbors; Hostile tourist behavior [4,28] [I] Decline in living quality for longer-term tenants (noise, partying, renovations, visitors’ inappropriate or indecent behavior) [4,28,30,31,33,38] [I/C] Residents’ frustration, sense of powerlessness, health-related and psychological problems affecting residents’ well-being [28,31,33] [C] Residents confronting with tourists, involving in formal and spontaneous protests against short-term rentals [28,31,38,42] [I/C] Deterioration of coexistence of citizens; Loss of the sense of community shared among residents [28,31,33,38] [C] Loss of identity and local culture [28,31] [I/C] Reworking of social relations of property; Social segregation in residential areas [33] [C] Creation of new socio-spatial relations restricting residents and traditional stakeholders; colonization of the lived spaces of urban housing [28,32,33] [I] Erosion of workers’ rights [20,33] [I] Racial disadvantages [20] [I] Reviews and ratings as a source of frustration and suspicion among home owners; moral issues related to impacts on tourists [20,33] [C] Increase in crime rate in community [38]
Economic domain	
[I] Extra income for home owners [3,28,31] [C] The strength and diversity of the local economy [3,28,31,32] [C] Fostering of local entrepreneurship and small businesses [3,20] [I] Increase of jobs; job opportunities [1–3,31,32,38] [C] Improvement of the local economy [2,28,32,38] [C] Fostering community innovation [20] [I] Emergence of the new SE-related services [38] [C] Expansion of the use of local offers and infrastructure [28,38] [I/C] Increase in tourist spending and municipal revenues [31,38]	[I/C] Increase in the overall cost of living [28,32,38] [I/C] Increase in residential rental rents [4,28,30–33,45,96] [I/C] Increase in the price of real estate [3,28,31–33,96] [C] Raise of gray accommodation market; Tax evasion [20,28,31] [C] Poor regulations; Ungoverned informal economy businesses; bypassing government regulations [20,24,31,33] [C] Unfair competition towards traditional accommodation entrepreneurs; Decrease in demand and price for other types of accommodation [1,31–33,45] [I/C] Unfair competition between permanent and holiday homes [28,31] [I] Generating precarious jobs; Casualization of labor with no social security coverage [32] [I/C] Commodification of private and public assets and space [32,33] [C] External control of local housing/tourist markets by SE platform owners [20,33] [C] Increase in local taxes [28] [C] Increasing share of money transferred by sharing platforms outside local economic systems [20] [C] Spatial concentration of short-term rental in city centers generating a “drag effect” on the global rental real estate market in the rest of the city [25] [I/C] The influx of low-cost tourists with limited spending power
Environmental domain	
[I] Reducing of water, energy use and greenhouse gas emissions through sustainable tourist behavior [1]	[I/C] Increases pollution/litter; Lack of waste separation [2–4,28,31,32] [I/C] Deterioration of the neighborhood infrastructure [2,28,31,32] [I/C] Ignoring fire and safety protocols by home owners [28,31] [C] Overcrowded neighborhoods; Traffic congestion [2,3,24,31,32,38,96]

Notes: [I] Perceived by individual residents; [C] Perceived on the community level; [I/C] Perceived on both levels.

Source: own elaboration based on review of papers listed in Appendix A.

The studies focusing on the resident perceptions recognize the SE as the main subject scope [2,38,39] or as a dimension of excessive tourism development [3,42]. Although the general residents’ attitudes towards the SE could vary in specific destinations—for example, the predominance of positive attitudes in Majorka, Spain [2] and the USA [38] vs. the predominance of negative attitudes in Barcelona, Spain [31] and Byron Bay, Australia [31] was identified—the juxtaposing of all the reviewed studies

indicates the dominance of unsustainable impacts of the SE (Table 2.). The most frequently raised issue refers to the interference of exponential and ungoverned growth of informal peer-to-peer accommodation on local residents' lives and the costs thereof. In particular, its disruptive role is perceived mainly by individuals who are not directly engaged in gaining from the SE. Nevertheless, many of the problems have become common issues, with repercussions affecting communities in general. As Stergiou and Farmaki [28] note, in residential areas, tourism-associated impacts are particularly concerning because the micro-level of neighborhoods represents the basis of societal structures and processes. For example, housing issues in terms of a shortage of long-term rentals, raising rents and replacements, as well as the lowering of the quality of living are perceived by individual residents; however, their increasing frequency affects neighborhoods and communities. Also, the long-term and commonly shared loss of community sense, identity and local culture has been recognized. Among the economic impacts, high residential rents and real-estate prices, the increasing of gray market and tax evasion as well as unfair competition has been identified.

The sustainability of the SE has also been identified, especially in terms of enlivening and enhancing the aesthetics of neighborhoods, cultural impacts, extra incomes of home owners as well as fostering entrepreneurship and innovation among residents. The environmental issues have also been recognized and their impacts are controversial.

Three issues must be raised while referring to Table 2. First, impacts evidencing both sustainability or unsustainability of the SE are interconnected. They are not perceived separately; instead these issues usually form a bundle of impacts propelling each other, forming a dynamic of interactions among the SE, local communities as destinations, and the tourism growth, which may fuel overtourism. For example, there are causality links amongst more income for home owners, improvement in neighborhoods, increase of residential rental rates, displacement of tenants, commodification of private and public assets and local resistance. Thus, Table 2 is composed from many 'sustainability pictures' of the SE rather than just one. Second, some impacts could be contradictory or mutually debilitating. This could be an issue involving the authenticity of resident-visitor relationships while raising the sense of powerlessness of the latter, or increasing the number of jobs which are precarious and casual. However, Table 2 is a composition of findings of the theoretical and research studies which are fragmentary, contextual or based on the case studies. Third, the general picture of (un)sustainability of the SE impacts on local communities in tourism context lacks dynamic overview. The majority of the studies—for objective reasons—diagnose the status of the impacts of the SE using selected aspects of the process. In other words, they mostly deliver static pictures of the process based on opinions of residents and key stakeholders or geostatistical data.

Given above the above arguments together, we must mention two studies which try to explore the mechanism of the process framed by using clearly defined theoretical frameworks which go beyond the tourism-specific concepts.

Stabrowski [33] recognizes sophisticated impacts of the SE on urban communities, which are incorporated in mechanism resulting from business models of sharing platforms. Basing on the Lefebvre's production of space concept and performativity in economics, the author points out the disruptive role of the reputation system of Airbnb and other accommodation rental platforms, consisting of mutual verification and rating of guests and hosts. However, this rating/reputation is also the only basis for building trust between peers and assessing the quality of their performance on the sharing market, becoming a form of currency in the global sharing system. Notably, it only permits the opinions of peers, restricting local stakeholders like tenants, neighbors or landlords. As the result, as Stabrowski [33] state: "hosts and guests are interpellated as fully autonomous individuals—unburdened by the collective nature of the lived spaces of urban housing—negotiating the rental price of an accommodation that itself is constituted as a bounded spatial entity whose use rights are defined in absolute terms. Socio-spatial relations outside of the binary host-guest relation—such as those between or residents within multi-family buildings, between neighbors within an urban locality (neighborhood), or even among the wider urban housing market—are thus 'bracketed

out' in this process, with profound implications for public urban space" (p. 336). Surrounding spaces are not free from this impact. The new geographies have been created within cities which colonize the lived spaces of urban housing and public space, imposing global market rules and unbalancing local communities.

Stergiou and Farmaki [28] examine perceptions of residents of Athen's Koukaki residential area regarding the impact of Airbnb accommodation growth on their neighborhood in relation to the exchange relationship with guests. Based on the SET analytical framework, the authors conducted analysis of the full process of resident-guest interactions, dividing it into three steps: initiation of exchange, exchange formation, and overall post-exchange; which lets us look inside the dynamics of the process. In general, the authors state that imposed costs outweighed any positive outcomes brought about by Airbnb and their interactions with guests in their neighborhood and residential environment. However, more positive views came from those participants indirectly engaged in hosting Airbnb guests. According to the detailed results, the residents were imposed to the disruptive face of the sharing accommodation model before the first guests appeared. The disturbance was caused by renovations and refurbishments of apartments, unexpected evictions and losing neighbors, increasing rents and the lack of consultation on the changes. During the exchange formation stage, the negative issues ranged from the presence and rotation of unfamiliar people, intrusion of tourists and commercial activity in the private life and spaces of residents, noise and litter, lessening of community bonds, to problematic issues such as rude and indecent behavior from tourists, damage in communal areas, disputes and occasional open hostility from guests. During the post-exchange evaluation, the residents reported annoyance, irritation, a sense of powerlessness or even fear and health-related and psychological problems affecting their well-being and inducing reactions such as confronting tourists, involvement in formal actions against short-term rentals, resigned acceptance or an interest in moving out of the area. Only residents indirectly involved in Airbnb activities enhanced their efforts to capitalize on opportunities from this activity. Summing up, the mentioned studies focus on a variety of aspects involving the sustainability of the SE on tourism, leading to a fragmented and vague picture with prevailing evaluative aspects. However, there is a need for studies which will provide a complex, theoretical explanation of the relations between the SE and local communities in the tourism context. As existing findings show, different aspects of socio-economic relations should be considered together. We tend to consider: individual relations (between neighborhood and tourists), business relations (between hosts and tourists), inter-institutional relations (between economic and social needs of local and external actors) and macro-process relations (between SE platforms that play the role of moderating the economic and social world and both local communities and authorities that represent them). Supposing that those issues should be framed by a clearly defined theory which goes beyond tourism-specific concepts, we employ the Social Capital Theory because it refers to key social and economic aspects of relationships.

6. Social Capital as the Reference Point for Communities

In the context of modern democracy and dynamically changing market conditions [97], social capital is an essential reference point for actions within communities. Therefore, the Social Capital Theory seems to be the most suitable one to illustrate the dynamics of social behavior in relation to emerging social-economic phenomena, including the SE. The SCT encompasses several theoretical trends formed in the second half of the 20th century and still used today. Initially, the significance of social capital has not been spotted, it has been rather discovered gradually starting with the works of Bourdieu [16,98] who is considered to be the creator of the narrative focused on the relationships in the community. His theory of "dark" social capital mainly refers to the social inequalities caused by access to goods such as education. According to the theory, a high level of social capital (e.g., an access to education) is a rare and desirable good, while growing up in a socially recognized area provides symbolic capital suitable for social advancement, and vice versa. According to Bourdieu, social capital is reproduced in a social network [16,98], which means that it increases and stimulates

social stratification. On the other hand, Coleman disseminated the concept of social capital in scientific discourse and neutralized its negative overtones. In his considerations on social capital, Coleman [17] refers to the concept of structure, i.e., a specific map of the paths of social capital flow. According to Coleman, the actors within the structure are equipped with three types of capital: human, physical and social. The levels of these types of capital and their configuration position members of the community in the social world. Next, Putnam [18], in his understanding of social capital proposed the "bright" (positive) approach. In his view, social capital is a network of dependencies and a kind of grease that reduces tensions in a society. Putnam's recognition of social capital legalizes the inclusion of excused private resources (e.g., bonding relationships) in the market game. In line with that approach, Fukuyama [99] understands social capital as an instantiated informal norm which promotes cooperation among individuals and organizations to pursue their own interests.

Putnam makes a distinction between the bridging and bonding social capital (see Table 3). The former is intended to depressurize this capital to stimulate integration and innovation so as to lead to social inclusion (including economic inclusion) and social innovation. The bridging SC facilitates movement in various social networks, e.g., in the labor market. It also allows an access to knowledge and awareness of the possibilities of its use. The bonding SC gives a specific sense of security and social stability so it is of exclusive nature, and thus leads to social exclusion (also economic exclusion) and inhibition of innovation (see Table 3). This division is not sharp; Putnam treats the bonding and bridging social capitals as coexisting analytical categories, which makes it easier to think about social resources. Such thinking about the SC imposes more economically understandable categories, creating a place for knowledge-based economy and reflecting the dynamics of urban change (which is considered as a laboratory in this article) stimulated by the SE.

Table 3. Putnam's social capital division.

	Bridging Social Capital	Bonding Social Capital
Main function	Connects people of dissimilar backgrounds and creates larger networks	Connects people of similar backgrounds Fosters denser social networks while bridging social capital that connects people of dissimilar backgrounds Creates larger networks
Main features	Supports entrepreneurship, innovation, creativity, open attitudes Breaks existing norms of thinking and behavior	Family, strong, hermetic, stagnant homogeneous communities Enhances conformism Suppresses innovation Protects individuals in exchange for "not leaning out of line"

Source: References [18,36,100,101].

The approaches within the theory of social capital have been criticized for their ambiguity and lack of a developed "universal" measuring apparatus. Various authors synthesized theoretical approaches [102,103]. Against the background of seminal works, the researchers using SCT theory nowadays [102,104–107] refer to Putnam's findings. The division into bridging and bonding social capital is used as a conceptual grid within which social capital is studied in selected aspects [106,108–110].

The criticism of Putnam's concept refers mainly to the lack of a clear division between bridging and bounding dimensions of social capital. Haynes [111] criticizes Putnam's approach for unspecified the direction of change given as examples of the impact of social capital. This, according to Heynes, makes the study conducted through the prism of the SCT tautological, that is explaining the cause of the (social) phenomenon by using its effect. Haynes also states explicitly that social capital cannot

be measured by hard indicators. Moreover, social capital refers to both positively and negatively validated social phenomena. This means, as mentioned before, that it has a “dark” side.

The tautological balance [111] between bridging and bonding has created space for reflection on the new components of Putnam’s division. Considering this criticism, attempts were made to develop a new type of capital, i.e., linking social capital [106,107]. Linking social capital was supposed to fill the liquid space between bridging and bonding and explain the phenomena beyond Putnam’s proposal. It seems, however, that to date, no more promising approaches have been developed to cover all of the social capital issues in a way that could replace Putnam’s approach.

Despite the discussion raised by Putnam’s works, we argue that among all the presented interpretations of social capital, Putnam’s approach to social capital is the most useful framework for discussing the sustainability impacts of the SE on the urban community. Three arguments are justifying this belief. First, Putnam’s framework considers the growing complexity of the social capital network. Second, it refers to the norms and relationships that can increase the society’s efficiency by facilitating coordinated action [36]. Third, Putnam’s approach refers to the study of the level of happiness, as the latter phenomenon refers to the quality of life concept when related to life in communities.

The SCT has already been used to explain the potential of social phenomena caused by the SE [112,113]. Some work has been also done to describe the role of sharing of resources in the development of modern communities and thus strengthening social capital [105,114–118]. The SCT has also been a basis for understanding micro-processes in the labor market, as the participation in the SE is associated with increased employability [113]. These studies confirm the SCT is predisposed for SE analysis by the fact that it considers the roles of all the actors of the social world, including businesses [119].

Researchers attempt to measure social capital in specific contexts. The SCT “profiling” studies relate to the social consequences caused by the changes in the natural environment [106] and the activities of voluntary organizations [109]. Social capital has also been analyzed in the context of selected values, such as trust in public institutions [120,121] and economic well-being [110,122]. These approaches increase SCT’s explanatory potential [106,108,121] and measurability of social capital at the expense of a holistic approach to its analysis. However, they seem necessary when it comes to observing the local community.

SCT is also used as a framework for studying relationships in tourist destinations [123–126]. Such an approach refers to the destination by examining it generally at the collective level as a group of social actors and their capacity to act together towards common goals, but this approach remains highly fragmented and vaguely operationalized [103]. However, regarding our attempts to review literature, this approach has been not applied to consider the SE in relationships with social phenomena in local communities in the context of overtourism.

The bonding and bridging social capital sets two extreme equilibrium points in Putnam’s approach. Their coexistence in relation to social life, including for business, is a determinant of social consensus. However, the communities face various challenges related to the emergence of SE market practices. The expansion of the SE can be described as a relatively new challenge [127], disrupting this equilibrium, or at least changing the rules for the creation of social capital. For the assumption of Putnam’s perspective on the SCT, one can suppose that the SE can strengthen social capital. On the other hand, social capital is one of the guarantees of sustainable development [112].

7. Sharing Economy and the Sustainability of Urban Destinations: The Social Capital Theory Perspective

The literature considering the impact of the SE on sustainability of local community in the tourism context summarized in Table 2 tends to characterize the aspects of that impact as positive or negative (or supporting sustainability/unsustainability of local community). Adopting Putnam’s approach to social capital for the need of an analysis of the sustainability impacts of the SE on a local community in the context of overtourism, it is important to take a collective level approach. Thus,

there is a need for a changing of the perspective from individually or commonly experienced changes within neighborhoods to a more general view which excludes interpretations of the impacts in the positive/negative category. Thus, the distinction used in the Table 2 between favoring sustainability and favoring unsustainability impacts must be translated into the SCT conceptual language and transformed into the division between the bridging and bonding social capital. Taking the perspective of the SCT needs a reference to the valence of the impact. As a neutral heuristic construct, social capital cannot be considered as being positive or negative. As the distinction between the bonding and bridging social capitals is not sharp, the coexistence of both is assumed. Thus, an increase in the overall cost of living was considered to be negative as an example, thereby providing an increasingly unsustainable impact of the SE on a community (Table 2). From the SCT perspective, this outcome should be considered as referring to the bonding social capital, independently from its valency. The outcome of such capital can be related to closing communities and suppressing innovation, which cannot be distinctly considered as being purely negative or positive. In this way, we refer to the SCT in a fashion similar to Rodriguez-Giron and Vanneste [104] who perceives it as “a heuristic tool to study a destination as a group of actors trying to act together, with its positive and negative aspects” (p.5).

The identification of the SE impacts exhibited in Table 2 relates to all the impacts which have been identified in the studies qualified to the selected systematic literature review as an internally undifferentiated group (except sustainability dimension criterium). They are the impacts which are experienced by residents in the consecutive stages of the process of the SE’s expansion in the community. For example, disturbance induced by renovations of apartments and evictions can be experienced at the same time as an increase in job opportunities, cultural learning and unfair competition felt by traditional accommodation entrepreneurs. Eventually, a loss of identity and local culture are the final results. Some issues, like the quality of formal regulation and governing towards the SE, can change over time. We are aware of this process as presented by Stergiou and Farmaki [28], but we do not include it in social capital perspective.

The distinction between two dimensions of social capital induces the need to differentiate between the extent of experiencing each one by the members of a community. Social capital is not an individual property and its potential for sustainability does not lie in the hands of single actors. Thus, it has to be considered from the perspective of a local community [17]. For example, the community’s sentiment could be different among the tenants playing the role of hosts in a new sharing community.

Classifying the impact of the SE on social capital within a community with a distinction between the bonding and bridging forms of social capital leads to generation of the framework presented in Table 4. In comparison to Table 2, many impacts have been consolidated and reformulated to suit the SCT conceptual framework. The left upper column includes the SE as supporting higher entrepreneurship, innovation, creativity, open attitudes, breaking existing norms of thinking and affecting behavior in communities. That impact might be assessed as both positive and negative, depending on the understanding of the community. The upper right column includes the SE as supporting strong, homogenous communities, tending to provide protection in exchange for ‘not leaning out of line’. That impact might be assessed as only being negative for a community, regardless of alternative perceptions.

Nevertheless, many impacts could be categorized in both dimensions of the capital, which is a more significant consequence. Thus, a much wider discussion is needed on how or towards whom the bridging and bonding function of social capital should be interpreted. More authentic interactions between residents and tourists, loss of identity or displacement of low-income or frustrated residents are good ground for this research. Both impacts are induced by the SE expansion. Interactions can be experienced as authentic only by apartment owners being a part of the SE community. Loss of identity in one group could mean a new identity in other groups. Evictions are caused by the SE expansion (enhancing bridging capital), but experienced within a traditional community (referring to bonding capital), since social capital is a two-sided coin concept.

Table 4. The impact of the SE on social capital within a community.

Referring to bridging social capital	Referring to bonding social capital
A stronger and more diverse local economy and culture	Increase in the overall cost of living
Extended use of local offers and infrastructure	Decrease in affordable housing
Greater liveability	Shrinking local community in the area
Increasing employment and entrepreneurship	Depopulation of buildings
A more innovative community; emergence of SE-related services	Decrease in sense of safety
Empowering of women in community	Decline in community well-being
Increase in value of the local real-estate market	Impairment of community health
Fostering community pride	Social unrest
Increase in tourism spending and municipal revenues	Loss of the sense of community
Raise of gray accommodation market and tax evasion	Loss of identity and local culture
Ungoverned informal economy	Social segregation in residential areas
Emerging of loopholes in the law and regulations	Colonization of the lived spaces of urban housing
Unfair competition in the local market	‘Drag effect’ in local estate market related to spatial concentration of short-term rentals
Decrease in revenues for traditional accommodation businesses	The influx of low-cost tourists with limited spending power
Commodification of private and public assets and space	
Increasing cultural exchange and cultural learning	
Referring to the sharing platform-modified social capital	
	Higher incomes for owners renting their properties
Improvements in residential units	New socio-spatial relations restricting residents and traditional stakeholders
	Social segregation in residential areas
	Increasing sense of authentic interactions
	Racial disadvantages
	New identity and local culture
	Increasing cultural exchange and cultural learning
	Fostering of local entrepreneurship and small businesses
	Colonization of the lived spaces of urban housing
	Greater destination loyalty of tourists
	Erosion of workers’ rights
	Decline in community well-being referring to reputational system of sharing economy platforms
	Moral issues related to impacts on tourists
	Increase in precarious jobs and casualization of labor with no social security coverage
	External control of local housing/tourist market by the SE platform owners
	Money transferred by sharing platforms outside local economic systems

Source: own elaboration; based on Table 2.

The majority of the SE impacts which were classified as favoring sustainability refers to the bridging side of social capital. However, the inclusive capital is connected with the impacts acknowledged as being disruptive. They are all of economic origin and are related to a new form of business relationships which have been triggered by the SE. The new rules of competition, under regulated areas of social activity and commodification of space are major examples of this disruption. On the other hand, the bonding function of the social capital comprises only the SE impacts, which were acknowledged to favor reduced sustainability. The majority of them are in the social and environmental domain.

The division between the bridging and bonding social capital also evokes impacts assigned to the SE community only, but have a typical bonding characteristic within the new community, thereby sharing a platform-modified area of social capital within local communities affected by overtourism. Higher incomes and social segregation in residential areas on the one hand, and racial disadvantages and external control of local housing market by the SE platform owners on the other hand are good examples of this. The former examples strengthen exclusiveness externally, while the latter are experienced only within the members of this group, which strengthens the group’s internal consistency. In this setting, the bonding social capital becomes more inclusive as hosts are colonizing the common

lived spaces of housing buildings and commodifying it as the resources used in sharing business. Moreover, the bridging capital becomes more exclusive, which means that it requires participation in sharing economy platforms as well as knowledge and ability to participate in business in accordance with the SE's community rules.

In this realm, the SE platforms become the moderators of the emerged sharing platforms-modified social capital (see the lower part of Table 4). This new configuration of social capital can occur due to the factors stimulated by the SE. Some indicators of this configuration of social capital can be distinguished as:

- informational driven (ICT-platform-based/driven)—driven by strictly-regulated platform principles and rules; the local norms are excluded or indirectly involved—which is disruptive towards local norms, regulations and culture;
- driven by a global, spatial-free community based on technological environment impacting local socio-spatial environments;
- micro-focused (the accommodation item, i.e., room or apartment is a basic element of sharing and competition, not the accommodation facility);
- non-hierarchical, but centrally-regulated by the platform owner;
- creating the sense of community within platform users as a driver of social activities and their outcomes;
- shared expectations and attitudes towards the local community are framed by information provided by and on sharing platform;
- driven by trust towards sharing a platform's users and platform control mechanism; relationships based on digitalized interactions;
- reciprocity confined within a sharing platform community alongside a limited engagement in community building.

Some characteristics of more general nature specific to this configuration of social capital can also be distinguished, such as: an orientation towards the future; heterogeneity (diversity); enhanced susceptibility to a fast and frequent transformation (and an ability to a complete transmutation at times); choice selectivity of city development goals and spheres as far as interests are concerned; a tendency towards a strong teleological, i.e., purposeful, orientation of social participation (undertook activities); or a powerfully stimulating influence on the development of the so-called citizen journalism. A similar proposition to extend Putnam's concept of bonding and bridging social capital when analyzing tourist destination can also be found in the work of Rodriguez-Giron and Vanneste [103]. They suggest introducing a linking social capital which points to vertical social ties among actors who control key resources. Interpreting this concept in the shadow of the SE, this capital refers mainly to sharing platforms, which links it to our concept of sharing platforms–modified social capital.

As the concept of sharing platforms–modified social capital is of a viewpoint character, its empirical identification could be challenging while considering both the difficulties occurring in the attempts of verification of social capital concepts and the difficulties associated with the tourism research obtained from an interdisciplinary and multifaceted analysis of this phenomenon. One of the most relevant problems could certainly be the fact that the identification and analysis of the relations taking place among the examined phenomena, i.e., the SE, sustainability, social capital and overtourism, is often challenging and that this identification and analysis could be possible only in the medium-term or even the long-term. For that reason, the matrix exhibited in Figure 1 could be a useful tool for such analyses.

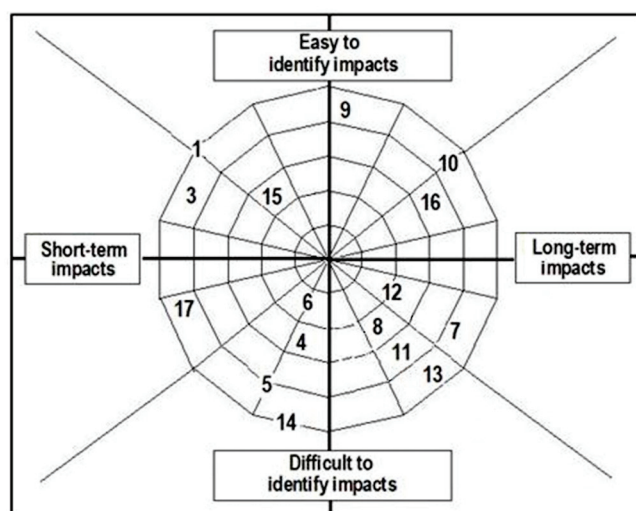


Figure 1. Matrix for identifying and analyzing the impact of the SE on social capital of urban destinations. **Legend:** 1 Higher incomes of owners renting their properties; 2 Improvements in residential units; 3 New socio-spatial relations restricting residents and traditional stakeholders; 4 Social segregation in residential areas; 5 Increasing sense of authentic interactions; 6 Racial disadvantages; 7 New identity and local culture; 8 Increasing cultural exchange and cultural learning; 9 Fostering of local entrepreneurship and small businesses; 10 Colonization of the lived spaces of urban housing; 11 Greater destination loyalty of tourists; 12 Erosion of workers' rights; 13 Decline in community well-being referring to reputational system of sharing economy platforms; 14 Moral issues related to impacts on tourists; 15 Increase in precarious jobs and casualization of labor with no social security coverage; 16 External control of local housing/tourist market by the SE platform owners; 17 Money transferred by sharing platforms outside local economic system.

Figure 1 exhibits all the most relevant manifestations of the sharing economy impact identified and shown in Table 4 as a new configuration of social capital. For example, higher incomes earned by the hosts (impact 1) could be identified almost immediately and without using complex research tools, while a decline in community well-being (impact 13) and formation of a new identity and local culture (impact 7) could be a complex and long-term challenge. Moreover, although transferring a portion of revenues generated by short-term rentals outside the local economic system (impact 17) occurs during the time of booking by users, its size can be difficult to estimate. On the other hand, studying the impact of colonization of the lived spaces of urban housing by the SE (impact 10) could be possible only in the long-term. Thus, the use of the matrix allows us to include the complexity of the analyzed phenomena and to refer to them in a relatively uncomplicated way, with no necessity to evaluate them (according to the culturalist perspective). Moreover, it facilitates the choice of appropriate methods, techniques and research procedures including, depending on a scale of possibilities of scientific recognition and probable time of occurrence, virtually all the potential sharing economy impacts on social capital and the sustainable development of cities in the context of overtourism.

8. Conclusions

As a relatively young and controversial phenomenon, principally caused by the recent digital transformation, the SE generates new factors which influence the sustainable development of local communities [128]. In this viewpoint article, we have considered the impact of the sharing economy on sustainability from the perspective of urban communities. We have presented overtourism as resulting from, collating or contributing to the sharing economy. We have also reflected upon the discussion, present in the literature, on a positive and negative impact of the SE on the environmental, economic and social aspects of the urban community in the tourism context. The picture that results from this discussion is fragmented and vague, so the need to find a new theoretical viewpoint has been pointed

out. Therefore, this article suggests that SCT is the framework allowing new insight into discussion on the impact of the SE on urban communities. It transfers the evaluative character of discussion to more general dimensions of bonding and bridging character of dynamically changing conditions of actions within communities. This article leads to conclusions on the bonds between SE, social platforms and sustainability of urban communities, which we present as a conceptual model. Then, we move to the conclusions on the key relationships assumed by this model. They refer to the influence of SE on social capital and the influence of social capital on sustainability in the context of overtourism in urban communities. In this way, the article refers to Dredge and Gyimothy’s [19] call to show the broader impacts of the SE on local and regional economies and communities.

By an introduction of the SCT approach, this article implies an initial framework that extends understanding of the impact of the SE on sustainability. Thus, it presents a more colourful but also more organized picture of the changes that take place at the junction of new ways of doing business imposed by sharing platforms and local communities affected by the emergence of these activities. The designation of bridging and bonding social capital shows the way the SE influences a local community. In the traditional concept of the social capital, the community—regardless of whether it is a district community or a neighborhood one—emanates bonding capital within which all the residents know or are familiar with each other. The SE community members—the so-called peers, i.e., hosts and guests—produce and transmit bridging social capital through a short-term rental disseminated by the SE platforms. Both greater liveability of the neighborhoods and unfair competition in the local market are the impacts referring to inclusive social capital. The same phenomenon is associated with consumers (potential peers, i.e., hosts and guests) who do not use existing solutions but have the awareness and tools necessary for applying them. Adopting the social capital theory to study the impact of the sharing economy on local communities in the overtourism context allowed us to construct a conceptual model which illustrates the relations among the most crucial elements in the complex process of the SE impact on the sustainable development of communities in city destinations affected by overtourism (see Figure 2).

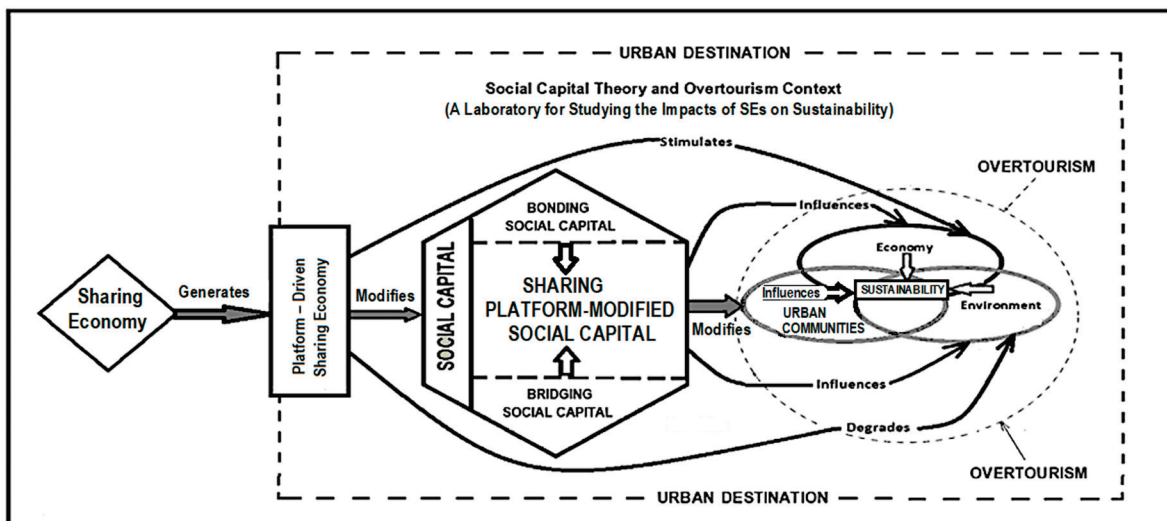


Figure 2. A model for studying the impact of the SE on the sustainability of urban destinations affected by overtourism. **Source:** Own elaboration.

The model presents the SE as an initiating factor—generated and distributed through sharing platforms focusing in the accommodation sector—which influence urban destinations by modifying social capital. Additionally, the SE directly influences the other dimension of a destination’s development by stimulating the economy and degrading the environment, as is exhibited on Table 2. Nevertheless, the model focuses on changes in the social sphere within local communities and

sustainability in urban destination experiencing overtourism. Overtourism is the context, not the main subject of our analysis. Social capital is the central element of the model. Being under the influence of the SE, it undergoes significant modifications and also causes changes in the last element of the model (right side of Figure 2), i.e., sustainable development of the destination. The modifications apply to bonding and bridging categories of social capital, sharpening their most significant features, discussed in Table 4 and Figure 1. Thus, a new configuration of social capital emerges, i.e., sharing platform-modified social capital. It reveals some features partly taken over from both function of social capital identified by Putnam; however, the configuration is profoundly transformative. The process of changes in social capital is identified by the arrows and the dashed lines indicating the direction of flow and the scope of the process of shaping a new configuration of social capital. Over time, this capital may become dominant, modifying the entire system of sustainable urban development. Its impact does not only concern the community, but also other components of sustainable development, i.e., the economy and the environment.

The gradual transformation of the elements of the bonding-type capital into the bridging-type capital is associated with the expanding network of social relations due to the development of sharing economy. Conversely, the transformation of some aspects of the bridging-type capital into the bonding-type capital occurs mostly due to adverse changes in the city residents' quality of living incurred by the sharing economy. These processes result in the growing number of the reconfigured elements, while the most significant impact force lies in the bridging function of social capital. However, this force is not strong enough in the confrontation with the bonding-type capital to ultimately transmute one form of capital into the other. This leads to a situation where the new elements appear and come to gain significance.

The SCT view which we introduce to the discussion on the SE impact on local communities leads to certain conclusions in the field of sustainability. We assume that both bonding and bridging social capital—as coexisting in social life—are favorable for the sustainability of local communities, as they are in constant pursuit of mutual balance. For urban communities, all of the forms of social capital are required to support collective actions that might transfer to perceived short-term sustainability as well as to unsustainability. In the long-term view to which sustainable development finally refers, this 'game of balance' between two types of social capital should be perceived as an representation of sustainability. Tourism is associated with the influx of tourists, so the development of the SE enriches the social capital of the destination with the elements characteristic of the bridging social capital. The social capital enrichment is deep, especially in the spheres of the development of the community, entrepreneurship and openness to the world as well as the resulting advantages (economic, social, cultural, referring to the social modernization, etc.). At the same time, the bonding capital grows in the communities affected by overtourism under the influence of the sharing economy. Its growth manifests itself in undertaking various actions which integrate local communities by generating (or enhancing) activities to protect their interests and the quality of living that is endangered due to the SE's effects. Thus, we can conclude that in both cases, we deal with the accumulation of the social capital induced by the sharing economy in the context of overtourism.

The link between the sharing platform-modified social capital and urban communities in the context of overtourism is multidirectional. On the one hand, the SE itself affects the residents' quality of living and the environment negatively, as it changes the equilibrium between the bridging and bonding capital. The new configuration of social capital might favor unsustainability, as it is not balanced by any of these two traditional types of capital. It manifests itself in a reputation system imposed by the sharing economy platform to trigger and strengthen new binary host-guest relation, at the same time 'bracketing out' other tenants and creating new disruptive geographies [33]. In this sense, an 'exclusive face' of this new social capital affects the traditional bonding capital (as shown in Table 4). However, the relationship between them does not refer to balance but rather to confrontation. This explains the negative resident perceptions and attitudes towards the SE and the unsustainability discussion of this phenomenon.

On the other hand, the sharing platform-modified social capital helps to establish the network and continuously growing social relations resulting from a growing influx of tourists and the activity of the institutions engaged in providing them with various services. Also, it brings about changes in social capital, re-uniting local communities around the protests against the negative changes it causes to their standard of living. In effect, alongside its negative impact on environment, we have to deal with the advantageous changes in two other spheres which make up sustainable development, which are society and the economy. Thus, the sharing platform-modified social capital refers not only to a certain (and moderately fixed) set of characteristics of the traditionally perceived social capital but also to the level of its saturation. It can manifest itself in openness to new ideas, higher networking of social and economic structures, an increase in entrepreneurship and a readiness to develop new business models. The new balance, and thus new exclusivity, changes the conditions of the market game. It allows and involves actors who do not exist as part of traditionally understood exclusivity. This phenomenon can be compared to a sea wave, which in a diffuse, but a successive way models the shape of the coast regardless of the assumptions of its hosts. Virtual platforms are here a new kind of a market player which, although physically inaccessible in space (like a hotel reception), sets the rules of a market game that not all the current players are aware of. In effect, we deal with the modification of the configuration of the basic elements which make up the categories of the generally conceived social capital and also—in many cases—with its new elements.

Regarding the Putnam approach to bonding social capital as important for survival and bridging social capital as being good for making progress [129], we can state that sharing platform-modified social capital is particularly crucial to ‘make progress’ in this very relevant branch of the sustainable development of tourist cities. At the same time, however, that capital is explicitly negative for destinations, at least concerning social and environmental sustainability. In the case of the economic aspect, the issue is more complex, yet the opinions of a negative impact can also prevail (as exhibited in Table 2), particularly in the long-term. As social capital cannot be considered selectively, concerning one community or spatial area, the impact of the SE should not be considered in these terms either. Thus, even if the SE leads to some local unsustainability, e.g., in the form of overtourism, it cannot be generalized because in a broader business landscape, sustainability may increase at the same time. However, the evaluation of this impact should include whether the social capital is treated in an autotelic or instrumental way at a given moment [130], as well as which of these two functions is regarded to be the dominating one. This is strongly emphasized by Coleman [17] in his functionalist approach and integral vision of the social realm. Schindler [130] adds that for a given situation, one can decide which function the social realm has and which elements of a social structure appear relevant, whether they serve or do harm, or whether they are neutral for a community. The article is in line with another of Schindler’s opinions that it is not the amount of social capital that counts, but its specific local features and the way it is used: to what extent it serves the communities which generate it and to what extent it is instrumentalized even contrary to their interests [130]. Thus, a question appears: to what extent can entities use social capital from a local community in a way which is not necessarily compatible with a community’s interests?

Summing up, this article contributes to the discussion on sustainability of SE by adopting the SCT framework to explain its role and extent of impact on local communities in relation to overtourism syndrome. As the tourism industry is one of several spheres where the SE is diffusing, the study’s results can be helpful for understanding the way that SE influences social capital and contributes to sustainability within urban communities. Following this approach, this article contributes to the discussion on overtourism by focusing on the relations between the SE and local communities, instead of only identifying the effects of the SE. Thus, it provides the new conceptual framework for studying the implications resulting from overtourism, which is in line of suggestions of Koens et al.’s [26] and Dodds and Butler’s [74] calls for more in-depth insight into both SE sustainability and overtourism. Moreover, it supports Rodriguez-Giron and Vanneste’s [103] suggestions that SCT may be helpful

in understanding the gap between intentions and efforts, as well as what can contribute to the improvement of a destination's ability to handle the impact of SE in more sustainable ways.

This article also contributes to discussion on social tensions that manifest themselves in the phenomenon of overtourism. The 'sharing effect' takes place in the sphere of accommodation host–neighbor relationships, i.e., business activities of flats/homes owners, the consequences of these activities for other tenants and their mutual inter-reactions. The tourist effect refers to the fact the accommodation is rented by tourists who are culturally-distant and use them for a short term and for leisure purposes, and therefore it is based on the interactions among them and other members of the neighborhood. Thus, medium-term problems arise (the long-term issues could not be observed yet) which affect local communities in many ways [26,27,74,92]. Applying Putnam's approach to the SCT, we can explain the role of the SE in the rise and growth of overtourism in urban communities as a gate through which the new configuration of social capital flows and emerges in a traditional community, enhancing the bridging side of social capital but confronting its bonding side. Overtourism, as a negatively assessed and perceived but short-term phenomenon, is fueled by the new configuration of social capital introduced by the SE in local communities. The dynamics of the violent growth of the SE in urban communities highlights the unsustainable sharing platform-driven social capital and pushes its inclusiveness to the background, causing the calls for laws and regulations [21,32,39,51].

The picture of the relations among analyzed phenomena and their effects is largely simplified, as the research in this field is still rare and underdeveloped. Similarly, our considerations have limitations resulting from the fact that they were based on a literature review and the area of the SE limited to the accommodation sector, although it certainly affects the overtourism to the most significant extent. Additionally, only the English-language studies indexed in the Web of Science and Scopus databases were selected for the systematic analysis. It can be expected that the research conducted in other countries and published in other languages could enrich the material and thus affect the cognitive and explanatory values of this work in a positive way.

This study puts forward several suggestions for further studies. To name a few, we start with sharpening of the discussion about what contemporary bridging and bonding SC becomes under the influence of SE in the area of tourism. Identification of the interplay between bridging, bonding and the new configuration of social capital affected by SE is sets the next issue that awaits identification. Having this in mind, we recommend further studies on the mechanisms and effects of the sharing economy and overtourism on the sustainable development of destinations and their communities using the concept of sharing platform-modified social capital and the matrix for identifying and analyzing the impact of the SE on the social capital of urban destinations. Understanding the factors that moderate generation of new configurations of social capital could be beneficial for academic and practical discussion. Finally, in the context of overtourism, studies could focus on finding ways of improving a destination's social capital-related capacity to self-determine its development path when it is affected by SE. As this article is strictly of a theoretical nature—which is its main limitation—the arguments and conclusions should be verified empirically by studying the impact of the SE on a selected community affected by overtourism. Analysis of the impact of the SE on the sustainability of a urban community using Putnam's approach of SCT in other sectors of the tourism industry and other spheres of social activity is also suggested.

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Appendix A

Table A1. Theoretical/Conceptual frameworks utilized in studies on the sharing economy in (over)tourism context.

Study	Main Purpose	Main Focus *	Theoretical Framework	Methods
Martín, Martínez, and Fernández, 2018 [3]	Measures residents' attitudes towards tourism and its impact	OT	Social Exchange Theory	Empirical research; qualitative and quantitative approach; semi-structured face to face interviews; telephone survey; Barcelona case study
Mody, Suess, and Dogru, 2019 [38]	Examines the residents' attitude (perception and support/lack of support) towards Airbnb	SE	Social Exchange Theory	Empirical research; quantitative study; An online survey among USA residents
Gutiérrez-Taño, Garau-Vadell, and Díaz-Armas, 2019 [2]	Examines residents' perception of the impacts of the P2P accommodation and their attitudes towards it and support	SE	Social Exchange Theory	Empirical research; Quantitative study; questionnaire survey; Majorca case study
Stergiou and Farmaki, 2019 [28]	Examines resident perceptions regarding the impact of P2P accommodation growth, and specifically Airbnb, on their neighborhoods	SE	Social Exchange Theory	Empirical research; Qualitative approach; semi-structured in-depth interviews; Athens case study
Martín-Martín, Ostos-Rey, and Salinas-Fernández, 2019 [32]	Analyzes the positive and negative aspects of unregulated new markets in order to pinpoint a solution to the problems that those markets have to face	SE	Social Exchange Theory; Neoclassical economics	Theoretical approach; desk research
der Heidt, Muschter, Caldicott, and Che, 2019 [31]	Explores the perception of key informants on the impacts of Airbnb on the local community, as well as possible solutions to the problems	SE	Social Representation Theory	Empirical research; Qualitative approach; semi-structured in-depth interviews; Byron (Australia) case study
Valdivielso and Moranta, 2019 [42]	Analyzes the debate around tourism edgrowth in Balearic Islands	OT	Tourism degrowth concepts	Desk research; critical discourse analysis
Namberger, Jackisch, Schmude, and Karl, 2019 [4]	Investigates residents' perceptions, their feelings and reactions to tourism development	OT	Social carrying capacity concept	Empirical research; quantitative study; a self-administered, door-to-door household survey; Munich case study
Pinke-Sziva, Smith, Sziva, and Olt, and Berezvai 2019 [30]	Analyzes the phenomenon of overtourism with specific reference to the night-time economy	OT	Own framework design	Mapping, observation, interviews and questionnaires with local residents, visitors and tourists; Budapest case study
Gössling and Hall, 2019 [20]	Conceptualizes the sharing economy in accommodation sector in comparison to the wider collaborative economy, and discusses its social, economic, environmental, and political impacts in comparison to the sustainable development goals	SE	United Nations' Sustainable Development Goals framework	Desk research; literature review; discourse analysis
Postma and Schmuecker, 2017 [45]	Assesses causes of fields of conflicts between residents and tourists and their impact	UT	Own framework design	Desk research; Hamburg case study
Garcia-Ayllon, 2018 [25]	Analyzes urban transformation associated with Airbnb growth	SE	Own framework design	GIS spatiotemporal indicators; Madrid, Barcelona, and Palma de Mallorca case studies

Table A1. Cont.

Study	Main Purpose	Main Focus *	Theoretical Framework	Methods
Stabrowski, 2017 [33]	Examines the material and discursive practices through which Airbnb has produced new social relations of domestic property	SE	Production of space concept; performativity in economics concept	Desk research; critical examination of the discourses and practices of Airbnb in the popular media, courts of law and public hearings; New York case study
Szromek, Kruczek, and Walas, 2020 [97]	Measures residents' attitudes towards tourism development	OT	Irridex model; Tourism Area Life Cycle	Quantitative approach; questionnaire survey
Cheng, 2016 [1]	Provides an objective, systematic and holistic review of the SE literature to uncover the theoretical foundations and key themes underlying the field	SE	Not applicable	Systematic literature review using co-citation analysis and content analysis
Agyeiwaah, 2019 [24]	Theoretically explores the nexus between over-tourism and sustainable consumption in cities, highlighting governments' inevitable role in this successful convergence	OT	Not applicable	Selective systematic literature review; Macau (China) case study

* OT—overtourism, SE—sharing economy, UT—urban tourism.

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Article

Assessment of the Overtourism Phenomenon Risk in Tunisia in Relation to the Tourism Area Life Cycle Concept

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Abstract: Tunisia is a destination where organised mass tourism has prevailed since 1985. This trend is still being observed, despite the unstable geopolitical situation in North Africa. Current reports from booking portals indicate that this country will be one of the most popular tourist destinations in 2020. Therefore, the aim of the study was to determine the prospects for sustainable development in Tunisia in 2020–2025 as means to prevent the negative effects of overtourism. The research was conducted in three stages: (1) analysis of the phases of tourism development in Tunisia from 1960 to 2019 in relation to the Tourism Area Life Cycle concept, (2) identification of the destination’s evolution in 2015–2019 with the method of trend function exploration, and (3) an attempt to assess the risk of overtourism in Tunisia in light of Tourism Carrying Capacity on the basis of the Tourism Intensity Index and Tourism Density index. The study results revealed three phases of development in Tunisia, i.e. exploration, involvement, and development. The verification of the trend function indicated that Tunisia would enter the consolidation phase in 2020. The highest risk of overtourism is estimated for three governorates—Tunis, Sousse, and Monastir.

Keywords: tourism area life cycle model; tourism carrying capacity; tourism intensity index; tourism density index; overtourism

1. Introduction

Tunisia, which is regarded as a “3S” destination, has been one of the most popular destinations for years chosen by international tourists due to its diverse tourist offerings. Tourism services and investments not only generate jobs, but also influence regional and local development.

In every area, tourism, like most types of economic activity, is associated with measurable profits and losses that should be assessed. An important element is the available area and other features of the region as well as their response to tourist traffic. When “the impact of tourism on a destination or parts thereof excessively influences perceived quality of life of citizens and/or quality of visitors’ experiences in a negative way”, the phenomenon can be referred to as overtourism [1]. As formulated by Peeters et al. [2], “overtourism describes a situation in which the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds”. As emphasised by Dodds and Butler [3], this is a new term for an old problem, i.e. the presence of an excessive number of tourists in a certain area, which may exert a negative impact on the place. The literature on this issue has been reviewed by Dodds and Butler [4], Milano et al. [5] and Kruczek [6].

The phenomenon of overtourism has been documented primarily in urban areas (e.g., Kraków, Poland—Kruczek [7]) and in protected areas, especially in national parks (e.g., Cinque Terre National Park, Italy—Faccini et al. [8]), on coasts (e.g., Maya Bay—Phi Phi Leh, Thailand—Dodds [9]), on entire

islands (e.g., Mallorca, Spain—Garcia and Servera [10]), and in rural areas (e.g., Bled, Slovenia—Mihalič et al. [11]). However, the problem has been assessed with different methods so far, including qualitative, e.g., Koens et al. [12], and quantitative methods based on the tourism carrying capacity model, e.g., Bertocchi et al. [13]. A review study of overtourism in as many as 41 countries (the selection was based on a set of criteria including one case per EU country, an even distribution over the four types of destinations—rural, urban, coastal and islands, heritage and attractions, and 12 iconic non-EU destinations) was conducted by Peeters et al. [2], who proposed a conceptual model of this phenomenon. The importance of studies conducted by Manera and Valle [14] who carried out a comparative analysis of the overtourism phenomenon in all countries of the world, should be emphasised as well.

The overtourism phenomenon in an area requires an immediate response from entities involved in tourism. This activity is usually strongly associated with the concept of sustainable tourism. It ensures the use of geographical environment resources in such a way that future generations may benefit from them. Therefore, overcrowding of the tourist areas or damage to their natural, cultural, recreational, and specialist assets should be prevented. It is essential that the touristic area does not become a tourist slum or lose its tourist function completely [15]. It is therefore important to determine the current stage of tourism development in a destination and to plan its further development.

The tourism planning process is gradual; it is characterised by continuity and comprehensiveness and focuses on achievement of sustainable development [16]. Its goal is to generate income and jobs on one hand and to protect resources ensuring tourist satisfaction on the other [17]. The space planning process for the needs of tourism development in compliance with the concept of sustainable development is becoming increasingly important in view of long-term prospect and attempts to maintain harmony between the natural environment, local community, and economic development. It is highly important that the Tourism Carrying Capacity should be defined in this process [2,14,18]. Excessive concentration of tourist traffic in a given area not only leads to overcrowding in attractive sites, but also reduces the level of aesthetic sensations experienced by tourists and results in natural environment degradation [7].

The concept of carrying capacity in tourism originates in the 1960s [19,20], although the problem (carrying capacity) was mentioned for the first time in 1936 [21]. Many definitions of the tourism carrying capacity (TCC) have been proposed e.g., [22], but the most comprehensive one has been formulated by the World Tourism Organization [23], i.e. tourism carrying capacity is “the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors’ satisfaction”. The definition of the tourism carrying capacity concept gave rise to the search for a method to calculate an indicator [14] that facilitates determination of threshold values as the key factor for sustainability and preserve environment’s good condition [24].

Studies on this problem in Tunisia (e.g., [25,26]) emphasised the need to plan sustainable tourism development in this country. This is associated with the documented problems in sustenance/preservation of natural resources, especially in the coastal zone (e.g., [27,28]). However, the phenomenon of overtourism was not documented. One of the recent studies highlighting this phenomenon [14] has demonstrated that Tunisia belongs to the group of countries with a moderate value of the tourism intensity index (422—mean value calculated for 1995–2015). This is important, as many reports based on data from booking portals [29,30] show that this country will be one of the most popular tourist destinations in 2020. The number of bookings made in this country by British people alone has increased by as much as 96.1% [29].

The main aim of the study is to assess the risk of overtourism in Tunisia based on the allowable volume of tourist traffic. The assessment is supported by analysis of three specific issues: (1) phases of tourism development in relation to the tourism area life cycle model with identification of the current tourism phase in this country (2) determination of the tourism carrying capacity for each governorate with using selected indicators, and (3) identification of governorates that are most exposed to overtourism risk and possibilities to prevent this phenomenon.

2. Materials and Methods

The assessment of the risk of overtourism in the analysed area is a complex issue. Therefore, it was divided into three basic stages: diagnosis, prognosis, and assessment of the overtourism risk (Figure 1).

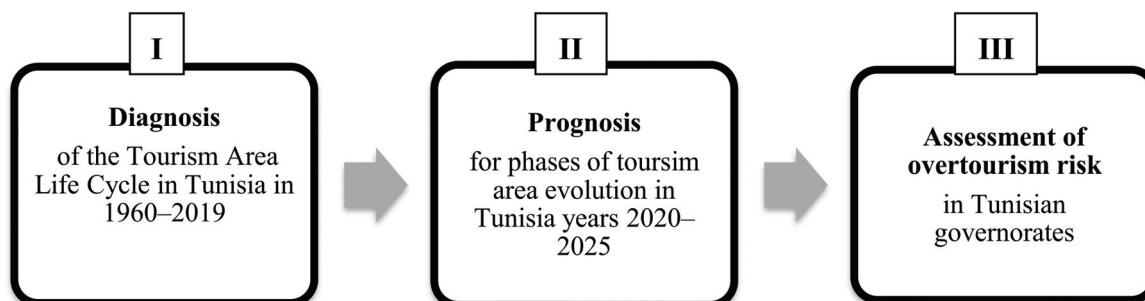


Figure 1. Scheme of the research design. Source: own study.

The first stage of the study (Figure 1) consisted of data analysis and phases identification for tourism development in Tunisia vs. the concept of the tourism area life cycle (TALC) [31], taking into account the diagnosis of the tourist area definition proposed by Alejziak [32]. The TALC model assumes that there are seven phases of tourist area evolution: exploration, involvement, development, consolidation, stagnation, decline, or rejuvenation. Although it originates from the concept of the tourist product cycle, the model can be suitable for analysis of a “3S” destination, such as Tunisia, as a recreational area (in the subtropical and tropical climate zone). As distinguished by Rak, Pstrocka-Rak [33], this destination is included in the group of two-generation tourist reception areas (the first generation—tourists arriving by rail during the tourist centers heyday in the 19th century, the second one—tourists arriving by plane in the second half of the 20th century). The TALC model facilitates determination of the relationship of an increase in the number of tourists and hotel beds with the number of residents over a specified time [34]. The identification of the development phases in Tunisia as a tourist reception area using the TALC model in 1960–2019 included the number of international tourists, and the number of hotel beds.

The second stage of the research (Figure 1) consisted of an attempt to determine the evolution phase in Tunisia in 2020–2025 using the trend function exploration method. The method facilitates the prediction of the tourist traffic volume should trends towards development and unintended fluctuations in time series occur [35]. This stage was focused on establishment of a hypothetical but most likely scenario for the future tourist traffic.

The choice of the analytical model, i.e. the trend function (linear, logarithmic, power, exponential, and polynomial) was based on calculated values of the determination coefficient (R-squared) for 2015–2019 for the following variables: the number of international tourists, the number of hotel beds, and the number of residents. The coefficient shows how some changes in the dependent variable are explained by changes in the explanatory variable. This facilitates assessing which of the analysed models is well fitted [36] (p. 209). The prognosis for the evolution of Tunisia as a tourist destination was based on a trend line analysis.

The third stage of the study (Figure 1) was an attempt to assess the risk of overtourism in the governorates of Tunisia. In the literature, the pre-evaluation stage consists of the tourism carrying capacity determination [2,14], which is usually measured with the two most frequently used indicators—the tourism intensity index (TII) and tourism density (TD) (Figure 2).

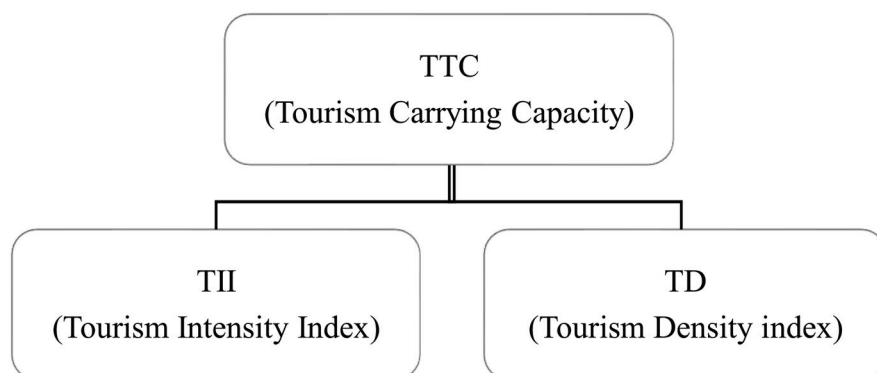


Figure 2. Tourism Carrying Capacity model in view of overtourism. Source: Own analysis based on Manera and Valle [14], Peeters et al. [2].

Different variables are used for these indicators in the literature. For example, Manera and Valle [14] used the following variables to calculate TII: the number of tourists, population, tourism revenue, gross domestic product (GDP) for a specific country, and GDP for the world, whereas TD in a given country was defined as the number of tourists per km². In turn, Peeters et al. [2] used two variables, i.e. bed-nights and inhabitants, for calculation of TII and bed-nights per km² for TD. In the present study, the definitions and classification of TII and TD follow those proposed by Peeters et al. [2]. The variables proposed by these authors are best suited to the analysis of Tunisian administrative units.

The tourism intensity index (TII) is the ratio of nights spent at tourist accommodation establishments relative to the total resident population of the area:

$$\frac{\text{bed - nights}}{\text{inhabitants}} \text{ TII} = \text{bed - nights/inhabitants}$$

The Tourism Density index (TD) is defined as the annual number of bed-nights per km²:

$$\frac{\text{bed - nights}}{\text{km}^2} \text{ TD} = \text{bed - nights/km}^2$$

Next, for governorates classified at the high and highest risk of the overtourism phenomenon according to the TII and TD indicators (Table 1), we formulated recommendations for the further use of their tourist potential and the possibility to divert tourist traffic to the lowest risk or low risk areas.

Table 1. Classification of the overtourism risk based on the tourism intensity index and tourism density index.

Indicator Values		Degree of Risk	Interpretation of Risk
Tourism Intensity Index	Tourism Density		
<407	<3.18	1	Lowest risk
407.1–719	3.18–4.49	2	Low risk
719.1–1174	4.50–6.30	3	Medium risk
1174.1–2278	6.31–9.58	4	High
>2278	>9.58	5	Highest risk

Source: Own analysis based on Peeters et al. [2], Eurostat [37], Peeters [38], World Bank Group [39].

The study involves secondary data sources usage. In the first stage (preparation of the TALC model), data from 1960–2019 were analysed. The figures were provided by two sources: (1) the Institut National de la Statistique (INS) [40]—the “number of hotel beds” variable and (2) the Office National du

Turisme Tunisien (ONTT) [41]—the “number of international tourists” variable (information obtained in person).

The second stage of the study (prognosis for the next phase of Tunisia evolution as a tourist area) was based on two data sources as well: 1) the Office National du Tourisme Tunisien [41]—the “number of international tourists in 2005–2019” variable (information obtained in person) and the Institut National de la Statistique [40,42,43]—the “number of hotel beds and number of residents” variables.

The third stage of the study (assessment of the overtourism risk phenomenon in Tunisian governorates based on the tourism intensity index and tourism density) was conducted using 2018 data from all governorates. They were obtained from the reports of the Institut National de la Statistiques [42,43] and Commissariat Général de Développement Régionale (CGDR) [44]. These were data on the area, number of residents, and number of bed-nights in each governorate.

3. Results

3.1. Evolution of Tunisia as A Tourist Reception Area in 1960–2019

Three phases of Tunisia development, i.e. exploration, involvement, and development, were identified from the curve constructed in accordance with the TALC model proposed by Butler [31] (Figure 3).



Figure 3. Tunisia evolution phases as a tourist reception area in 1960–2019. Source: Own analysis of ONTT data.

The first phase, exploration, lasted in Tunisia until the 1960s, i.e. before the appearance of stable tourism investments. This period was characterised by a relatively small number of the explorer-type tourists ranging from several thousand to 94,000 in 1960 (Figure 3). This type of tourists chose their travel destination based on the desire to meet local people and explore natural and cultural resources, to experience adventure, and to rest in a remote isolated and undiscovered area, which was not affected by the lack of a tourist base [33]. At this phase of area development, the presence of tourists exerts a relatively low impact on the economic and social life of residents [45].

The involvement phase (1960–1985) was characterised by a substantial increase in the number of tourists in Tunisia, i.e. 1.8 million in 1985, which was almost 20-times higher than in 1965. During this period, a 10-year tourism development plan for the country was implemented to provide 35,000 hotel beds. At that time, the first tourist areas were established near coastal towns, e.g., Tunis, Hammamet, Nabeul, Sousse, Monastir, and Djerba [46]. Additionally, the Office National du Tourisme Tunisien (ONTT) was established to develop and promote tourism and to ensure high quality of tourism services. The Société Hôtelière et Touristique de Tunisie (SHTT) was created to supervise and manage the construction of national hotels. Consequently, 15,000 workplaces were created in the tourism industry [47].

The mass-scale development of tourism noted after 1985 initiated the development phase in Tunisia (Figure 3). In this phase, the number of hotel beds was increased to over 93,000 in 1985 and 40,000 jobs were created in the tourism sector [48]. Over the next 10 years (1990–2000), the number of hotel beds doubled (197,500) as well as the number of jobs (79,000) [49]. The development of the hotel base and economic changes, especially in 1987 [46], contributed to an increase in the tourists' number. In 1990, it reached over 3 million visitors and increased significantly to approximately 5 million tourists within the next 10 years (1990–2000) [49].

A noticeable increase in tourist traffic was reported at the turn of the 20th and 21st centuries. This generated increasing tourism-related income and development of infrastructure. Despite the global crisis and the concern about H1N1 influenza worldwide, an increase in the number of tourist arrivals was noted in Tunisia, especially in 2008 (approx. 7 million) (Figure 4).

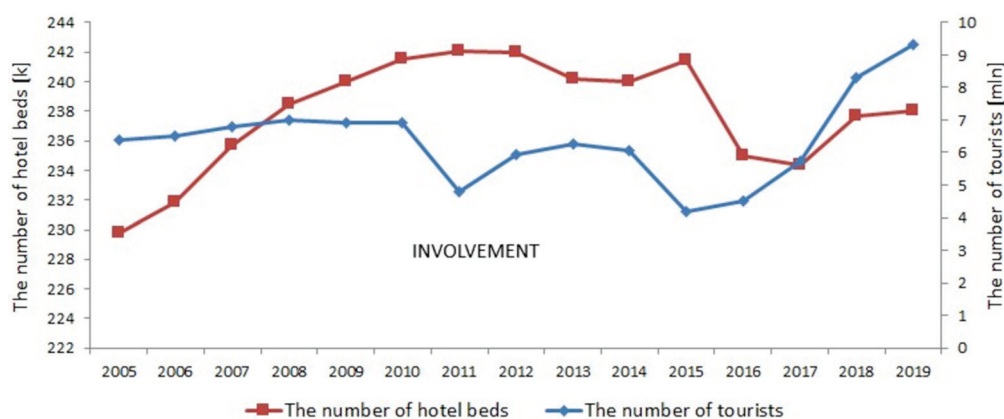


Figure 4. Tunisia evolution phase as a tourist reception area in 2005–2019. Source: Own analysis of ONTT data.

In 2011–2015, there were two sharp declines in the number of visitors to Tunisia (Figure 4). The first was reported during the first three months of 2011 when the number of tourist arrivals decreased by as much as 44% compared to 2010, and the tourism industry losses amounted to over 620 million USD. Another decrease was noted in August 2015 when only 4.2 million tourists came, which was 24% less than in the corresponding period of 2014, and the number of tourists from Europe decreased by 50% [47]. The decline in the tourist traffic resulted in a reduction of the number of hotels beds from 242,100 to 240,000 in 2013 and from 241,400 in 2015 to 235,000 in 2016 (Figure 4).

In 2018, the number of tourists increased again to reach 8.3 million, and the number of hotel beds increased to 237,600 (Figure 4). Even higher tourist traffic (9.4 million visitors) was recorded in Tunisia in 2019; it accounted for a 13.6% increase compared to 2018. This was mainly associated with the greater number of tourists coming from European countries—an increase by almost 2.8 million (15.9%) and from North African countries—by almost 5 million (15.5%) [50].

3.2. Prognosis for the Next Phase of Tunisia Evolution as A Tourist Area

The verification of the trend function models for the 2015–2019 time series (Table 2) at the level of the coefficient of determination R-squared demonstrated the highest values of the polynomial function for the analysed variables—number of tourists ($R^2 = 0.963$), number of residents ($R^2 = 0.958$), and number of hotel beds ($R^2 = 0.751$).

Therefore, the prognosis for the future phase of Tunisia evolution (2020–2025) was based on the 2nd order polynomial trend line. Given the values of the determination coefficients close to 1.0, it can be concluded that the function accurately describes the development trend for the analysed variables.

Table 2. Coefficients of determination R-squared in 2015–2019.

Trend Function	Values of Coefficients of Determination R-Squared for Variables		
	Number of Tourists	Number of Residents	Number of Hotel Beds
Linear	0.938	0.882	0.055
Logarithmic	0.809	0.727	0.193
Power	0.854	0.730	0.190
Exponential	0.955	0.884	0.053
Polynomial	0.963	0.958	0.751

Source: Own analysis of ONTT data.

In the analysed time series, an upward development trend was noted for all variables, i.e. the number of hotel beds, tourists, and residents, starting in 2015. The intersection of the trend lines for the “number of residents” and “number of tourists” variables will be observed in 2020 (Figure 5). This may indicate that Tunisia is entering the next phase of the tourism area evolution referred to as consolidation. It is characterised by an equal or higher number of tourists than the number of residents [31].

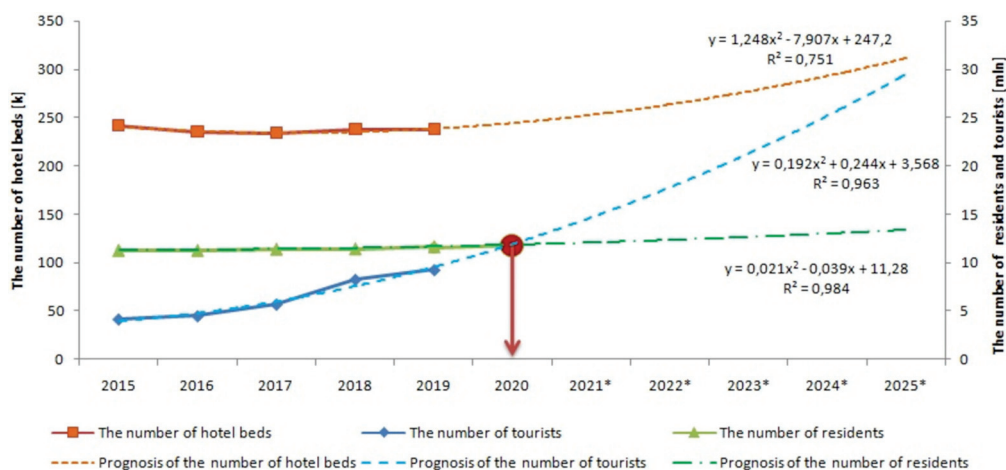


Figure 5. Prognosis for the next phase of Tunisia evolution in time series 2015–2025. Source: Own analysis of ONTT data.

3.3. Assessment of the Overtourism Risk Phenomenon in Tunisian Governorates Based on the Tourism Intensity Index and Tourism Density

The prognosis for the phase of Tunisia evolution as a tourist area in 2015–2019 determined by the trend function models verification for the time series was the basis for identification of the tourist carrying capacity and potential overtourism in all governorates.

Given the criteria for classification of the overtourism risk based on the value of the Tourism Intensity Index (Table 1), it should be underlined that the highest risk (5) was demonstrated for three out of the 24 Tunisian governorates analysed, i.e. Tunis, Sousse, and Monastir. Some governorates were assigned the following levels of risk: Nabeul—high risk (4), Medenine—medium risk (3), and Mahdia—low risk (2). The other 18 governorates were identified as the lowest-risk areas (Figure 6).

As shown by the criteria for classification of the overtourism risk based on the value of the Tourism Density index (Table 2), the highest risk (5) was identified in two governorates—Medenine and Sousse. Two administrative units, Monastir and Nabeul, were assigned medium risk (3) and low risk (2) was detected in one governorate, i.e. Mahdia. As indicated by the TD values, the other 19 governorates should be classified in the category of the lowest risk (Figure 7).



Figure 6. Overtourism risk in Tunisia based on the tourism intensity index. Source: own study.

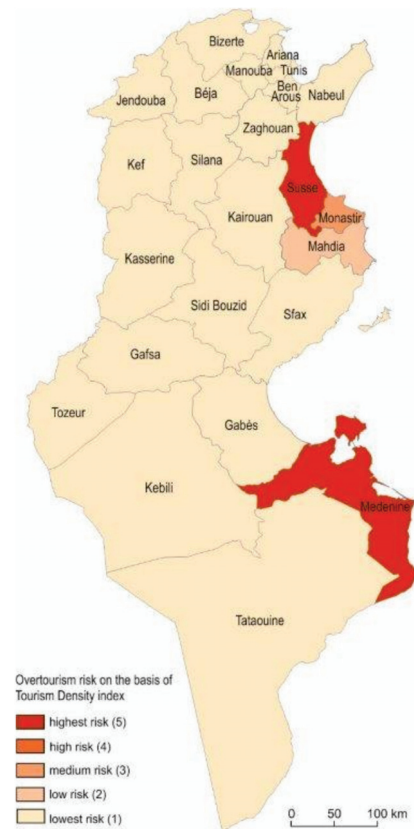


Figure 7. Overtourism risk in Tunisia based on the tourism density index. Source: own study.

4. Discussion

The interpretation of the TALC curve obtained for the 1960–2019 data from Tunisia (Figure 3) raises no doubts as to the first two phases—exploration (before 1960) and involvement (1960–1985). In contrast, the development phase, especially in 2010–2019, may seem disputable. The reported reduction in the number of tourists and hotel beds in 2011 and 2015 followed by an increase in these parameters should not be interpreted as the decline and rejuvenation phases. Firstly, Tunisia has not yet reached either the consolidation or the stagnation phases that precede the decline phase. Secondly, the decrease in the tourist traffic did not result from deterioration of the services' quality or attractiveness of the offer. As emphasised by Zmysłony [51], the cause of the “developmental anomalies” in both cases was the strong impact of internal developmental determinants.

The cause of the sharp decline in the tourist traffic in 2011 was the “Jasmine Revolution”, which induced social and economic changes in the country and abroad. Consequently, the changing geopolitical situation brought serious repercussions on the tourist markets of almost all North African and Middle East countries. This resulted in a change in destinations and structure of tourist traffic. In Tunisia, this led to cancellation of most of the tourist events booked for the 2011 season, although the revolution lasted less than a month (from 17 December 2010 to 14 January 2011). The collapse of the tourist traffic in 2015 was caused by the terrorist attacks at the Bardo National Museum in Tunis (18 March 2015) and on the beach in Sousse (26 June 2015). Therefore, one should agree with the suggestion made by Mika [52] that all manifestations of social and political tensions are immediately reflected by reduction of the tourist traffic volume in countries affected by such unrest. Thus, the geopolitical stability of Tunisia as a tourist region and tourists' safety are of key importance for the modern tourist market development.

The development phase implies that the tourist market is well defined. As emphasised by some authors [53,54], residents in this phase lose control over the development of the tourism market and local services are replaced by external investors associated mainly with hotel services. Additionally, the local authorities involvement in the development of tourism declines, as the design and area development takes place at the regional and national levels. Resident antagonisms may also be sometimes observed.

The next stage in the development of Tunisia may be the consolidation phase. Its characteristic feature is an increasing number of tourists, who may exceed the number of residents over time [41]. The involvement of residents proceeds through joining the business activity for tourists or focusing services mainly or even exclusively on visitors [53].

The subjective selection of the 2015–2019 time series for the prediction process was prompted by the visual assessment of the graph (Figure 4). It presented an upward development trend and random fluctuations of the analysed variables. The reduction of the hotel beds number and tourists recorded in 2011 and 2015 was caused by factors unrelated to tourism phenomena. As in the case of the TALC curve for 1960–2019, the fluctuations may have affected the trend function analysis and exerted a negative effect on the interpretation. Therefore, it was reasonable to carry out the prediction process for 2020–2025 based on the trend function models for the time series 2015–2019, which reflects the current and real dynamics of tourism in Tunisia. It revealed that Tunisia would enter the *consolidation* phase in 2020. Furthermore, the number of tourists may be twice as high as the number of residents in 2025 (Figure 5), which may lead to overtourism in this area. Therefore, it is important at this stage to take appropriate actions in governorates threatened with the greatest risk of this phenomenon.

As demonstrated by the tourism intensity index and tourism density, the phenomenon of overtourism threatens the governorates of Sousse (the highest risk), Monastir, and Madanin. All these areas are located on the east coast of Tunisia on the Mediterranean Sea. Currently, the Sousse and Madanin governorates specialise in long-term seven-night stays, which are typical of only 20% of the area of Tunisia.

What attracts tourists to these governorates? In addition to its recreational values, Sousse (also called the “Pearl of the Sahel”) has unique cultural assets, e.g., the Medina of Sousse (kasbah, ramparts,

medina, the Great Mosque, Bu Ftata Mosque, ribat), included on the UNESCO World Heritage List [55]. This area has an extensive tourist infrastructure, especially in Port El Kantaoui, where a yacht port, golf courses, and numerous hotels can be found [56].

The Madanin Governorate covers a geographically diverse area. Tourist traffic is typically concentrated on Djerba Island and Matmata-Dahar Plateau. Djerba Island, located in the Gulf of Gabes, is an important recreational area attracting tourists with its sandy beaches and numerous thalassotherapy centers. A great attraction on the Matmata-Dahar Plateau, famous for its “bad land” loess landscape [57] known as “lunar” landscape, is the culture of Berber descendants [58] called troglodytes. The “lunar landscape” near Matmata was the location for some scenes in the “Star Wars” movie series [56]. Monastir attracts tourists mainly with the Monastir-Skanes seaside resort with luxury hotels along sandy beaches [59,60].

It should be emphasised that, although they visit attractions or do sightseeing, most tourists stay in the coastal zone in the three governorates. The tourist traffic overload of the coastal area (overtourism) and the related problems (water stress, excess waste, shore line developments), especially in Hammamet Bay and on Djerba island, are part of research focused on the deteriorating quality of the natural environment (e.g., [28]) and the negative impact of tourism on the natural environment (preservation of biodiversity and the natural character of the coast, fresh water supplies for tourists, wastewater treatment, electricity consumption) and society (e.g., [26,27]).

5. Conclusions

Using the TALC model, three development phases were identified in Tunisia – exploration (before 1960), involvement (1960–1985), and development (1985–2019).

The prognosis carried out using the trend function models indicates that the next phase of Tunisia evolution as a tourism area will be the consolidation phase. It will begin in 2020. The number of tourists will increase significantly and gradually exceed the number of residents. As predicted, the number of tourists in 2025 may be twice as big as the number of residents, which implies the risk of overtourism in the analyzed area. The consolidation stage was a premise to take measures to investigate the degree of overtourism in this destination.

The increasing tourists’ number strengthens the tourism function of the area and has a positive effect on economic development at the regional level on the one hand, but can exert a negative impact on the natural environment and, consequently, worsen the recreational conditions on the other hand. It can also lead to the buildup of social tensions at various levels.

At present, however, the values of the tourism intensity index and tourism density, which reflect the tourism carrying capacity, indicate the risk of overtourism in three governorates: the highest in Sousse (TII 5, TD 5) and high in Monastir (TII 5, TD 3) and Madanin (TII 3, TD5).

The research procedure adopted in the present study yields a diagnosis of the overtourism problem in the analysed area. However, it brings preliminary results, which diagnose the problem based on a limited number of variables and represent entire governorate areas. In future, the phenomenon of overtourism should be analysed taking into account a greater number of variables, e.g., the TCC phenomenon. It is also important to diagnose overtourism in basic administrative units within the governorates, which may be difficult due to the limited possibility of acquiring relevant data.

In compliance with the principles of sustainable development, specific measures should be undertaken to prevent the phenomenon of overtourism in Sousse, Monastir, and Madanin and, in the near future, also in Tunis and Nabeul. Some of them are highlighted by Halioui and Schmidt [26], UNWTO [1], and Kruczek [6]. Actions that may limit the negative effects of overtourism should include the following steps: 1. creation of new attractions and tourist routes in neighboring governorates in order to disperse visitors in space and time; 2. adjustment of legal provisions for organization and management of tourism in the governorates; 3. providing the local community with the benefits from tourism.

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Article

Temporal Distribution as a Solution for Over-Tourism in Night Tourism: The Case of Suwon Hwaseong in South Korea

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Abstract: As the demands of tourism become increasingly bigger, there are side effects of rapid quantitative growth, representatively, over-tourism. As efforts at minimizing over-tourism, the possibilities of temporal and seasonal distribution were explored. For the experiment, an offline survey was conducted targeting the visitors who visited Suwon Hwaseong, the UNESCO World Heritage in South Korea during the nighttime. Group classification was conducted based on visitors' preferred times and seasons and estimated the marginal willingness to pay (MWTP) for night tourism activities by these classifications. To compare the MWTP of the groups and examine differences in attributes between the groups, a choice experiment (CE) was used. The results from the CE revealed that the MWTP for attributes was different in those groups. Based on MWTP of each group and their characteristics, it was confirmed that temporal and seasonal distribution can be one solution of over-tourism. These results may be useful for night tourism management and development at a UNESCO World Heritage site, such as providing strategies for minimizing over-tourism, which is distributed by peak and non-peak times.

Keywords: over-tourism; temporal distribution; willingness to pay; choice experiment; tourism management and development; UNESCO World Heritage site

1. Introduction

Why is the issue of over-tourism important? According to the UNWTO (World Tourism Organization) [1], tourism demand is increasing significantly with an increase in the number of tourists from 25 million in 1950 to 1.3 billion in 2030. There are a few side effects of rapid quantitative growth such as the influx of tourists to a region that exceeds the tourism capacity, which is called over-tourism [1,2]. Tourists come and go from pre-existing spots and sometimes they visit new areas which are not prepared for over-tourism. When over-tourism occurs, residents experience its side effects in environmental, economic, and social aspects, whereas tourists experience a decrease in visit satisfaction due to crowding, and a lower likelihood of return visits [3–5]. Irresponsible use of resources due to tourism development has led to conflicts between tourists and locals, creating difficulties in sustainable tourism [6]. Side effects from over-tourism have been reported around the world, and solutions are being sought [2,5–7].

Over-tourism occurs when too many people gather at any one particular place, and it is associated with over-crowding and carrying capacity [1]. In this regard, solutions that are being considered include regulation and education, limiting visitor numbers, and distribution [2,5–7]. However, tourism

is a demand-driven activity that is difficult to regulate or educate. It is also burdensome for destinations to forcibly regulate the number of tourists which inevitably leads to quantitative reduction [8]. On the other hand, distribution is utilizing off-peak seasons and times, distributing tourists to other regions, and changing the target tourism market [2,5]. This should be based on the characteristics of the destination and an understanding of the visitors to a destination. Distribution through clear targeting not only improves the quality of tourism by easing crowding and increasing satisfaction, but can also achieve sustainable quantitative growth including balanced development during all seasons (peak or off-peak seasons) [9]. This is not a new solution from over-tourism but is widely used in tourism and outdoor recreation [10,11], and is also explained conceptually as substitutability, or alternative recreation opportunity [12]. However, existing studies do not deal with the distribution of visitors in night tourism as a solution for over-tourism, and being mostly case studies, there is a lack of empirical research on the applicability of visitor distribution.

Thus, the present study examines visitor distribution as a solution for over-tourism, especially in night tourism. Night tourism is a form of sightseeing that takes place during the night. It is popular in its economic impact of increasing length of stay through the use of overnight accommodations [13]. Night tourism increases immersion and attraction to destinations or activities through the reduction of vision at night [14]. In Korea, cultural assets which were previously only opened during the day due to management issues have now been opened at night. Night tourism focuses mainly on cultural assets and promotes aspects such as night views, night experience activities, night transportation, night performances, and interpretation [15]. However, when night tourism is active and more tourists enter a limited area, crowding impairs immersion to the destination [14,15]. In addition, when there are many people at night, when vision is limited, safety issues may arise [16]. Thus, a solution for over-tourism during night tours is more important than for daytime tours.

The purpose of the present study is to find a concrete way of distributing visitors to solve over-tourism in night tourism. In order to do this, the willingness to pay of night visitors to Suwon Hwaseong Fortress, a UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage site, was estimated for less preferred times and seasons. Less preferred times and seasons were defined as non-peak times and seasons. According to Suwon City, Suwon Hwaseong is a representative tourism destination that has 720 thousand daytime tourists per year in 2019. At that time, the night tourism program was provided during just three days and 130 thousand nighttime tourists had been visited. Since the limitations of infrastructure and place on the event days, over-tourism has been raised as a problem at night. Suwon City has considered distribution strategies as a solution to the nighttime over-tourism problem based on the experiences to temporal distribution of night tourism at heritage sites in Korea. As mentioned in previous studies [2,5], this study explores the possibilities of temporal distribution as an effective solution on Suwon Hwaseong nighttime over-tourism by empirical research.

Specifically, this study aims were first, to estimate visitors' willingness to pay for non-peak times and compare it to the willingness to pay for peak times, and see if the temporal distribution was possible. Second, the study aimed to compare visitors' willingness to pay for non-peak seasons with the willingness to pay for peak seasons, and to see if the seasonal distribution was possible. Third, the study aimed to compare the willingness to pay for night tourism attributes using the choice experiment method. We examined which attributes should be given more emphasis on establishing strategies for temporal and seasonal distribution of night tourists. The present study aims to empirically examine the application of visitor distribution as a solution for over-tourism in night tourism, with an emphasis on sustainable tourism development through mitigation of over-tourism.

2. Literature Review

2.1. Night Tourism

Night Tourism—tourism that occurs during the night—has made a big wave in the international tourism market. In 2019, the Union Minister of State for Tourism and Culture of India emphasized ‘night tourism’ and they opened their important monuments until late in the night for visitors [17]. Also, the Chinese government regarded night tourism as a vast opportunity for new growth and made great efforts to boost it [18]. However, although various studies have spotlighted night tourism since the early 21st century, there is no unified definition of “night tourism” yet, instead only a main debate focused on the scope of ‘night’ exists [13]. Night tourism can be considered as a simple extension of tourism activities from daytime tourism activities [19]. In other words, night tourism should be characterized in that the night itself is the core attractive attribute [14]. In short, night tourism can be referred to any kind of tourism activity that occurs between sunset and sunrise.

Night tourism can be composed of various programs. Tong [20] divided the night tourism program into three types: performance, participation, and landscape. Cao [21] expanded the classification to include performance, participation, landscape, and comprehensive type. From various studies, it is possible to see that night tourism activities can be categorized in the same way as typical tourism activities. It can include sightseeing, watching performances, and participating in tourism programs just like day-time tourism activities.

Night tourism received attention from major destinations with rich natural and cultural resources as enhancing competitiveness and advancing marketing strategies. Numerous cities, including Paris, Melbourne, London, Jerusalem, Baltimore, and Barcelona, promoted night tourism programs such as light festivals [22]. Night tourism, which has emerged as an alternative to securing tourism competitiveness, has been attracting more attention by the emergence of the night economy. Night tourism can lead to 24-hour economic development by generating 24-hour consumption by tourists [13]. Night tourism could trigger the development of the night economy of destinations. Evans [23] analyzed late-night events/festivals and confirmed that perceived benefits from night economy growth as improving the vitality of areas, expanding leisure venues, growing the number of citizens, increasing the number of jobs, increasing the number of tourists, and activating investments of other areas’ businesses. Also, night tourism could enrich the local culture since it not only brings the tourist from outside but also gives a chance for consumption in the cities by local citizens [14,23].

However, over-tourism problems could also arise in night tourism, since it occurs during the night which is not considered to be normal tourism time. Night tourism could bring about conflicts between residents and tourists [14]. It causes inconveniences for resident such as noise at night [24], and this also lead to deterioration of tourism destinations due to residents’ resistance [14]. In addition, it could also result in the decrease of the attractiveness of tourism destinations as Smith and her colleagues revealed that perception of crowdedness during night tours is significantly related to the decline of the attractiveness of the destination [15,24].

2.2. Over-Tourism

UNWTO [1] defined over-tourism as “the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitors experiences in a negative way.” Goodwin [3] said over-tourism could describe destinations where hosts or tourists, locals or visitors feel that the number of visitors is too high and that the quality of life in the area or the quality of the experience has declined unacceptably. In short, over-tourism could be referred to as the negative impact of an intolerably large number of tourists. This concept emerged in the late 2010s, and studies on the effects and solutions of the causes have been conducted so far [2].

Over-tourism could cause serious problems at the destinations, bringing economic, social, physical, and environmental problems which impede sustainability of the destination. It can be understood from the perspective of sustainable tourism. UNWTO [25] explained sustainable tourism in three pillars:

economic, social, and environmental sustainable development. Economic sustainable development means generating prosperity of society and cost effectiveness of all economic activity for maintaining economics in the long term. However, over-tourism could lead economic unsustainability by a “tragedy of the commons” [4]. Social sustainable development emphasizes local communities and maintaining and strengthening their lives and culture. Over-tourism could harm this aspect by causing deterioration of residents’ quality of life [5]. It could lead to conflicts between locals and visitors [14] and if it becomes more serious, over-tourism can cause residents’ resistance [14]. Environmental sustainable development means conserving and managing resources especially for biological diversity and natural heritage. It also emphasizes actual actions for minimizing pollution. However, over-tourism could have negative effects on the physical and environmental resources of the destination [5].

For solving the problems due to over-tourism, it is easy to find the various efforts that have been made thus far. Also, various studies have introduced ways of relieving the negative effects of over-tourism, including spatial dispersion of spots for tourists [2], temporal and spatial distribution of tourists [5], educating residents, [6] and a taxation strategy [7]. Understanding of the nature of tourism, which is a demand-driven industry, it should be recognized that it is very difficult to solve the deformation phenomenon in large numbers of tourists with education or regulation strategies. If the destination regulates the number of tourists compulsorily, they might face the burden of the quantitative reduction of tourists [8]. In contrast, temporal or spatial distribution will be a better solution since it could affect target tourists’ behavior without any enforcement [2,5].

2.3. Distribution as a Key to Solve Over-Tourism at Night

Night tourism is one of the most obvious cases of the over-tourism problem. Since night tours take place outside of regular hours, the side effects of over-tourism, such as inconveniences to residents, are clearly evident. In order to solve the problem of over-tourism during peak times, it is necessary to implement a decentralization policy in relation to night tourism. Since one of the main attractions of night sightseeing is its quietness, the problem of over-tourism must be solved. Just emphasizing responsible tourism is not the best solution and a distribution policy could be an alternative way to solve the problem more effectively [26]. As we have seen, there are many ways to solve over-tourism problems, and temporal dispersion can be one of them. Although the effectiveness of temporal variance has not been validated in day tourism cases, as investigated in day tourism cases, studies have confirmed that temporal dispersion such as reducing the seasonality of tourism can be a solution of over-tourism [9].

In fact, many destinations use temporal distribution strategies to solve over-tourism. In Barcelona’s Boqueria Traditional Market, only locals are allowed to see the market, and the time limit for entering groups is limited. In addition, Venice provided water bus priority boarding passes to local residents during rush hours. In Lisbon, they regulate operation hours for protecting central inhabited areas and they more actively protect those areas by inducing night tours in places where few residents live [9]. Especially, some famous destinations use night tourism as a visitor management strategy, for example, the Taj Mahal in India opens for night viewing every full moon day after 8:30 p.m. until 12:30 a.m., and in Mont St. Michel, France, abbey grounds are opened from 7 to 10:30 p.m. during the summer, which is the peak season.

In addition, various studies showed that the effort to solve over-tourism using temporal variance was significant. In Vermont, researchers found the factors which affect people to turn their intention to visit from peak times to non-peak times, such as variation of the entrance fee, and perception of crowdedness [10]. Other studies have found the characteristics of tourists who are less affected by seasonality. In a study in England, they were purposive tourists such as VFR (Visiting Friends and Relatives)tourists [11], and in Slovenia [27] and Sweden [28], the influence of seasonality was different according to nationality. Also, a study conducted in Nigeria suggested one way to overcome the seasonality issue during the off-peak season was through a family tourism business [29].

In addition, the study revealed that the morning-larks tended to pursue novelty more than night-owls, and the tendency to enjoy tourism activities was higher when the novelty-oriented trends were higher [30]. There was also a study that revealed that college students are interested in tourism after 12 a.m. [31]. It is also possible to develop night tourism targeting these specialty floors, and finding out potential targets that can be visited during non-peak hours can be an alternative to over-tourism at night.

3. Method and Materials

3.1. Study Area

Suwon Hwaseong Fortress was selected as a study area. It is the UNESCO World Heritage Site in the Republic of Korea. There are various types of tour programs for visitors including night tourism programs during the summer. For example, Suwon Cultural Heritage Night provides the opportunity to enjoy the night view of the fortress with special parades, and to experience the history and culture of Suwon (see Figure 1).



Figure 1. Various night tourism attractions in Hwaseong Fortress.

At present these night tourism programs are provided in partial areas only in summer which means providing at the limited time and place. By an exceeding the acceptable number of visitors in Suwon Hwaseong fortress at night, as shown in Figure 2, visitors are suffered from crowding. In other words, there is over-tourism. According to the Suwon Hwaseong night visitor survey [32], visitors' inconvenient experiences are about crowding, such as hardness to join programs and to take tourism vehicles because of crowding. In addition, many visitors asked to extend the running hours or to expand other seasons, to avoid the crowding.

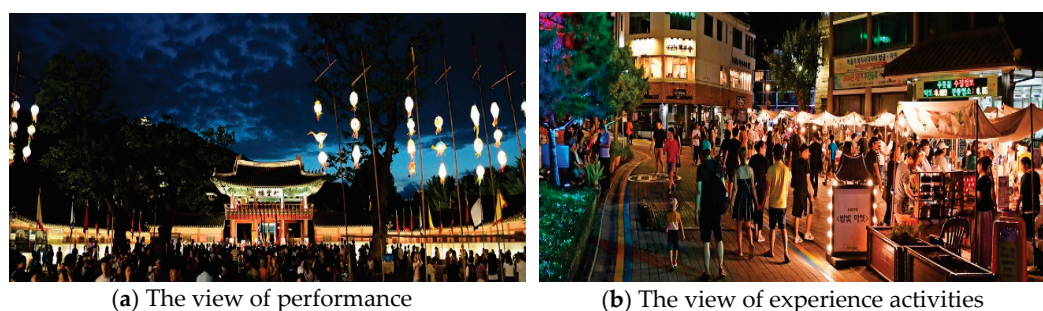


Figure 2. Over-tourism in Suwon Hwaseong Fortress at night.

3.2. Choice Experiment Analysis

In the present study, the possibility of visitor distribution was examined using CE to determine willingness to pay for night tourism at less preferred times and seasons. Based on marginal utility theory [33], CE estimates the marginal willingness to pay (MWTP) for various attributes that affect the value of goods and services [34], and is one of the most used methods for estimating the value of tourism resources and tourism products [8]. Due to its advantage of being able to estimate the willingness to pay for each attribute that affects the value of tourism resources, CE has been used in various tourism studies [8,34–40].

The willingness to pay for night tours of Suwon Hwaseong Fortress was obtained, and McFadden's conditional logit model (CL) was used to estimate the indirect utility function [33]. MWTP was calculated using the maximum likelihood estimator for each attribute and level. As all variables except for the price variables were binary variables, MWTP values for level 2 and level 3 of each attribute mean additional willingness to pay compared to level 1.

The application of CE requires the setting of attributes and levels that constitute the value of the tourism resource. The attributes and levels used to examine the willingness to pay for Suwon Hwaseong Fortress night tourism were set as shown in Table 1. These settings were in consideration of the specific attributes of Suwon Hwaseong Fortress night tourism as discussed previously in the Section 2.

Table 1. Attributes and levels for Choice Experiment.

Attribute	Level	Content
Night view	1	Basic lighting (street lighting, basic building lighting)
	2	Beautiful special lighting and night sculptures
	3	Real-time media performances at night using lights and sounds
Performance	1	None
	2	Small-scale performance (E.g., solo plays, etc.)
	3	Large-scale performance (E.g., martial arts, opera, etc.)
Experience activities	1	None
	2	5–10 minutes simple experience
	3	30-minute experience of various themes
Tourism vehicle	1	None
	2	Tourism vehicle on fixed course (E.g., Hwaseong sightseeing train)
	3	Tourism vehicle on free course (E.g., bicycle taxis)
Interpretation	1	None
	2	Yes
Entrance fee (per person)	1	5000 KRW (4.3 USD)
	2	15,000 KRW (12.7 USD)
	3	30,000 KRW (25.5 USD)

Considering the types of night tourism in the previous researches [20,21] and types of night programs which currently underway in Suwon Hwaseong, as well as domestic cultural heritage sites, the main attributes were derived. The attributes of Suwon Hwaseong Fortress night tourism include night view, performances, experience activities, rides, and interpretation. The payment vehicle utilized an entrance fee. Each attribute was divided into three levels, with the first level not including any additional content. At level 2 and level 3, additional content is provided.

In the present study, a key question for resolving over-tourism by visitor distribution is “What are the differences in willingness to pay for night tourism at less preferred times and seasons compared with others?” MWTP calculations using CE were used to compare groups that were derived as follows. First, willingness to pay was compared between two groups: Group A that prefers night tourism at the peak time of 6 to 10 p.m., and Group B that prefers night tourism at non-peak times. Second, willingness to pay was also compared between Group C that prefers night tourism during peak seasons (spring,

fall), and Group D that also prefers non-peak seasons. The results allow us to discuss the possibility of distributing tourists to less preferred times and seasons to overcome the problem of over-tourism.

3.3. Questionnaire Design and Data Collection

The choice set in the experiment questionnaires was based on level-specific combinations of attributes as seen in Table 1. A full factorial design of all 486 (35×2) choice profiles is not possible to consider. Thus, a fractional factorial orthogonal design is generally used [41,42]. In the present study, 18 profiles derived from an orthogonal design using SPSS (IBM, Armonk, New York, USA). 23 were used for the choice set. Survey respondents randomly selected 3 of these 18 profiles at each round, and either chose their favorite choice or chose none of them. The experiment was conducted in 6 rounds with all respondents. The number of valid responses was 563, with the total number of experimental responses at 3378.

The target population of the present study was night tourism visitors to Suwon Hwaseong Fortress who were over 19 years old. A pretest was conducted in order to increase the objectivity of the survey and to increase the validity of the questionnaire. After the revision of the questionnaire, the main survey was conducted. The survey was conducted on weekends and weekdays over 17 days in night tourism periods of Suwon Hwaseong Fortress, from 9–25 August, 2019, using face-to-face 1:1 surveys. Systematic random sampling was used at survey areas. In addition to CE items, the survey consisted of items about night tourism preferences, Suwon Hwaseong Fortress visiting behavior, and demographic characteristics. Each survey took about 15 minutes to complete.

4. Results

4.1. Sample Characteristics

Of all 563 respondents, demographic characteristics of the sample included more women ($n = 343$, 60.9%) than men ($n = 220$, 39.1%). The average age of participants was 39.9 years ($SD = 12.57$), with more visitors older than 30 ($n = 159$, 28.2%) than those in their 40s ($n = 155$, 27.5%) or 20s ($n = 120$, 21.3%). Residents from the Suwon area (i.e., within 30 min; $n = 280$, 49.7%) and the Gyeonggi Province (i.e., 30 min to 1 h; $n = 175$, 31.1%) accounted for more than three-quarters of the sample (80.8%), indicating that visit rate was highest among residents within one hour travel time (i.e., local visitors). College attendance/graduation was the most common educational level ($n = 347$, 61.6%) and household income was more than 4 thousand dollars a month ($n = 323$, 57.4%), which indicated a high proportion of highly educated and high-income visitors. 48.3% of visitors had visited Suwon Hwaseong Fortress three times or more during the past year (i.e., excluding first visit and one-time revisit). In relation to night tourism, 80.2% of respondents preferred night tourism between 6 and 10 p.m., and 10.8% for 10–12 a.m., and 7–9 a.m. In terms of seasons, 67.7% of respondents only preferred the peak seasons of spring and fall, and 32.3% also preferred the non-peak seasons of summer and winter.

4.2. Visitors' WTP for Less Preferred Times

Groups were divided according to their preferred times for night tourism, with Group A's preference for peak times of 6–10 p.m., and Group B's preference for non-peak times of 7–9 a.m. and 10 p.m. to 12 a.m. (Table 2). A comparison of the frequency of visits did not show a large difference in that 48.2% of Group A visitors who prefer peak times visited Suwon Hwaseong Fortress more than three times in the past year, whereas 49.2% of Group A visitors who prefer non-peak times visited more than three times.

Table 3 showed the conditional logit model estimation results of the selection experiments for each group. First, the coefficient estimates of payment amount are negative and statistically significant at the $p < 0.01$ significance level. Thus, when other conditions are held constant, the larger the amount of payment, the lower the probability of selection, indicating rational decision-making has occurred in the experiment. Again, the coefficient estimates by attribute and level were positive and statistically

significant (except for interpretation). That is, when other conditions are constant, the probability of choosing another alternative (level 2 or level 3) increases compared to the baseline (level 1).

Table 2. Conditional Logit Model Estimation Results by Preferred Time Group.

Attribute and Level		Coefficient ¹	
		Group A (Prefers Peak Times)	Group B (Prefers Non-Peak Times)
Payment Amount		-4.7×10^{-5} *** (2.5×10^{-6})	-3.2×10^{-5} *** (6.5×10^{-6})
Night view	Level 2	0.571 *** (0.059)	0.407 ** (0.165)
	Level 3	0.569 *** (0.06)	0.408 ** (0.165)
Performance	Level 2	0.903 *** (0.062)	0.880 *** (0.171)
	Level 3	1.034 *** (0.059)	0.777 *** (0.166)
Experience activities	Level 2	0.721 *** (0.061)	0.547 *** (0.168)
	Level 3	0.907 *** (0.06)	0.744 *** (0.159)
Tourism vehicles	Level 2	0.817 *** (0.06)	0.943 *** (0.171)
	Level 3	0.870 *** (0.06)	0.938 *** (0.166)
Interpretation	Level 2	0.357 *** (0.053)	0.222 (0.145)
Log likelihood		-3,136	-403
Number of observations		12,028	1460

¹ Parentheses indicate standard errors, ** $p < 0.05$, *** $p < 0.01$.

Table 3. Marginal willingness to pay (MWTP) estimation results by preferred time.

Attribute and Level		MWTP ¹		MWTP Gap ² (B Group – A Group)
		Group A (Prefers Peak Times)	Group B (Prefers Non-Peak Times)	
Night view	→ Level. 2	12,535 [9879–14,452]	11,502 [4286–24,273]	-1,032
	→ Level. 3	11,506 [9858–14,373]	13,428 [4321–23,898]	1,922
Performance	→ Level. 2	20,350 [16,574–21,945]	18,772 [17,361–45,828]	-1,578
	→ Level. 3	23,737 [19,436–24,667]	18,646 [14,925–40,707]	-5,091
Experience activities	→ Level. 2	15,612 [13,021–17,639]	14,849 [8,439–29,860]	-763
	→ Level. 3	19,893 [16,803–21,777]	18,813 [14,363–38,024]	-1,080
Tourism vehicles	→ Level. 2	16,647 [15,069–19,650]	21,741 [19,860–46,351]	5,094 **
	→ Level. 3	18,057 [16,086–20,904]	21,947 [19,669–46,522]	3,891
Interpretation	→ Level. 2	7924 [5657–9503]	6706 [-594–16,038]	-1,218

¹ Willingness to pay is a payment amount that one is willing to pay as content is added compared to level 1. Square brackets indicate 90% confidence interval using the Krinsky–Robb [43] parametric bootstrapping. ² ** The different in payment amount is statistically significant at the 0.10 level.

MWTP estimation results for each group are summarized in Table 4. Overall, MWTP increases from level 2 to level 3, but not at a statistically significant level. Group B that prefers non-peak times has a relatively lower MWTP, except for rides. However, as the differences are small, Group B still demonstrates the willingness to pay, and the dispersion of visitors to non-peak times would be possible through discounts and product differentiation.

Table 4. Conditional logit model estimation by preferred seasons group.

Attribute and Level		Coefficient ¹	
		Group C (Prefer Peak Seasons Only)	Group D (Prefer Non-Peak Seasons Also)
Payment Amount		-5.3×10^{-5} *** (2.9×10^{-6})	-3.2×10^{-5} *** (3.9×10^{-6})
Night view	Level 2	0.630 *** (0.069)	0.439 *** (0.096)
	Level 3	0.611 *** (0.071)	0.461 *** (0.096)
Performance	Level 2	0.938 *** (0.072)	0.849 *** (0.098)
	Level 3	1.054 *** (0.069)	0.918 *** (0.095)
Experience activities	Level 2	0.664 *** (0.071)	0.777 *** (0.099)
	Level 3	0.884 *** (0.07)	0.910 *** (0.095)
Tourism vehicles	Level 2	0.867 *** (0.069)	0.754 *** (0.1)
	Level 3	0.875 *** (0.069)	0.870 *** (0.096)
Interpretation	Level 2	0.275 *** (0.062)	0.466 *** (0.083)
Log likelihood		-2,371	-1,160
Number of observations		9,136	4,352

¹ Parentheses indicate standard errors, *** $p < 0.01$.

The order of preference for attributes differs between the two groups with MWTP for level 3 in Group A that prefers peak times in the order of Performance > Experience activities > Paid rides > Night views > Interpretation. In contrast, Group B's order of preference is Tourism vehicles > Performance > Experience activities > Night view > Interpretation. Thus, willingness to pay for performances and rides varies the most depending on the preferred time of visits. Group B visitors who prefer non-peak times have a relatively lower willingness to pay. However, considering the margin of error, the differences in payment amount in willingness to pay are not statistically significant at the 0.10 level. Group B also indicated a higher willingness to pay for Tourism vehicles, and this difference was statistically significant.

4.3. Visitors' WTP for Less Preferred Seasons

Based on preferred seasons for night tourism, groups were divided into Group C that prefers only peak seasons (spring, fall), and Group D that also prefers non-peak seasons (summer, winter). Due to seasonal characteristics of Korea, visitors are mainly concentrated during the seasons of spring and fall which are the most pleasant times to enjoy night sightseeing. Considering the frequency of visits, 46.5% of Group C visitors who only prefer peak seasons had more than three nights visits to Suwon Hwaseong Fortress, whereas 52.2% of Group D visitors who also prefer non-peak seasons had more

than three visits. This indicates that many visitors who also prefer non-peak seasons are loyal visitors to tourist attractions. In contrast to the results of the MWTP for less preferred times, the MWTP in the group that also prefers non-peak seasons may be higher.

The conditional logit model estimation results of the CE for each group are summarized in Table 5. The coefficient estimates of the payment amount in both groups are negative and statistically significant at the 0.01 level, indicating rational decision making occurred. All attribute and level coefficient estimates in both groups were positive and statistically significant.

Table 5. MWTP estimates for preferred seasons.

Attribute and Level	MWTP ¹		MWTP Gap ² (D Group – C Group)	
	Group C (Prefer Peak Seasons Only)	Group D (Prefer Non-Peak Seasons Also)		
Night view	→ Level. 2	11,975 [9719–14,401]	13,903 [8586–20,350]	1928
	→ Level. 3	11,613 [9342–13,993]	14,608 [9375–20,881]	2995
Performance	→ Level. 2	17,838 [15,287–20,713]	26,891 [20,256–35,949]	9053
	→ Level. 3	20,051 [17,573–22,839]	29,091 [22,719–37,810]	9039
Experience activities	→ Level. 2	12,637 [10,369–15,036]	24,620 [18,664–32,160]	11,983 **
	→ Level. 3	16,805 [14,391–19,368]	28,843 [22,446–37,422]	12,037 **
Tourism vehicles	→ Level. 2	16,483 [14,217–18,879]	23,871 [18,081–31,209]	7388
	→ Level. 3	16,650 [14,292–19,182]	27,573 [21,476–35,590]	10,922 **
Interpretation	→ Level. 2	5232 [3249–7222]	14,757 [10,042–20,373]	9525 **

¹ Willingness to pay is a payment amount that one is willing to pay as content is added compared to level 1. Square brackets indicate 90% confidence interval using the Krinsky–Robb [43] parametric bootstrapping. ² ** The different in payment amount is statistically significant at the 0.10 level.

The difference in MWTP in groups divided according to preferred seasons was greater than in groups divided according to preferred times. Group D that also prefers non-peak seasons was more willing to pay than Group C that only prefers peak seasons. In particular, MWTP was 1.7–2.8 times larger for paid experience activities, tourism vehicles, and interpretation, and these differences were statistically significant. The payment amount that visitors were willing to pay at level 3 were highest in the order of Performance > Experience activities > Tourism vehicles > Night view > Interpretation.

5. Discussion

The present study was an empirical examination of temporal and seasonal distribution that is considered to be a possible solution for over-tourism. The possibility of distribution was tested by comparing willingness to pay between peak and non-peak times during night tourism activities at Suwon Hwaseong Fortress, a UNESCO World Heritage site. The contribution of this study is to expand the scope of the study of over-tourism to the overlooked field of night tourism.

The results and implications are as follows. First, in terms of frequency of night tourism visits, the group that also preferred the non-peak seasons group had higher visiting frequency compared to the group that only preferred peak seasons. There was, however, no difference between peak time preferred group and non-peak time preferred group. The result of the temporal comparison indicates that, regardless of preferred time zones, night tourism activities can only be offered until 10 p.m. That is, visitors to the study site are not familiar with various night zones. However, considering Mont-Saint-Michel in France and the Taj Mahal in India, which are open from sunset to sunrise, it will be necessary to examine the possibility of expanding opening hours. The result of the seasonal comparison is in line

with substitutability that local residents and regional visitors can be made to visit during non-peak times (i.e., mornings, evenings, and weekdays) rather than at peak times [12].

Second, the comparison of willingness to pay for night tourism products between the group that preferred peak times and the group that preferred non-peak times showed that the willingness to pay was lower for all products except for tourism vehicles in the non-peak times group. The reason why willingness to pay of the non-peak times preferred group was high for tourism vehicles is that non-peak times are non-operating time zones at this site. Also, the number of seats and operating time zones of tourism vehicles are also fixed. Thus, there is an additional willingness to pay for currently non-operating time zones and to reduce inconveniences caused by overcrowding. There was also a positive willingness to pay for all attributes in the case of non-peak times preferred group. This suggests that visitors will still visit even if they are distributed to different time zones. It is thus necessary to expand gradually from the provision of services that do not cost a lot even during non-peak times. Tourism vehicles for which visitors indicate a high willingness to pay maybe a key product to attract tourists during non-peak times. This study expands the scope of night tourism with an expansion of temporal range, supporting previous studies which propose an expansion of night tourism targets [14,23].

Third, in relation to seasonal distribution, a comparison of the group that prefers only peak seasons and the group that also prefers non-peak seasons showed that the latter group showed a higher willingness to pay for all attributes. Specifically, willingness to pay was high for experience activities, tourism vehicles, and interpretation, suggesting a high preference for the avoidance of overcrowding inconveniences that occur during peak seasons for these contents. The high frequency of visits of the group that also prefers non-peak seasons seems to be influencing their high willingness to pay. These findings expand Hospers' [5] examination of the usefulness of temporal distribution by comparing visitors' willingness to pay, and provide practical implications for the applicability of temporal distribution.

6. Conclusions

For sustainable night tourism, the management of over-tourism is important. This study examined the possibility of temporal and seasonal distribution as a solution for over-tourism in night tourism by estimating the willingness to pay for peak and non-peak times of visitors to a World Heritage site. This is important in terms of sustainable development of night tourism, and the implications of this study are as follows.

First, temporal and seasonal distribution were proposed as a solution for over-tourism in night tourism. Existing over-tourism research has been conducted in a case-by-case manner without empirical testing of methods that have been carried out under the general concepts of crowding or displacement, rather than considering site or visitor characteristics [2,5,9]. However, distribution criteria should be based on an understanding of both the characteristics of the destination and its tourism resources, as well as the target market. This study thus proposed a specific distribution method based on characteristics of night tourism. Night tourism refers to tourism at all other times during which day tourism occurs. With developments in transportation, one can easily leave destinations, and the benefits of night tourism such as overnight lodging do not always occur. Late night times (i.e., after 10 p.m.) or early morning times (i.e., earlier opening times) may be effective ways of temporal distribution. Seasonal distribution methods were also presented by comparing visitors who prefer non-peak seasons in addition to general peak seasons. These solutions can be effective in attracting additional tourists by providing differentiated tourism products that consider seasonal characteristics.

Second, the choice experiment method was used to examine in more detail the distribution of night tourism visitors. Choice experiments allow estimations of the MWTP according to each attribute and level of night tourism products. The findings suggest that there are restrictions on service provision for temporal and seasonal distribution, and that emphasis should be placed on interpretation, tourism vehicles, and experience activities during which the inconveniences of overcrowding are especially felt.

Third, the applicability of temporal and seasonal distribution was tested through an examination of visitors' willingness to pay during peak or non-peak times. The distribution of visitors to non-peak times is aimed at sustainable development of target resources [9] in terms of preventing peak season crowding, improving satisfaction, and reducing fluctuations in demand, through an easing of over-tourism in night tourism. In addition, it is possible to broaden the field of night tourism by targeting time zones during which night tourism content is not yet provided. Thus, in order to avoid crowding during peak times and lower quality tourism experiences, there is a need to provide both pleasant and differentiated experience activities during non-peak times for visitors.

Finally, similar to previous studies that examined the characteristics of potentially distributable groups [11,12,27], this study examined characteristics of the group of visitors that preferred non-peak times. According to Manning [12], visit frequency may still be high for local residents and regional visitors even if time zones are changed. Providing support for this, visitors who also preferred non-peak seasons had a high number of night tourism experiences at the study site (22.4 average visits vs. 13.2 average visits for peak times). The non-peak preference group can be seen as loyal customers for whom various strategies such as discounts, and time zone or season specific services and product development are needed. The results of this study indicated a high willingness to pay for night tourism experience activities, tourism vehicles, and interpretation, allowing specific distribution strategies to be established.

Given the exploratory nature of this study in which just the possibility of distribution was tested, the intention to visit based on specific services/products was not directly examined. For actualization of distribution, more detailed research is needed on so-called loyal customers who are likely to visit frequently. Through big data analysis, visit patterns by times/seasons should be obtained, and basic distribution data should be prepared in order to break down time zones and seasons in more detail. Since this study is about the specific case on over-tourism of night tourism, to generalize the results more researches are needed in other cases. In addition, to introduce a temporal distribution as a solution for over-tourism, the incentives for workers and local residents, who provide the services, should be considered. Despite theoretical and practical limitations, the present study is meaningful in that it pursues sustainable development through elimination of over-tourism in night tourism at a World Heritage site by testing the possibility of distribution in more detail using visitors' willingness to pay.

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Article

The Relationship of Subjective Well-Being in Residents' Perceptions of the Impacts of Overtourism in the City of Blumenau, Santa Catarina, Brazil

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Abstract: Tourism is an expanding sector, and it is one of the priorities of individuals seeking leisure. While the activity is developing rapidly, the increase in the flow of tourists in localities has interfered with the residents' subjective well-being, generating a feeling of "excess of tourism." Overtourism is associated with destinations that suffer from the tension of tourism when the maximum number of people who can visit a tourist destination at the same time is exceeded. Therefore, this study aims to correlate the relationship between the subjective well-being of the residents of Blumenau and the perceptions of excessive tourism in their territory of residence. To this end, a survey was carried out, with a quantitative approach with 400 residents of Blumenau, Santa Catarina, Brazil. The survey results demonstrate that the subjective well-being of the autochthonous population correlates with tolerance to overtourism. Thus, the research has practical and managerial implications for tourist destinations. Managers must develop means for the subjective well-being of the population to be high, thus contributing to the decrease in the feeling of overtourism.

Keywords: overtourism; subjective well-being; residents; festivals; tourism consequences

1. Introduction

Tourism is an essential global activity as it develops local economies, promotes the development of activity in new destinations, and motivates individuals to leave their daily territory seeking new experiences. The increase in the movement of people worldwide, as well as the strengthening of destinations as "a strong brand," causes several impacts, including overtourism, which shows a substantial threat to places already consolidated in tourism [1,2]. Insh [2] proved this fact by arguing that, currently, two out of five European residents believe that the number of tourists represents a threat to Europe's cultural heritage. The term overtourism is recent in academic research, it appeared in 2016, used by Skift [3], and has been increasingly disseminated and used as a focus of research due to its relevance for tourism. The Responsible Tourism Partnership [4] (p. 1), conceptualizes overtourism as "destinations where hosts or guests, locals or visitors, feel that there are too many visitors and that the quality of life in the area or the quality of the experience has deteriorated unacceptably." Thus, there is a complexity of the consequences suffered by the most diverse agents involved within a destination, since in addition to residents, this phenomenon can also affect tourists, investors, and, consequently, the sustainability and economy of the destination [5].

Tourism can also affect the subjective well-being of residents, as it affects the other areas of their lives—economic, social, cultural, and environmental. Although the interest in the perceived impacts

of tourism and the residents' quality of life has increased, and some research on this relationship is ongoing, there are still doubts about how residents' well-being is affected by tourists [6]. Ivlevs [7] (p.1) highlights that "understanding the effects of tourism on host populations has long been a question of primary importance for both academics and policymakers." Considering the overtourism characteristics and its consequences on residents' well-being, we need to analyze its influence within the context of a festival. Some festivals, including the Oktoberfest in Blumenau, were created seeking to promote and value German culture [8,9]. Due to their characteristics and the possibility of attracting visitors, currently, it has been increasingly used by destinations as a tourism product. It is attracting a significant number of tourists who wish to know and feel part of a new culture and also generating a possibility of leisure and entertainment for tourists and visitors.

However, Yolal et al. [9] state that if the residents perceive the development of the festival as a problem for their daily lives, they will develop a feeling of anti-tourism. If the negative impacts of such a development outweigh the positive ones, the tendency is that the community will not support the event in their city. It is understood, then, that if the increase in the flow of tourists is much higher than the capacity of the city, this can directly affect the residents' well-being, thus generating a feeling of overtourism. In addition to the residents' feeling of well-being, the excess of tourists visiting the same destination in a short period, due to festival schedules, can also directly influence the generation of irreversible impacts on the receiving community [10]. Thus, the ability of a destination to assess the subjective well-being of residents and its ability to support visitors can assist in the sustainability of the location [9,11]. There is a concern on the part of festival visitors, who are increasingly aware of the environmental and social responsibility of the organizers of the events they attend. Therefore, sustainability is becoming a must for events and destinations [12,13]. Sustainability should not be measured only through environmental aspects, but also to the social, economic, and cultural changes that residents can endure without this interfering in an extremely negative way in their routine [14,15] throughout the year and not just during the period of the festival [16–18].

An example of a Brazilian destination that suffers a considerable population increase during a festival is the city of Blumenau. The municipality is in the State of Santa Catarina, southern Brazil, and has held the Oktoberfest since 1984, considered the largest Oktoberfest in the Americas and the second largest in the world [19]. The festival's program includes a series of activities that seek to demonstrate to the residents and tourists the "folklore and cultural wealth, brought in the passion for music, dances, and typical German cuisine, striking elements of the Germanic traditions brought to Santa Catarina by the colonizers" [19] (p. 100).

According to data from the Brazilian Institute of Geography and Statistics (IBGE) [20], the city that was colonized by Germans has approximately 357,000 inhabitants (third municipality with the highest population density in Santa Catarina) and received an amount of approximately 576.5 thousand visitors during the 19 days of celebration in 2019 [21]. Thus, the importance of holding the event for Blumenau is perceived, since it is currently the main tourist product of the destination, responsible for triggering the entire tourism industry during its realization. Based on this, more studies seeking to understand the residents' perception of the festival in their city, seeking to identify how they experience the changes caused by the significantly increased tourists flow driven by the Oktoberfest and its relationship with the well-being of individuals.

In addition to the managerial contribution, this research adds relevant theoretical data for different themes—such as festivals, subjective well-being, and overtourism—which, when combined, bring the originality to the research. Thus, this research aims to analyze the relationship between the subjective well-being of Blumenau residents (Santa Catarina, Brazil) with the perceptions about the impacts of excessive tourism in their territory of residence. To achieve our purpose, we structured the research into six sections. Initially, the introduction seeks to contextualize and justify the choice of the theme and, consequently, to present the goals of the study. Subsequently, a literature review on well-being and overtourism is carried out. The second section presents the methodology adopted in the construction

of the work. The results and conclusions are presented in the third and fourth sections, respectively. Finally, the fifth section contains the references used in the theoretical framework.

1.1. Subjective Well-Being

Happiness and unhappiness are not separate dimensions since they can be perceived differently, and they are part of the same phenomenon [22]. Based on this understanding, many researchers have been more concerned with understanding the processes that cause and influence happiness than with analyzing demographic variables that correlate with it [23], showing interest in understanding the implications between meeting needs, quality of life, and subjective well-being.

Well-being concerns the quality of life lived in the present, “right here right now,” and its support for future generations [24], that is, the authors incorporate the principles of sustainability into the concept of well-being. Other studies that link these two themes reinforce that the focus of these researchers is precisely on increasing or sustaining the well-being of a location or event [24–26].

We have to consider that “we are beings of multiple and interdependent needs. Simultaneities, complementarities, and compensations are characteristic of the dynamics of the process of satisfying needs” [27] (p. 37). In this aspect, Wilson [28] emphasizes that satisfaction depends on the individual’s levels of adaptation or aspirations, which are influenced by previous experiences, comparisons with other individuals, and personal values.

The control of individual satisfactions, people’s emotional responses to different situations, and the global judgment of life satisfaction are included in a broad category of phenomena that compose subjective well-being [23]. Yolal et al. [9] understand subjective well-being as the result of cognitive and emotional assessments that people obtain and how it affects satisfaction with their life. Mendes et al. [29] claim that happiness, through well-being [9], and satisfaction with life [30] play a fundamental role in people’s quality of life. It is no wonder that studies that make this relationship between happiness and quality of life have been increasing in recent years [29].

Nawijn [30] states that happiness can be understood as satisfaction with life. This happiness presupposes the general assessment of life, which is based on how well people feel and how life adjusts to their desires. Sirgy et al. [31] compare the levels of satisfaction to a pyramid, where the top characterizes satisfaction in general, the middle and the base of the pyramid are the other domains of life satisfaction, such as, for example, satisfaction with family, with the community, belonging, work, health, and social life.

According to the authors, satisfaction with life is strongly related to satisfaction with all areas of life. Therefore, the higher the satisfaction in the several domains of life, the higher the general satisfaction with life itself and, consequently, the higher the individual’s happiness. Tourism is an example of a component of life’s domains since participating in tourism activities contributes to the individual’s sense of well-being [32].

Tourism studies that have focused on discussions related to the good life and human activities have been represented by a range of terms inspired by philosophy and psychology, such as quality of life, life satisfaction, happiness, and well-being [6]. Lee et al. [33] suggest that the tourist’s happiness is influenced by the positive experience they had at the destination, also stating that the tourist seeks happiness through a satisfactory tourist activity.

Yolal et al. [9] investigated how the participation of residents in local festivals can influence their subjective well-being and their quality of life. Among the main results, the higher the perceived community benefits of festivals, the more significant the impacts on the residents’ subjective well-being. Another positive relationship was between cultural/educational benefits and the well-being of the residents. However, concerns about the quality of life, which involve vandalism, traffic, and noise levels during a festival, have harmed the sense of well-being of residents.

On the other hand, the study carried out by Ivlevs [7], in 32 countries over 12 years, pointed out that with the increasing arrival of tourists to a particular destination, the subjective well-being of residents decreases, especially in terms of satisfaction with life. The author notes that tourism,

on the one hand, brings benefits to the local community through the modernization of recreational facilities, cultural revitalization, organization of festivals, investments in tourism, and environmental infrastructure. In contrast, tourism activity can increase the local cost of living, contribute to the increase in noise pollution, agglomeration, traffic, crime problems, contributing to the decrease in the residents' well-being. In addition to the assessment related to the subjective well-being perceived by residents, the concept of overtourism is also directly related to how much the destination can deal effectively with the social and environmental effects generated by the tourist activity in its territory [2,34].

1.2. Overtourism

The term excessive tourism, or overtourism, is used to describe a situation in which the activity ends up uncontrollably influencing the quality of life of residents and, consequently, the experiences of tourists who visit the destination [35]. Milano et al. [5] argue that when the destination reaches this capacity, it ends up being overloaded by additional tourists and consequently does not develop sustainably. It should be noted that overtourism is not a synonym for overcrowding, but a situation where the number of visitors overloads the services and facilities available at the destination. Above all, it becomes an inconvenience for residents [10,16].

Mihalič and Kuščer [36] argue that the effects caused by overtourism are directly linked to the sustainability of the destination. The World Tourism Organization [35] states that overtourism affects the social sustainability of the interaction between residents and tourists when the number of visitors in the destination affects the quality of life, or the experience has deteriorated more than the local population was willing to accept.

This is demonstrated in the study by Kuščer and Mihalič [37], who realized that the positive, sustainable impacts of tourism reduced the perception of Ljubljana residents about overtourism and even improved their view on the responsible management of the local Target management organizations, which consequently increased satisfaction with life at the destination. The results achieved in this research are similar to those found by Jamieson [38], who realized that destination managers must pay attention to the effects of excessive tourism in the social, environmental, and economic aspects of destinations that explore the activity.

The relationship between sustainability and overtourism was also addressed in the study by Cheung and Li [32]. In Hong Kong's context, managers must pay attention to the deterioration of relations between residents and tourists promoted by the impacts generated by tourism in the destination. As result, the authors also realized that for there to be no anti-tourism feeling, tourism resilience must be developed, and sustainable growth in Hong Kong should be explored.

Amore et al. [39] proved in their study that the feeling of overtourism and the perception of sustainable development of the destination are not directly linked to the number of visitors in the locality, but rather, to how much the residents can support. The results showed that many of the cities studied have below-average overtourism potential, which contrasts with the extensive media coverage surrounding the problem of overtourism that each city is facing. Thus, when the adverse effects of the tourist activity outweigh the benefits generated by the activity, a negative feeling may arise in the residents regarding the development of tourism in their destination [1,40,41]. Overtourism has been considered one of the greatest threats to global tourism development [34,42].

Koens et al. [43] and Phi [40] argue that it should be analyzed whether residents' perception of the negative impacts of tourism not only concerns the actual number of tourists visiting the destination but whether this presence is also aggravated under changes brought about in the community motivated by the presence of visitors. Insch [2] adds that tourism should generate local and global environmental benefits, providing an improvement in the residents' quality of life and, from the moment that this does not occur, the tendency is for anti-tourism feelings to grow in the destination.

Despite the relevance of analyzing the influencing aspects of overtourism in destinations, authors such as Capocchi et al. [1], Carballo et al. [44], and Insch [2], encourage research to understand how the process of development of anti-tourism feelings occurs, with regard to overtourism and

consequently the decline of destinations influenced by such phenomena. As already mentioned, this term has been used in the literature for a short time; it came out in 2016 [3]. Thus, it still needs more considerable attention and acclamation within the academia, so that it has greater visibility and depth in the analysis of the relationships between the residents' well-being and the perception of excessive tourism. Carballo et al. [44] further argue that research related to the theme has been approached as theoretical insights and reflections. However, they still need specific variables and scales that can measure the residents' feelings of overtourism.

Among the aspects related to the excess of tourism in a community, vandalism has been pointed out in research as a significant negative impact on the support or rejection of the residents toward the development of tourism in their territory of residence [7,8,45,46]. The increased flow of tourists within a destination and the possible increase in the number of police occurrences can decrease the residents' sense of security and their well-being in their locality [43].

When surveying in order to understand the attitudes of Ibiza residents about tourism in the destination, Serra-Cantalops and Ramon-Cardona [47] realized that these are divided into three groups: supporters, opponents, and light opponents. Residents, in general, realize that nightclubs and parties are fundamental to the image of Ibiza as a tourist destination. However, the noise perceived in the community is the primary motivator of opposition to tourism by opponents and light opponents. These groups claim that the movement promoted by the activity in the territory, makes the noise levels of tourists unacceptable, making the destination an "open-air party," reducing the quality of the tourist experience.

The results of the research presented here demonstrate different influencing aspects of the residents' perceptions of overtourism. Namberger et al. [48] and Smith et al. [46] argue that, among other aspects, the increased people flow circulating in the territory and, consequently, the overcrowding of traffic and access is a primary generator of anti-tourism feeling motivated by excess demand. Namberger et al. [48] in their study on the overtourism feeling during Munich's Oktoberfest, revealed that the city residents perceived a component of local disturbance caused by tourism. A growing crowd of tourists who generated local disturbances mainly due to cultural differences between groups, discouraging residents from receiving new visitors.

The results also show that destinations that use events and festivals as the main tourist product tend to directly cause concerns among their residents about the increase in the flow of visitors to the destination. In the case of festivals, Yolal et al. [9] argue that during the period of holding such events, there is a substantial increase in the number of visitors in cities, and this lasts for a short time (only as long as the festival's program exists). This means that residents do not adequately perceive the benefits generated by the festival achievement.

Thus, the perception is that their routine is directly altered, there is a considerable increase in the displacement of people and means of transportation [8,48], increase in sound and noise levels [8,47], vandalism and violent trends in the city [45], generating a feeling opposed to the achievement of festivals and events and, consequently, reducing their well-being in the destination [9]. It is worth mentioning that in most cases, the festival's participants are predominantly residents, reinforcing the argument that building relationships with communities over time is fundamental to the success of these events and should be adopted as a central management activity [49].

2. Materials and Methods

This paper has an exploratory, descriptive character with a predominantly quantitative approach. Quantitative research understands the reality based on the analysis of raw data, collected from standardized and neutral instruments. Unlike qualitative research, quantitative research understands that everything can be measurable, that is, to demonstrate the opinions and information collected in numbers. This type of research focuses on objectivity [50–52]. This study was developed in four stages, a documentary and bibliographic review, referring to the research theme; data collection and methodology; analysis of the collected data; and, finally, the discussion and conclusion.

The first stage used the bibliographic and documentary review as a technical procedure in order to support the research, in addition to supporting the construction of the data collection instrument. The second stage, characterized by data collection, was performed through the Focus project and carried out by Publicity and Advertising students at the Regional University of Blumenau (FURB). They used the stratification in the 36 neighborhoods of the city of Blumenau, Santa Catarina, Brazil, as a sampling technique.

The data collection took place between the 3rd and 16th of September 2019 through the application of a structured self-filling questionnaire, composed of two dimensional analysis: the subjective well-being of residents (three items) and the overtourism feeling (three items), which were extracted from the study by Yolal et al. [9]. The six variables were measured with staggered responses of agreement and importance (not at all satisfied, not very satisfied, neither satisfied nor dissatisfied, or indifferent, satisfied, and very satisfied).

The survey, which adopted a 95% confidence interval and a 5% error margin, covered the population of Blumenau aged 16 years and over. A sample of 400 respondents was selected, segmented by sex (200 men and 200 women), age group (from 16 to 34 years, from 35 to 59 years, and 60 years or more) and average income (up to R\$ 3000, from R\$ 3001 to R\$ 8000, and over R\$ 8000).

Descriptive and multivariate statistical treatments were applied in order to measure the relationships between the variables analyzed, according to the proposed objective. This way, Microsoft Office Excel Software was used in the process of tabulation of the collected data, and later IBM SPSS Statistics 25 was used for the analysis of the results. For the analysis, we used simple descriptive statistics: through frequencies and averages and multivariate techniques, univariate analysis of variance (ANOVA), and Mann–Whitney in order to find statistically significant differences between the groups analyzed.

3. Results and Discussion

Through a stratified sample, applied in 36 neighborhoods of Blumenau, we sought to analyze the opinions of 400 respondents living in the city, aged 16 or over, in the period from 3rd to 16th September. Of these 400 valid questionnaires, 202 (50.5%) were men, 50% were between 16 and 35, 33.5% were from 36 to 59, and 16.5% were 60 or older. About the respondents' average monthly family income, the majority showed that they received between R\$ 3001 and R\$ 8000 (54%), with the remaining receiving up to R\$ 3000 (30.3%) and over R\$ 8000 (15.8%).

About the means found regarding the subjective well-being of Blumenau residents and their perception of overtourism in the destination, it appears that the variables most perceived by residents are the problems related to the excess of tourists in the receiving destination, such as traffic conflicts (3.91) and vandalism (3.58) generated by the Oktoberfest. The variable referring to the residents' subjective well-being most perceived by them is the one that represents the happiness in participating in the festival, with an average of 3.48.

The results presented show that the community is happy to participate in the festival, but still realizes that the costs generated by it still exceed the feeling (Table 1). Such results are in line with what was exposed by Lee et al. [33], who states that the positive experience influences happiness in the destination, where tourists (focus of their study, but it also applies to the context of residents) seek happiness through a satisfactory tourist activity. Therefore, it appears that the perception of the negative impacts of Oktoberfest in Blumenau may be affecting the happiness of residents with the festival in their community.

Table 1. Averages related to the feeling of overtourism and subjective well-being of Blumenau residents.

Variable	Average	Standard Deviation
Traffic problems, involving cars and buses, increase to unacceptable levels during the party.	3.91	1.131
Vandalism increases in the city during Oktoberfest.	3.58	1.198
Participating in Oktoberfest makes me very happy.	3.48	1.341
The noise in the streets increases unacceptably during Oktoberfest.	3.29	1.279
Participating in Oktoberfest makes me feel much better about things and myself.	2.90	1.343
Somehow, Oktoberfest improves my life.	2.76	1.331

Source: research data (2018).

On the other hand, residents demonstrated to perceive less the variables related to subjective well-being, since “feeling better about things and myself” after attending Oktoberfest and the fact that the festival improves the respondents’ lives were the variables with lowest averages: 2.9 and 2.76, respectively. Thus, it appears that the population already shows characteristic traits of overtourism, perceiving predominantly negative aspects of the festival in their community. The results are similar to those found by Namberger et al. [48], who also analyzed the residents’ opinion about holding an Oktoberfest.

The averages found in the present research, as well as the results generated by them, are also similar to those perceived by Ivlevs [7] and Yolal et al. [9]. In both contexts of analysis, concerns about the quality of life have had negative impacts on the residents’ sense of well-being. The conflicts generated by the increased flow of tourists in the destination cause the residents’ happiness to decrease significantly, making them perceive more sharply the costs of the activity in their community.

Subsequently, respondents were divided into two groups. The first group consisted of Blumenau residents who perceived a low average of well-being about the Oktoberfest at their destination (with averages between 1 and 3.99). The second group consisted of the portion of respondents who feel greater well-being in the festival, with averages between 4 and 5. The results found in the survey showed that the vast majority of Blumenau residents (73.3%) belonged to the first group, that is, they had low well-being concerning the largest festival held in their place of residence. Only 26.8% of residents showed that they belong to the second group.

These findings can be directly related to the descriptive statistics found in the research. The averages demonstrate that the residents predominantly perceive negative aspects related to the excess of tourists in Blumenau during the Oktoberfest. This finding corroborates what was exposed by Capocchi et al. [1] and Ivlevs [7], who also found that the feeling of overtourism and the perception of negative impacts promoted by tourism, cause discomfort or decreased the well-being of residents.

In order to assess more deeply the difference between groups of residents, two tests were performed, the univariate analysis of variance (ANOVA) and the Mann–Whitney. The first sought to determine, based on a dependent measure, whether samples came from populations with equal averages [1]. The second, on the other hand, is indicated for comparison of two unpaired groups, present in non-normal samples, to verify whether they belong to the same population [53]. It was decided to carry out the two tests due to the significant difference between the participants in each group. The results of the two tests were similar, demonstrating the existence of a statistically significant difference between the groups at a level of 0.001 in the first test and 0.000 in the second.

The results found in ANOVA regarding the residents’ well-being at the Oktoberfest in Blumenau and its relationship with the overtourism feeling are shown in Table 2. In the Mann–Whitney test, the results were similar to the U value Mann–Whitney with 0.000 significance, Wilcoxon W of 43,071.000, Z value being −15.380, and bilateral significance at a level of 0.000.

Table 2. Univariate analysis of variance related to the well-being of Blumenau residents and the overtourism feeling.

	Sum of Squares	Degrees of Freedom	Average Square	F	Sig.
Between Groups	8.576	1	8.576	10.571	0.001
In groups	322.061	397	0.811		
Total	330.637	398			

Source: research data (2018).

Based on the results found in the ANOVA and Mann–Whitney tests, there are statistically significant differences between the two groups initially determined. Thereby, it can be assumed that Blumenau residents can be divided between those who have lower well-being with the Oktoberfest in the city and those who have higher well-being. These results are in line with the study applied by Yolal et al. [9], who identified both positive and negative influences on festivals and residents' well-being.

It is worth mentioning that there are signs that there is a certain level of rejection to the development of the festival since the majority of the population claims that it does not generate well-being in Blumenau. These findings are similar to the ones found by Ivlevs [7], which pointed out an increase in the arrival of tourists to a specific destination or the subjective residents' well-being.

Related to the overtourism feeling among Blumenau residents, the group of those with low–average well-being at the Oktoberfest in the destination had a higher level of overtourism feeling ($m = 3.7$). The second group, the ones with high–average well-being, had a lower overtourism feeling ($m = 3.35$), which means that the lower the feeling of well-being of the residents, the higher they will tend to feel uncomfortable with the changes caused by the increase in the flow of tourists to the destination.

The results are in line with the majority of research related to residents' attitudes about the excess of tourism or its impacts on the communities receiving the activity [8,45]. However, the research sought to analyze, among other aspects, the general attitude of residents. This paper aimed to relate the influence of residents' well-being in generating feelings about the excess of tourism in the destination.

Finally, as the main managerial contribution, we can state that for the long-term sustainable development of festivals in destinations, besides investing in social and infrastructure improvements for residents, managers also have to provide and motivate the feeling of objective and subjective well-being of the natives. This is because the residents' feeling of well-being can increase tolerance to the negative impacts promoted by the increased flow of tourists in the destinations.

This statement is in accordance with previous studies [6,29]. For the authors, tourism development should not compromise the residents' well-being, and, knowing the impacts of happiness on the tourists' lives, one can work strategically to improve the activity, motivation, and engagement of tourists. The results of the present research prove that this context also represents the happiness of the residents of destinations that conduct festivals.

4. Conclusions

This research aimed to unite two emerging themes in the scientific literature that remain little explored within the context of festivals: the subjective well-being (happiness) and the residents' feeling of overtourism. Thus, we seek to analyze the relationship between the subjective well-being of Blumenau residents (Santa Catarina, Brazil) with their perceptions about the impacts of excessive tourism during the Oktoberfest.

The object of study was chosen due to its relevance in the national context since it is currently considered the largest Germanic festival in Brazil. Its realization directly changes the routines of the residents, also affecting the destination's tourism sustainability, due to a large number of tourists circulating in the city in a short period.

The results had two main implications, theoretical and managerial. The main theoretical result demonstrates a statistically significant difference in residents' perception regarding the overtourism

feeling in the realization of a cultural festival in their city. Residents with less sense of well-being with the Oktoberfest were demonstrated to perceive in a more obvious way the negative impacts of the Oktoberfest in the community. That is, they were demonstrated to perceive the conflicts generated by the excess of tourism in the place.

The present research advances the current literature on overtourism, providing a new perspective on the theme. It is worth mentioning that the residents' well-being and their sense of overtourism can directly influence the development of Oktoberfest's social and cultural sustainability. Moreover, the residents' happiness and their ability to withstand the intense flow of visitors in Blumenau can interfere directly with support or rejection of the festival.

Regarding management implications, the results revealed the relevance of managers' performance in implementing the local culture and identity in the festival schedule. It is not enough to have community participation in the realization of the festival; managerial attitudes must be taken in order to increase the residents' well-being so that they have more positive attitudes toward the tourist activity in their place of residence. Such findings can be a great competitive advantage in the destination management, which can be implemented and executed without high financial costs, but with a more considerable effort in expanding the sense of well-being and happiness of the natives.

This research also provides managerial and political implications regarding the residents' subjective well-being, overtourism, and destination sustainability. The findings corroborate the existing research, which argues that destination managers should consider the residents' overtourism feeling seeking the sustainable development of tourism in their territory. The present study also proved this relationship about subjective well-being. It also adds that, in the political vision of the management, this context must be considered not only concerning the Oktoberfest in Blumenau but also on the tourist activity throughout the year in the city.

Despite the significant theoretical and managerial contribution to the scientific literature on subjective well-being and excessive tourism in destinations, the present research had some limitations. Among them are the lack of tested and valid empirical instruments in tourism and festivals area that could more deeply measure the residents' overtourism feeling. The low number of publications on the excess of tourism and its relationship with residents was also a limiting issue in the theoretical construction of the present study.

As suggestions for future studies, we suggest the development of an expanded scale that has a greater focus on the relationship between subjective well-being and excessive tourism. We also suggest applying it in a different context, in order to identify whether the significant difference between the two groups of residents found here is present only in festival contexts or whether this finding can be generalized to the different existing contexts in the tourism industry. Finally, new research can carry out different analyses, such as clusters, seeking to identify new groups of residents, according to their feelings of subjective well-being and sense of overtourism.

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Article

Reasons and Consequences of Overtourism in Contemporary Cities—Knowledge Gaps and Future Research

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Abstract: Even though overtourism became the object of extensive scientific research only three years ago, different definitions and approaches to the issue can be seen. However, it is still in the initial phase of research, and there are numerous gaps in our knowledge of the reasons and solutions to this issue. The main aim of the paper is to summarize different approaches and points of view on the overtourism issue. This includes searching for reasons of tension between tourists and visitors in particular destinations. They are presented partially in tourism literature but also in the literature dealing with urban studies, sustainable development and other areas. This aim was achieved through a literature review and the deduction method. The paper identifies several different factors that stimulate overtourism. Some of them are acknowledged in most publications. They are a growing number of tourists, new solutions in the information technologies (IT) business and the availability of cheap flights. Other factors such as management mistakes in particular destinations are underlined from time to time. Finally, some factors are expressed very rarely. They are the growing popularity of city tourism and the shift from 3S (sea, sun and sand) to 3E (education, experience, entertainment) tourism. Identification and general overview of those factors is intended to be an important contribution to the contemporary scientific knowledge on overtourism. The analysis of the factors recognized allowed to point out significant weaknesses of our contemporary knowledge on overtourism. A radical shift of the approach to the governance of cities as tourism destinations, as well as filling theoretical gaps and creating effective tools to manage tourism development in cities are postulated. Several directions of the future research are presented in the conclusions of the paper. Some practical recommendations for decision-makers in particular cities are also included.

Keywords: overtourism; tourism-phobia; tourism in cities; tourist gentrification; impact of tourism; experience economy

1. Introduction

Negative consequences of tourism development were acknowledged and researched for many years [1], including issues of overcrowding, carrying capacities [2,3] and guests-residents relationships or community antagonism [4]. That is why the term “overtourism” might be perceived as old wine in a new bottle [5]. According to Capocchi et al. [6] p. 10, what is new is mainly the level of awareness of the possibly damaging effects of the continual quantitative growth of mass tourism. Phi [1] added that the current overtourism debate continues many of the issues on tourism development that were undertaken previously, yet, now, they take place in a much wider range of destinations, and they are much more complex, which is a guarantee that they will be explored further [7]. However, it is often justified to perceive “overtourism” as a term that enriches our terminology and our knowledge about tourism development, since it appeared as a result of changed conditions of contemporary tourism development and it is intended to illustrate the process typical for the second decade of the

21st century [1,5]. The negative impact of tourism development has recently been associated with terms such as anti-tourism movements, tourism-phobia, tourist-phobia and overcrowding [7] p. 25. Higgins-Desbiolles et al. [8] p. 16 described the conflicts represented by overtourism as a wake-up call as tourism should be reclaimed from an industry that has defined it as a business sector to accumulate their profit, to a human endeavor based on the rights and interests of local communities in welcoming tourists. While causing reductions in the quality of service of a tourist destination and rejection by the local population, overtourism spoils the positive economic and social results produced by the tourism sector [9]. In numerous popular tourist destinations where the harmful effects of overtourism occurred, any previous consensus on the desirability of continuous quantitative tourism growth for the sake of maximizing the economic benefits of tourism, without fully considering the side effects that can be destructive to the social, cultural and ecological environments, has come under intense pressure from the civil society and local populations.

The main aim of the paper is to summarize different approaches and points of view on the overtourism issue, including searching for reasons for tension between tourists and visitors in particular destinations. They are presented partially in tourism literature but also in the literature dealing with urban studies, sustainable development and other areas. This aim was achieved through a literature review and the deduction method. As a result, by summing up pieces of information already presented but in a very scattered way in the contemporary literature, it was possible to present two different approaches to overtourism as well as strengths and weaknesses of the contemporary knowledge on this issue. Referencing many different scientific sources enabled capturing of few factors possibly supporting overtourism and tourism-phobia that were not analyzed in most of the contemporary publications. Those factors are mainly connected with the way tourism develops in particular cities. It was assumed that in the case of contemporary cities, tourism development involves a bigger number of inhabitants with much different attitudes and expectations than in traditional tourism resorts. Those inhabitants are confronted with tourists' behavior that might be evolving quickly, but often does not consider local society as more than a group of people delivering services for visitors. Growing awareness and education of tourists in many cases may not help this situation as those aware tourists in their search for authentic experiences often disrupt local people's everyday life. The most important scientific output of the paper is connected with significant gaps in the scientific knowledge which were identified. Those gaps are to be perceived as the most urgent directions for future research within the field. Additionally, some practical recommendations are offered.

The paper is organized as follows: in the first part of the paper, the notion of overtourism and different approaches to the issue are deliberated. In the next parts, potential reasons of overtourism are presented starting from those that are acknowledged in most of the publications, such as growing number of tourists or new solutions in IT business, through those that are underlined from time to time, such as management mistakes in particular destinations, and finishing with those that are expressed very rarely, such as growing popularity of city tourism and the shift from 3S to 3E tourism. The paper ends with conclusions and limitations.

2. Overtourism—In Search for a Definition

Even though overtourism is a new phenomenon and a new subject of scientific research, there are several definitions presented thus far in the literature. Most authors agree that it is tough to present a commonly accepted definition of overtourism. Koens et al. [10] suggest that the term overtourism largely arose from media discourses without a solid theoretical foundation. This new concept can be considered "blurred" because it is not well defined, it lacks clarity and it is very difficult to make it operational [6] p. 8. That is why overtourism remains open to multiple interpretations [10] p. 1. Furthermore, the term overtourism does not describe a single phenomenon but a multitude of phenomena that converge and overlap expressing a new trend worth being analyzed [6] p. 15. Table 1 presents some of the definitions of overtourism presented in the literature. It is evident from this table

that most of the definitions link overtourism to congestion and failing infrastructures and increased resistance toward tourism and a protest against it among marginalized and displaced inhabitants.

Table 1. Definitions of overtourism presented in the literature.

Source	Definition	Factors Defining Overtourism
UNWTO [11], p. 4	A situation in which the impact of tourism on a destination, or parts thereof, excessively influences the perceived quality of life of citizens and/or visitors in a negative way.	Impacts, harm in citizens' quality of life
Peeters et al. [12] p. 11	Overtourism describes the situation in which the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological and/or political capacity thresholds.	Impacts, crossing capacities
Higgins-Desbiolles et al. [8] p. 6	Overtourism describes a situation in which a tourism destination exceeds its carrying capacity—in physical and/or psychological terms.	Exceeding capacities
Goodwin [13] p. 1	Overtourism is about destinations where hosts or guests, locals or visitors, feel that there are too many visitors and that the quality of life in the area or the quality of the experience has deteriorated unacceptably.	Overcrowding, harm in citizens' quality of life, harm in tourists' experiences
Butler [14] p. 635	Overtourism represents a situation in which some numbers of visitors overload the services and facilities available and also become a serious inconvenience for permanent residents of these locations.	Overcrowding, harm in citizens' quality of life
Milano et al. [7] p. 354	The excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have caused permanent changes to their lifestyles, denied access to amenities and damaged their general well-being.	Overcrowding, harm in citizens' quality of life
Perkumienė, Pranskūnienė [5] p. 2138	Overtourism is characterized by an excessive number of visitors, which affects the quality of the region.	Overcrowding, harm in citizens' quality of life

Two attitudes towards overtourism might be found in the literature. (Table 2) The first attitude, the wide approach, perceives overtourism as a phenomenon that can be seen in many different places. Sometimes this is stated explicitly, like in Peeters et al. [12] p. 16, who stated that the most vulnerable destinations are not necessarily cities, but rather coastal, islands and rural heritage sites. In other publications, this approach can be seen by a selection of places where overtourism is analyzed [12,15,17]. The second approach relates overtourism entirely to cities [1,5,10,18,19]. This paper follows the second point of view presented as it is concentrated on the reasons and consequences of overtourism typical for cities. In the urban context, overtourism means not only the growing numbers of visitors together with the growing problems it causes, but it additionally involves new phenomena such as tourism-phobia.

Table 2. Two approaches to overtourism.

Wide Approach—Overtourism might be Observable in All Kinds of Destinations			Narrow Approach—Overtourism is Typical for Cities		
Publications	Selection of cases	Direct support of the approach	Publications	Selection of cases	Direct support of the approach
Peeters et al. [12]	Different destinations across Europe including rural, mountain and other nature-based regions	<i>The most vulnerable destinations are not necessarily cities, but rather coastal, islands and rural heritage sites [p. 16]</i>	Milano [15]	Venice, Berlin, Barcelona	Among the effects of overtourism congestion of public spaces in city centers and the rise in housing prices are mentioned [p. 7]
Dodds & Butler [16]	Cities (Barcelona), countries (Thailand), islands (Boracay)		Koens et al. [10]	13 European cities	The whole paper concentrates on cities
Stanchev [17]	Cities (Prague, Dubrovnik) and islands (Santorini, Majorca)		Capocchi et al. [6]	Venice	<i>In this context, the term "overtourism" has begun to be used in the recent literature with particular regard to models of tourism development, some city destinations, and issues of sustainability [p. 1]</i>
			Phi [1]		<i>Modern overtourism essentially takes place in the urban areas [p. 3]</i>
			Namberger et al. [18]	Munich	<i>City destinations are particularly interesting study areas for overtourism [p. 453]</i>

According to Peeters et al. [12] p. 21, by its very nature, the overtourism phenomenon is associated with high numbers of tourists, the type and time frame of their visits and a destination's carrying capacity. Thus, overtourism may appear when the number of tourists in a particular place is extremely high. However, overtourism is not just the same as the phenomenon of overcrowding, which is commonly known and has been researched for many years [15]. Too many tourists in a particular place is not enough to call it overtourism. According to the definition by Peeters et al. [12], the key factor is the impact of tourism. However, destinations with tourism development that approach or exceed their ecological capacities were identified and researched plenty of times, thus, this problem is not to be perceived as a new phenomenon defining overtourism. In fact, what is new (or most likely forgotten in tourism research for the last few decades) in the definition by Peeters et al. [12] is a social capacity [18].

At the very beginning of the research on tourism impacts, it is possible to find many works [20–22] on the social impact of mass tourism under the heading of alternative tourism, which was one of the very important topics of tourism studies between the 1960s and the 1980s. Mass tourism, which was growing fast at that time, was perceived negatively, as local societies in particular destinations were excluded from economic benefits and were bearing the social and cultural costs of its development. Additionally, tourists were consuming poor, culturally inauthentic products [23,24]. Unfortunately, it appeared that small scale alternative tourism cannot be a proper solution to solve the global problem of mass tourism. The outcome of the alternative studies stream was a bit forgotten when sustainable tourism development studies took the lead with the clearly underlined ecological impact of tourism and the need to balance economic, social and ecological pillars of that development. Among those three, the social impact of tourism is the most difficult one to be researched and the most ambiguous one. It is commonly agreed that the economic pillar of tourism development is mainly about benefits; the ecological one is mainly about costs. It is easy to identify the many cost and benefits of tourism development of a social nature, and the balance of the social costs and benefits can be very different in different places and it can change with time. Thus, it is not surprising that several scientific and practical studies on sustainable tourism development were concentrated on balancing the economic benefits and the ecological costs.

On the contrary, many studies in over-visited city destinations are focused on the social carrying capacity [18] p. 452. The significance of the negative social impact is evident in the most commonly reported examples of overtourism. The very common part of those examples is the resistance of citizens of particular cities against tourism and tourists, which is manifested in differentiated ways [18]. Higgins-Desbiolles et al. [8] p. 6 stated that overtourism indicates that local communities are becoming increasingly hostile to forms of tourism that are imposed on them and diminish their quality of life. A popular term used to present this inhabitants' negative perception of how tourism development impacts their lives is "tourist phobia." The term was used for the first time in 2008 to explain a mixture of repudiation, mistrust and contempt of tourists [16] p. 25. Later, a similar concept, tourism-phobia, has been deliberated together with overtourism as a direct result of the accelerating evolution of unsustainable mass tourism practices [7]. Examples of tourist-phobia were already identified in many cities such as Barcelona [16,25], Venice [12,26,27] or Berlin [16].

To understand the nature of overtourism, its causes and consequences, it is necessary to understand why citizens of particular cities started to perceive tourism as a factor that has a negative impact on their quality of life [28]. The answer to this question is complex and includes changes of quantitative and qualitative nature and factors coming from the outside of the tourism industry as well as those from the inside, including those who were and still are at least partially dependent on tourism stakeholders' actions. The widely recognized factor, which is independent of the tourism industry and tourism academia actions and which is of typical quantitative nature, is the growth of tourism. Fast-growing numbers of tourists, which is an objective fact confirmed in statistics (such as those conducted by United Nations World Tourism Organisation — UNWTO), is partially supported by marketing activities of the tourism companies and public bodies, but it is mainly influenced by trends in the global economy, politics, technology and demography. However, overtourism should not be perceived as merely

a too big number of tourists. To understand the dramatic increase of the perception of hosts that tourism may be a disadvantage for their lives, an additional switch in tourist behavior and preferences is to be considered. That switch is much more difficult to be captured and measured than just the growing number of tourists, and as such, it is much more ambiguous and controversial. What is also of great importance is the fact that, at least partially, tourism policies following models proposed by the academia are responsible for that switch.

3. Well-Recognized Sources of Overtourism

UNWTO [29] reported that the number of international tourism arrivals is steadily growing. For decades, global tourism has been rapidly and constantly growing. For the first time, the number of international tourist arrivals has exceeded 1 billion in 2012 and is expected to almost double by 2030 [11]. This is coupled with an even higher growth of domestic tourism activities and other forms of tourism-related mobilities [1,30]. There are numerous reasons for this. Currently, growing tourism activity among Chinese society supported by political enhancement is often pointed to as one of the important and characteristic factors for current times [28,29]. This tremendous growth of tourist numbers in recent years, along with tourists' tendency to travel to popular destinations during the same periods, is often pointed to as the leading cause of overtourism [1] p. 2.

It can be seen that many authors who present their concepts of reasons for overtourism are largely focused on factors that make contemporary people travel more often. This can be found in the book by Butler and Dodds [17] p. 6. These authors provide a list of 10 enablers of overtourism, which are: (1) Greater numbers of tourism; (2) Travel has become more affordable; (3) New groups of tourists; (4) Dominance of the growth-focused mindset; (5) Short-term focus; (6) Competition for space, amenities and services; (7) Wider access to media and information; (8) Destinations lack control over tourists numbers; (9) Imbalance of power among stakeholders; (10) Tourism stakeholders are fragmented and at odds. The first enabler is about the growing number of tourists, the next two give some reasons why this is so, and the others are focused on the reasons why particular destinations fail to cope with this huge number of visitors.

Another argument showing how strongly overtourism is perceived as growth-driven can be found in actions undertaken in some destinations as well as in suggestions presented in the literature. They both often search for solutions for overtourism in concepts such as degrowth [8] or demarketing [25].

The list for reasons of overtourism and for the growing numbers of tourists can be extended. Many authors such as Phi [1] and Goodwin [13] referred to the falling cost of air travel and low-cost carrier companies' growth, the expansion of sharing platforms, seasonality and the concentration of tourists in certain areas. Alonso-Almeida et al. [9] underlined the role of social media in establishing overtourism, as they raise tourism demand and direct it to particular destinations. Additionally, Phi [1] points to the complex nature of the local/global tourism supply-chain, and the exceeding efforts that the destinations put into marketing actions. Especially the last sentence is important, as it means that this growing number of tourists that are blamed for overtourism has been stimulated for many years by tourism promotion and many destinations spent significant amounts of money on "inviting" overtourism.

Those expenses include both promotional actions and a development of tourism products. Indices that could prove that they were effective were necessary to justify incurring these expenses. Due to numerous reasons [12,13], the number of visitors/tourists was the index that was used most often. Compared with other indices that might be used here, it is relatively easy to be measured and objective. As it was used in international statistics (such as UNWTO), it gave a perfect opportunity to compare own achievements with competitors. However, concentration on that single index made decision-makers lose sight of other indices that present real benefits and costs of tourism development. A tacit assumption that the more tourists, the better effect, was made without an in-depth analysis of how a growing number of tourists enhances their expenditures, supports job creation, reduces unemployment, etc. As a result, the performance of tourism marketing and management organizations is measured in international tourist arrivals rather than the yield or the spread of tourism to bring

benefits for areas that need more urgently expenditures made by visitors. [13] p.6. Based on the analysis of over 30 examples of places with overtourism in Europe, Peeters et al. [12] p. 18 stated that most destinations are managed based on a growth-paradigm, with the main appreciation for the growth of visitors' numbers, without considering carrying capacity and other policy goals. Cheer et al. [28] even referred to plenty of narratives that treat the growth of tourism as a Holy Grail. That way of thinking was not perceived as a mistake for many years, neither by practitioners nor in the academic works. For example, the UNWTO is frequently cited as the key promoter of the need for constant tourism growth, despite the problem of overtourism [1]. Goodwin [13] p. 3 presented several examples of tourism management textbooks that were published about 20 years ago and supported that kind of thinking. Even the structure of many of those textbooks, with many chapters devoted to marketing (which means attracting visitors) and just a few chapters on making real economic benefits and minimizing economic, social and ecological costs, makes Goodwin's point of view rational. Milano et al. [7] p. 335 called for models and measures of tourism success in global tourism policy that would mirror a shift from a focus on destination development and stimulation of growth in visitation, to more accurate forecasting of what the implication of excessive tourism numbers might mean for a destination.

Growth-centric strategies of tourism development in particular cities led to another tragic mistake, which was opening doors of coastal cities for cruise tourism too wide. For many years, Venice was presented as a "perfect" example of a destructive impact of overdeveloped cruise tourism on the city's sustainable development, including influence on environment, citizens and tourists [6,16,26,27,31]. After the tremendous success of *Game of Thrones* being shot partly in Dubrovnik, this city is perceived as even more strongly "infected" by overtourism and, in particular, by cruise tourism [6]. Panayiotopoulos and Pisano [32] indicated the "overtourism dystopia" related to the paradox of tourism that risks the destruction of what tourists come to see. In both cases, it should not be perceived that the overtourism problems of both cities are caused by the cruise tourism only, but both cities suffer because of the huge number of tourists traveling there by planes, coaches, cars or trains, and there is another huge stream of tourists traveling there by the sea. Even more discouraging is the fact that this huge stream of tourists does not bring too many benefits for the local economies as they arrive to their destinations with their own accommodation and often also with gastronomy on-board. However, the problem is so obvious that in many places, local authorities have taken different measures to deal with it. For example, in Dubrovnik, policy responses have included attempts to limit the number of tourists admitted to the city and to restrict the capacity of cruise ships permitted to call at the city's port [6] p. 12. The transport minister of Italy responded to Venetians' anti-tourism protests by announcing that Venice will restrict the Giudecca Canal's access to all the ships of more than 55,000 tons of weight. These cruise ships will take another route and will dock at the industrial port of Marghera [15] p. 20.

However, many authors turned our attention to factors not directly connected with numbers. The most commonly unaccepted tourists' behavior has been pointed out [1,9,13]. Seraphin et al. [27] noted that the environmental sustainability of destinations might be permanently jeopardized and that the tourists are impacting negatively on the quality of life of the locals and reducing the positive contribution of tourists to local legal businesses. Overtourism has also been linked to the Tragedy of the Commons, as tourism activities often rely on and heavily exploit public resources [1,13,33]. Additionally, Cheer et al. [28] stated that overtourism appears for a variety of reasons, which are shaped by a number of supply-side destination drivers, demand-side factors and a global supply chain. The last two are difficult for destinations' management to influence. Finally, it is clear then that particular reasons for the appearance of overtourism in a destination might differ significantly between particular places.

4. Shifting Tourists' Interests from Resorts to Cities

According to Phi [1] and Koens et al. [10], overtourism is not only related to the objective increase in the number of tourists, but also that the subjective factors play an important role. They usually

involve inhabitants' perceptions that tourism influences their lives negatively, as they can be impacted by a number of factors, such as tourists' behavior, historical exposure to visitors and differing levels of community resilience. Indeed, it is hard to justify these dramatic and sudden tourist-phobia attitudes among citizens of many cities by growing numbers of tourists only. Tourism growth can be observed on a permanent level without dramatic breakthroughs lately [29]. It is expected then that at least some symptoms of anti-tourism movements should have been observable for many years. An important hint to interpreting the reasons for overtourism is to be found in the fact that thus far tourist-phobia was reported almost only in smaller or bigger cities [6,13,16], while in traditional tourist resorts, it was reported very rarely, if ever. This should be compared with a visible shift in tourism statistics, which shows that big cities are becoming more and more popular and fashionable destinations [18]. Hitherto, the research dealing with tourism impact tends to focus on overcrowding in the context of national parks and protected areas. However, as Phi [1] p. 3 stated, modern overtourism essentially takes place in the urban areas. A similar conclusion can also be found in other publications [5,10,18,19].

The strong increase in demand for city tourism has several causes [18] p. 453: people are taking shorter holidays but travel more often [34], low-cost carriers enable people to reach cities for affordable prices [35] and cities increase their attractiveness by organizing various events [36] as well as becoming more and more popular as a location for shopping, culture and sightseeing [37].

Cities differ significantly from destinations of other kinds. They provide visitors with a range of multifunctional, complex and multiuser environments. They are able to host increasing numbers of domestic and international leisure tourists simultaneously, but also business tourists and people visiting friends and relatives [10] p. 2. The fact that cities are usually equipped with good infrastructure facilities and host a dynamic and diverse population nowadays may suggest that they will deal with the growing tourist number better than other destinations. Indeed, until recently, tourism was seen as one of the most sustainable economic growth strategies for cities. Especially after the last global economic crisis, it was perceived as a significant driver for economic recovery or growth [10] p. 2.

The fast growth of tourists' interest in visiting cities [38,39] is among the most underestimated tendencies in contemporary tourism, and significant differences between typical resort destinations and cities were missed by tourism companies, tourism authorities, tourism academia and, finally, by tourists themselves. Those differences are of great significance as destination's carrying capacity differs between types of destinations such as islands, rural destinations or city destinations [18] p. 453. Participants of mass tourism were used to visiting the destinations that were better and better adjusted to their needs, and that sometimes the destinations (so-called integrated resorts [40,41]) were even totally designed to satisfy tourists' expectations perfectly. In many seaside or mountain resorts, tourism became a dominant economic function of the place, which became totally economically dependent on tourists' arrivals and expenditures [42]. Additionally, especially during the peaks of the season, the number of tourists could be several times bigger than the number of inhabitants. In such conditions, the basis of the theory and practice of tourism organization and management were developed. Economic dependency was often so strong that not only local authorities but also most citizens were aware that their economic prosperity depends on tourism and the relationship between more tourists, and even greater prosperity was easy to accept [43]. Fierce competition between destinations forced particular destinations as a whole, but also particular stakeholders, including inhabitants, to do their best to make visitors satisfied. More and more management, or, later on, governance theories were established to make a success of a destination more probable [44–46]. They appeared to be efficient in building tourism resorts competitiveness; however, when we consider a city as a tourism destination, every single condition presented above has to be adjusted [47]. Apart from an evident difference between proportions of a number of inhabitants and a number of tourists, the most important fact is that usually in cities, neither a city as a whole nor most citizens, perceive their economic prosperity as dependent on tourism. In most cities, tourism may play only a supporting role in their economies, while in other cities it may even be one of the important economic functions of the city, but hardly ever is the most important one. The inhabitants who do not see any economic benefits (and also benefits of other

kinds) are not willing to limit their needs and adjust their way of living to satisfy the visitors' needs. This makes a huge difference between the inhabitants of resorts and cities.

As was stated earlier, that difference was missed by tourists, tourism practitioners and researchers. Theories that turned out to be effective in making tourist resorts competitive were now used directly (without being modified) in the pursuit to make cities competitive destinations [13]. Sooner or later, such attempts had to fail, leading to dissatisfaction of citizens and/or of tourists. For both of those groups, visitors-inhabitants encounters are new in their form and somehow uncomfortable. For most citizens, tourism developing in their neighborhood is a new phenomenon [48]. The perception of the lowering quality of life is not only a result of what burden tourism is but also of factors that were not influencing that quality earlier on [49]. Tourists are used to the fact that they are customers and are treated as precious clients by everyone in their destinations. Tourists pay for their holidays and expect to get the perfect product and do not want to limit and adjust their behavior to local requirements. On the contrary, they expect that the local requirements should rather be changed or adjusted for tourists' satisfaction.

It is difficult to understand citizens' resistance to tourism development without understanding the nature of the impact of tourism on their lives [49]. The most evident effect, most frequently described in many publications [5,18], is congestion: congestion of pedestrian zones, lines in shops, a crowd in means of public communications, etc. Another factor that is often presented in the literature is improper behavior of tourists [1,9,13]. The way the tourists behave, speak or wear their clothes may abuse local traditions. A big number of loud and sometimes drunk tourists also lowers the sense of security. Finally, many citizens notice that some parts of the cities, most frequently the city centers, change into a big party zone.

However, the problems presented above are not new. They have been present for many years as cities have been destinations for tourists for decades. Nowadays, together with a surging increase in visitation to cities, those problems also seemed to be more severe. Still, the contemporary development of tourism in cities has also brought problems that have been almost absent previously [48]. Those problems are often identified in the literature related to the sharing economy but should not be referred only to the development of this phenomenon. Many authors [49–56] agree that the extremely rapid development of sharing economy platforms such as Airbnb influences cities' real estate market severely. The essence of that impact is related to a big increase in the demand for houses and apartments created by prospective runners of the P2P (peer-to-peer) services. This increase caused several consequences that can be observed in different places and on a different scale [57]. In many places, short-term tourism rental appeared to be more profitable for residents than renting. As a result, in order to maximize their profits, investors, both big players and small local ones, have been attracted to the P2P accommodation market, where small investors with as little as one apartment to rent can access the global marketplace. Horn and Merante [56] suggested that home sharing is a factor that increases rental prices by decreasing the supply of units available to potential residents. As a result, for five years, the rental market in Paris, for example, has lost about 20,000 homes. In some districts (especially in the center and in the west of Paris), tourism furnished apartments can represent up to 20% of the total rental offer [57]. Similar findings were presented by Wachsmuth and Weisler [58], who identified neighborhoods in New York where the housing markets have already been significantly impacted by short-term rentals at the cost of long-term rental housing, which are increasingly under the threat of Airbnb-induced gentrification. In many places, the development of the sharing economy has also coincided with housing shortages and affordability issues. The reasons for those housing problems are diverse, complex and historically embedded in, for example, the evolution of national and regional housing policies, infrastructure and investment policies. Among important examples of these external factors that make the housing problems more difficult, increased EU mobility and more relaxed rules for property investment can be pointed out. Those factors have contributed to a real estate boom in coastal areas of Spain, including Barcelona [59]. The factors presented, together with the demand increased by investors who buy properties for short-term tourism rental were the reason why two negative phenomena appeared. The

natural reaction of the market to the increasing demand was also a cause of increasing prices of real estate, both to buy and to rent. Unsubstantiated reports suggest that the cost of housing rental in Berlin grew as much as 56% between 2009 and 2014 [60]. The effect was also the growing shortage of properties available on the real estate market in particular cities. As a consequence, affordability issues also arose. Housing affordability issues made financially challenged residents seek additional income through renting, which resulted in an even greater housing shortage. These sorts of effects have, in turn, put considerable pressure on city governments to develop regulatory frameworks to cope with a process that was hardly ever mentioned in public discourse only a few years ago [52].

Apart from affordability and shortages problems, the development of tourism sharing platforms should contribute to citizens by bringing them additional income, thus improving their quality of life [56]. This process phenomenon undoubtedly takes place [61]; however, recently, a new process, which is clearly a limitation to positive economic effects for ordinary urban residents, can also be seen. This process is related to purchasing attractively located real estates mentioned above and is regarded as a capital investment, which is additionally supposed to pay off by bringing revenues by selling accommodation through sharing economy platforms. In many cities, apartment networks come into being; a new business model of a hotel enterprise was even offered (integrated hotel), which consisted in the operation of a central reception for apartments distributed in different buildings of one city [62]. According to the research by Horn and Merante [56] conducted in Boston, only 18% of hosts had multiple properties listed simultaneously in Boston. Their properties represented almost half of those listed on Airbnb (46%), which suggested that a large part of Airbnb's properties in the city are leased by commercial operators. A similar situation was detected in New York City by Wegmann and Jiao [51]. These new trends are the reason why real estate renting revenues from sharing economy platforms are not distributed to a wide range of residents but are transferred to a small group of investors, who sometimes are from the outside [63]. As mentioned earlier, this process is also the reason why the operation of the local real estate market is significantly disturbed, and it becomes a matter of concern for the local regulatory authority.

Development of tourism in cities supported by accommodation sharing economy platforms brings economic benefits, but they are distributed unequally, and a significant part of them leaks outside to external owners of apartments. Thus, it is easy to understand why many citizens do not benefit from that development. Still, apart from economic costs related to apartment rents and prices, they also have to suffer from other troubles. This is because tourism spreads to districts that were previously used only for residents. Online home-sharing platforms for visitor accommodation blur the traditional boundaries between residential and tourist areas [64]. Providing accommodation in a district that has not been visited by tourists has become an attractive option for earning money for owners of flats and houses, and it attracted numerous guests lured by Airbnb's slogan 'live like a local' [13]. It soon turned out that the city inhabitants who were able to bypass the tourist traffic by passing by the historic city centers where tourist traffic was focused, currently cannot do this, as they meet numerous tourists using accommodation services in facilities immediately next to them [65]. The most important fields of conflicts are the shortage of available living space, the increase in rents and the problem of constantly changing neighbors. Additionally, the behavior of Airbnb users is seen as problematic [18] p. 463. At the same time, those who live next to the historic sites often complain about the lack of an 'ordinary neighborhood,' because all apartments or houses in the neighborhood are rented to tourists. As a result, they feel as if tourists continuously stayed in a tourist town, while the groups of neighboring tourists constantly changed. This led to Gürsoy's [19] p. 431 statement that everyday life is the base where tourism-phobia is taking root.

Oftentimes, development of tourism in cities is blamed for supporting gentrification processes [48,54,58,66,67]. According to Cocola-Gant [66], gentrification caused by tourism is increasingly affecting a number of places around the world. In this process, the original residents of traditional neighborhoods are economically "expelled" to the urban periphery as a result of the increase in rental prices in their neighborhoods [54]. Although some scholars have noted that tourism threatens

the ‘stay-put’ right of existing populations [66–69], a conceptualization of how this phenomenon occurs has not been fully considered [66]. Gentrification is not a new phenomenon—in the United States, it is usually perceived to have begun as early as in the 1950s [67]. Still, the previous waves of this process were not connected directly with tourism; only the latest, third wave of gentrification includes tourism gentrification [67].

All the facts presented above made cities’ representatives search for solutions for this situation [26]. There were numerous attempts to regulate the real estate market to make it more difficult to turn residential properties into commercial ones [57]. Additionally, congestion was a concern for authorities in many places [13,57]. However, old “resort-like” thinking can be very often seen in their actions. For example, Copenhagen has adopted an aggressive redistribution strategy spreading tourism across the city, “declaring the end of tourism as we know it” [13] p. 4. While commenting this generally accepted step, Goodwin [13] p. 4 wondered whether it will generate protests by residents. Stanchev [15] p. 19 gave other examples of similar actions from Prague, Amsterdam and Venice. The aim of such campaigns is to motivate the tourists to explore attractions that differ from the popular ones, at the same time suggesting less congested attractions and “local experiences” and encouraging tourists to spread out more by introducing tourists to less frequently visited parts of the city [15] p. 19. Both sides, residents and visitors, suffer from congestion in the most attractive parts of cities; however, it seems that mainly visitors may benefit from the results of successful redistribution. Additionally, the tourism industry should appreciate the growing capacity to host even more tourists in the city. However, from the point of view of citizens, the results of such a redistribution most likely will make the situation even worse. This is so because it supports invading increasingly more residential parts of cities by tourism, and all problems presented above with the real estate market and lack of regular neighborhood will only be intensified.

Cities most often related to tourism-phobia are often metropolises where the old city is not understood in a traditional way, such as Barcelona (according to the research by Phi [1], Barcelona is by far the most often described city in global news media in the context of overtourism), Amsterdam, Paris or Berlin in Europe [13]. On the contrary, cities such as Budapest, Prague or Cracow are also often involved in overtourism, but more in terms of congestion, and just a few manifestations of reluctance between tourists and citizens are noted there [17,70–73]. Old cities that are parts of those cities are totally dominated by tourists and play the role of a tourist ghetto in those cities [17]. Additionally, most of the must-see attractions of the cities are located there. As a result, the boundary between the tourism zones and the residential ones is more evident. Citizens often treat old cities as lost [18] p. 462, but they may expect a relatively low impact of tourism in their places of living and working. In Berlin, Amsterdam or Barcelona, the boundaries between residential and tourism parts of the cities are blurred, and citizens often spend their time in the same places as tourists do. This causes citizens to be exposed to even more to congestion and compete with tourists even more severely for the same attractions and places; finally, it leads to conflicts and reluctance [18,49]. That is why, to protect citizens, local authorities should rather implement dynamic zoning strategies and aim to separate tourists and citizens [17] than redistribute tourism to more and more residential parts, which make the processes of gentrification even stronger. Such actions have been conducted for many years, for example in Bruges and Dublin [12]. This conclusion seems to be neglected thus far, both in the most of cities authorities’ actions and in the scientific literature. However, one should remember that there are no two identical cities, and the problems and reasons for overtourism are diverse [69]; moreover, effective solutions in one place are not going to work in another. That is why it is also possible to imagine a city in which redistribution strategy can be effective in satisfying citizens’ requirements. Such cities should have attractive parts that are not visited by tourists too often and are located outside the typical residential zones.

Another important reason for the conflict between tourists and citizens in particular cities derives from the nature of assets used by tourists and/or inhabitants. When describing this situation, Goodwin [13] p. 8 referred to overtourism as a classic case of the Tragedy of the Commons. The problem

in the fact that tourism makes extensive use of common-pool resources in the public realm and takes advantage of, for example, monuments or viewpoints that are free or priced on a non-market basis, which was initially bringing benefit for the residents. The tourism commons are very vulnerable to crowding and degrading by tourism pressure. The industry enjoys free access to public goods, which are very often its core product [13] p. 7. The public realm is free—tourists do not pay for their walks in La Rambla or Champs-Élysées—but repair and maintenance costs have to be covered by local taxpayers [13] p. 5. The public realm is funded through local taxes—the residents pay for public toilets, building maintenance and waste disposal. At the same time, tourism businesses are selling the public realm, but they do not pay anything for the resource they sell. Neither tourists nor inhabitants usually understand the nature of the public realm and pool assets, but both of them demand their comfortable access to those assets. Goodwin [13] seems to accept the citizens' right to be hosts and disposers of the local free assets, and this right is based not only on their localization, but also on paying for their maintenance via the local tax system. The natural consequence of this view is an introduction of some kind of fees paid by tourists and tourism businesses aiming to introduce tourism into financing free attractions, but also possibly limiting the excessive number of tourists and enhancing citizens' opportunity to make use of the famous places of their cities. Regardless of the technical difficulty of this solution, this might be challenged under the intra-generational equity [74,75], one of the most important pillars of sustainable development. The introduction of fees limits the demand and eliminates the poorest tourists from visiting places.

The list of potential negative impacts of tourism on cities and their inhabitants is even extended by Benner [76] p. 2. According to him, the potential threats related to overtourism include gentrification, growing costs of living and housing (not only because of increase of rents but also because of growing prices in local shops also visited by tourists), real estate speculation, deterioration of local residents' identification with the place, loss of a destination's authentic character, significant harm to its cultural or environmental heritage, congestion of transport infrastructures and privatization of spaces that are supposed to be publicly accessible—and hence segregation. Additionally, Milano [16] states the loss of residents' purchasing power and the unbalanced number of locals compared to visitors. However, the extreme pressure of tourism on inhabitants' everyday life, which can be observed, for example, in Venice, involves much more pedestrian factors such as the lack of essential shops for everyday life, which have been replaced by tourist shops and rising prices that lead to the forced exodus of many residents [16].

5. The Transition of Tourism from 3S to 3E

A few decades ago, mass tourism was criticized not only for its negative impact on destinations, but supporters of alternative tourism, and many other scholars and experts, were pointing out very little benefits for tourists [20,21,77,78]. Tourists who spend whole days passively lying on beaches did not get much knowledge about the places they visited and had very little contact with local inhabitants and their tangible and intangible cultural heritage [22]. Almost identical remarks were referred to sightseeing trips that were also very popular at that time and perceived as a form of mass tourism. Such trips were concentrated on “ticking places off a list,” maximizing the number of must-see attractions during one trip and, as a consequence, reducing the time spent in particular places as much as possible. The relationships between visitors and their destinations were extremely shallow and concentrated on tangible heritage, while completely omitting people currently living in particular places [20].

However, more and more tourists have become interested in local intangible cultural heritage, such as traditions, food, dress, dances, etc. Their needs were often satisfied with what MacCannell [23,24] described as staged authenticity. These were often artificial shows (but this could also include shops or restaurants dedicated to tourists) produced for tourism purposes that presented the local culture, only in a more or less detailed way. MacCannell [23,24] developed this concept to illustrate the fact that tourists are often provided with experiences or performances that are theatered or orchestrated in order to meet the expectations of tourists. These experiences or performances are usually superficial,

featuring only the 'front stage' area of a particular culture. Therefore, tourists who seek the 'real' or the 'genuine' in a foreign culture end up with experiences that are staged, which is a restriction for tourists who seek to peek into the 'backstage' area of a community to get a comprehensive understanding of a particular local culture. However, Mohamad et al. [79] argued that although tourists can afford these experiences, they do not have the right to the 'back region' unless communities are willing to show it to them. It should be up to the local communities to decide what they deemed appropriate for the tourists to see and experience [80]. In that sense, staged authenticity events played an important role as a security buffer for inhabitants who did not want to introduce tourists to their everyday life and also for tourists who feel safe in a situation arranged especially for them [80].

In the 1980s, some of the tourism scholars announced a huge shift in the nature of tourism that took place at the time. This shift was later on briefly described as a transition from 3S tourism to 3E tourism, where the three "S"s were symbols of "sea, sun and sand" while the three "E"s were symbols of "education, entertainment and experience (or excitement, or emotions)" [81,82]. This shift was enthusiastically welcomed by the academia and practitioners as a highly favorable trend. Since that time, elements included in 3E have been playing an increasingly larger role [83,84]. Typical trips to coastal resorts are still the leading products of tour-operating companies, but their customers often do not spend the whole time on passive relaxation, sharing their time between beaching, visiting monuments, sporting activities and cultural events.

At the beginning of the 21st century, two new economic theories mirrored the growing importance of tourists' experiences in tourism: experience economy [85] and experience marketing [86–88]. Both of them found tourism among the most important areas of the current economy where customers' experiences play a key role. This role was also noticed by tourism practitioners who started to adjust their products and their marketing activities to underline the special experiences that they can offer. At the end of the second decade of this century, nobody doubts the crucial role of tourists' experiences in different kinds of tourism, including city tourism [88,89]. Tourists who search for their experiences have begun to be more and more active, mobile and open for contacts with local inhabitants [49].

All those processes were warmly welcomed by tourism scholars as they are at least partial implementation of postulates of advocates of alternative tourism, however, on a much bigger scale. Still, we should not forget about the negative consequences that also exist. Partially, they are strictly related to city tourism and tourism-phobia that accompanies overtourism in cities. Many contemporary tourists are no longer satisfied with a shallow relationship with a visited city, which is limited to a short stay and concentrated on visiting the most famous monuments [49]. The factor that started to play a very important role in the competition between cities on the tourism market is the ambiance. Traditional city destinations that built their competitive position on the bases of monuments and heritage such as Rome or Paris had to face competition from cities such as Amsterdam, Barcelona, Milan or Berlin. The growing popularity of the so-called city breaks [90–92] made tourists visits in a single city a bit longer, and during their stays, tourists are not concentrated so much on visiting monuments, but rather on having fun, shopping and spending their time nicely. This effect was even strengthened by the Airbnb adverts suggesting tourists will be "living like a local" [13] p. 5. Indeed, spending time in, for example, Barcelona in the way that Barcelonan people do started to be fashionable in the tourism market. The citizens' way of living in Barcelona, Amsterdam or Milan started to be tourism attractions, and many tourists have been visiting those cities for that reason. The problem is that nobody asked citizens if they want their way of living to be a tourism attraction. Unlike cities with more precisely set borders of the old city such as Prague or Cracow, in those cities, it is not possible to keep tourists in a tourist ghetto that is not visited by citizens too often. In fact, inhabitants and visitors compete for the access to exactly the same places that are precious assets for both these groups. As an example, La Rambla in Barcelona can be pointed out. Visitors who try to follow the inhabitants' way of life can be a real burden for the locals [49]. They want to stay overnight in places where citizens live, eat in restaurants for the locals, shop in the same shops, etc. Visitors are searching for 'alternative public spaces,' 'creative urban areas' or 'ethnic precincts.' Wandering 'off the beaten

track' is considered an important strategy to find these places [49]. They perceive their product as authentic. As a result, citizens may have difficulties to escape from tourism to a "safe shelter," and this strengthens the tourism-phobia attitudes.

Contemporary city tourism seems to be a good example of the implementation of postulates of the tourism literature. Tourists here are active and open for meeting local people, searching for authentic products without being satisfied by staged authenticity. It turned out that the implementation of those postulates produced nightmares for the city's citizens.

6. Conclusions and Limitations

6.1. Discussion

Overtourism is defined differently in different publications. Usually, the objective facts of the growing number of people traveling worldwide and of the development of the new media and technology solutions, including reservation platforms of sharing economy, low-cost airlines and web 2.0 in tourism, are to be blamed for the appearance of overtourism. In such an approach, overtourism seems to be somehow inevitable. However, in many publications [1,10,13], other factors that support the development of overtourism are stated. The most often mentioned example is consumer behavior, which is changeable and often improper. Another reason for overtourism, which is often highlighted in the literature, is growth-oriented tourism policy [12,13,28] conducted for many years by different public bodies on the national, regional, and local scale. Severe competition between numerous destinations worldwide forced the implementation of aggressive marketing strategies that welcome more and more guests. The use of such strategies was perceived positively by practitioners and in tourism textbooks for many years, as it appeared to be effective in cases of many tourism resorts. Additionally, the local, regional and national governments were not prepared to deal with the negative consequences of overcrowding, as the studies conducted by Peeters et al. [12] did not reveal any evaluation or monitoring programs in any of the destinations studied, making the effectiveness of the measures in the particular place difficult to assess [12] p. 16.

Scientific research on the topic of overtourism, besides its rapidly growing popularity, is still at its initial stage. Contemporary studies include mainly overview papers and case studies with a very little number of empirical research of visitors or citizens' opinions (examples can be here the studies by Namberger et al. [18] conducted in Munich and by Smith et al. [72] conducted in Budapest). Additionally, the theoretical description of the issue is scattered; case studies of cities, as well as of nature-based destinations and traditional resorts, are presented. Additionally, the recapitulation of the scientific knowledge on the possible effects of overtourism needs in-depth studies of previous publications on tourism impact and sustainable tourism, but also of the literature not directly related to researching tourism and dealing with urban studies where problems of gentrification or impact of tourism development on real estate market are presented.

As overtourism is often observable in the urban environment, the presented paper links the reasons and consequences of overtourism with the rapid growth of the popularity of city tourism. Reasons for this shift in tourists' interest are numerous, complex and are mainly similar to the issues linked with the genesis of overtourism—the growing popularity of Airbnb-type reservation platforms, new IT solutions, accessibility of cheap flights and shortening the length of tourism trips. However, neither reasons nor consequences of the growing popularity of city tourism were researched in-depth thus far. The long-term aim of future research should be the establishment of a coherent theory of development of tourism in contemporary cities, taking into account new phenomena such as overtourism, tourist-phobia or wide-scale gentrification. Theories of tourism development created 20 years ago and mainly for tourism resorts' purposes are not appropriate for contemporary cities, and even after upgrading them for contemporary cities, they seem to be insufficient. In fact, tourism development in plenty of contemporary cities realizes many postulates of this theory. the number of visitors is quickly growing, as well as visitors' expenditures, while tourists tend to search for

authentic experiences and try to follow the way of life of genuine inhabitants. However, realization of those postulates resulted in appearance of new problems such as tourism-phobia instead of bringing positive effects.

6.2. Future Research and Practical Recommendations

Changes in contemporary tourism and in contemporary cities are very rapid and results achieved a few years ago might not be relevant to current challenges. That is the reason why a lot of future research of the topic are required. New phenomena, such as overtourism, have not been extensively researched thus far, and well-known phenomena such as tourism gentrification got a new momentum. This mixture of old and new problems creates a tension in many cities, and local authorities urgently search for methods of solving them. This part of the papers is devoted to the presentation of a list of directions of future research that were estimated as the most urgent. However, this list cannot be perceived as complete and closed.

An important issue to be researched is the impact of the growing tourism traffic in cities. Cities differ significantly from destinations of other kinds and, especially, the impact of tourism development here is totally different from that researched for many years in tourism resorts or in nature-based destinations. Still, the nature of this difference needs to be studied. Future research should help to develop tourism policy tailored for cities, which needs to point which exact tools and suggestions presented in contemporary literature on destination management are to be adjusted and how. It was already underlined in the literature that visitors might be perceived by inhabitants of a city as unwanted invaders that do not support citizens' economic prosperity and significantly deteriorate their quality of life due to their improper behavior, congestion, negative impact on the real estate market and gentrification of neighborhoods. In most publications, all those negative impacts were presented without detailed analysis. Future research should then analyze which kind of tourist behavior is perceived by citizens as the most annoying and which one can be accepted. Similarly, the scale of congestion that can be acceptable for citizens is to be researched; moreover, an analysis of places that according to citizens' opinion might be crowded and should not be congested due to tourists under any condition should be conducted. Additionally, in-depth research of the perception of citizens of gentrification processes as well as changes in the real estate market are to be surveyed. All those analyses are extremely difficult, as particular cities and their inhabitants might differ significantly and research conducted in different places might lead to highly differentiated results. The example of Berlin can be presented here [49]. The city still struggles with underdeveloped residential infrastructure in the former communist part of the city and the negative influence of tourism development on the real estate market is experienced here especially severely. Similarly, local conditions, typical for a particular city, might play an important role in other cities as well. This differentiation of local conditions makes the impact of tourism and citizens' perceptions of the problem being highly differentiated between particular cities; moreover, solutions should rather be tailored than universal, suggested for each particular city. Understanding local conditions and factors influencing effectiveness of tourism policy in particular cities are then another important direction of future research.

However future research should not concentrate on destinations and their inhabitants only. In-depth studies are also required in the field of analysis of visitors to cities and their needs, requirements and behavior. This topic seems to be especially attractive for scientific research, as this group of tourists presents a mixture of features derived from different models of tourists' behavior. Following contemporary models of tourists (3Es), they are often active and open for contacts with the local people and the local real life and culture, exactly as, for many year, has been advocated for by supporters of alternative tourism and experience marketing. However, at the same time, they have often gained their tourism experiences during numerous stays in mass resort-like destinations (3Ss). During those stays, they used to be demanding customers and "consumers of destinations" that are completely tailored to their needs. In such a case, they simply do not ask local people if they are willing to have their everyday life be an attraction for tourists [49]. This misunderstanding between the expectations of

hosts and guests is among the basic reasons for anti-tourism movements and tourism-phobia [49]. The divergence between citizens' and tourists' perceptions of their encounters is one of the most attractive topics for interdisciplinary research in the future as this topic includes issues typical for sociology, psychology, marketing, geography, urban studies and other scientific fields. Additionally, further analysis of how the description of tourists' motivations and behavior presented in contemporary tourism literature (especially according to the 3Es model) fits and reflects the situation observed in many cities should be conducted. Thus far, this issue was not raised in the tourism literature, and the description of its importance is intended to be among the most important contributions of the paper to the scientific knowledge.

Local authorities in many cities still attempt to use well-known strategies that have proved to be effective in resorts or nature-based destinations, as the scientific toolkit available for cities is almost empty. Filling this toolkit is an important task for scientists dealing with the topic. However, establishing new tools to be effective in contemporary tourism cities is not sufficient. Solving the problem of overtourism requires the creation of new bases of tourism policy adjusted for cities. It is not possible to solve the problem of overtourism in cities without a fundamental shift in the tourism policy and in the general perception of tourism as a phenomenon that is always wanted, invited and effective. However, based on several studies presented thus far, it is already possible to present a few practical recommendations for tourism decision-makers in cities. In the times of overtourism, even in the highly competitive global environment, building the tourist attractiveness of cities is not going to be the priority. It should rather be managed so as to make the level of tourism traffic satisfactory. This is a challenging task, as such a policy was not implemented widely in any city, and the theoretical background for such actions is missing as well. Thus far, tourism with its natural tendency to spread and "conquer" new territories was not perceived as a negative issue, as this was related to growing positive economic effects. On the contrary, in the literature on tourism development based on resorts-like destinations, local stakeholders' education was perceived as an important attitude to secure the local support for bigger and bigger growth of tourism [93–95]. Inhabitants who resist further tourism development should not be perceived as making a mistake anymore. This shift in tourism policy should be also reflected in marketing activities conducted by authorities of particular cities. This should embrace both different approaches to the continues growth of the number of visitors as well as the different perception of tourists' behavior. Tourists' behavior in accordance with the 3Es concept, which is enthusiastically welcomed in other destinations, causes additional problems in cities and creates even more tension between residents and tourists. The question about the selection of the desired market target and the way of communication with it is to be answered in particular cities as well as in scientific literature.

It seems that the development of overtourism should be perceived in a way described by Hall [96,97] as a third-order change. Unlike the first-order change, which can be characterized by incremental, routinized, satisfactory behavior that leads to a change of the basic instruments of policy and to the second-order change which bring modification of the strategic behavior of authorities, the third-order change involves the shift in the whole policy paradigm [96–98]. Thus, the new goal hierarchy is adopted by policymakers because the coherence of the existing policy paradigm has been undermined. This occurs if a failure in the perceived policy results in discrepancies or inconsistencies that cannot be explained within the existing paradigm [98]. The overtourism creates such different conditions for the functioning of contemporary cities that without a paradigm shift and establishing a comprehensive attitude towards the problem, the policymakers may only react and minimize particular costs of the overtourism. Currently, there are no convincing examples of authorities that would take such an approach toward overtourism.

6.3. Limitations

Among important limitations of the argumentation presented, simplification of resorts-cities dichotomy is probably the most significant one. In fact, in reality, we can find plenty of examples that

do not fit this dichotomy. Obvious examples are nature-based destinations related to lower intensity tourism such as ecotourism or agritourism. However, researchers are aware of them, and special requirements for strategies of tourism development for those destinations are well-recognized and often researched in the scientific literature, which makes the rules of their development commonly known and usually accepted. A much bigger problem is related to destinations that might be placed on the continuum between resorts and cities that cannot actually be labeled as any of them. These are often small cities that became economically dependent on tourism traffic. Examples of Dubrovnik [32] and Venice [6,27,99] presented here, and also places such as Palma de Majorca [100], prove that the situation of those destinations is extremely complicated. In big cities that are not dependent on tourism, it is possible to keep only the supportive function of tourism in economic development while limitations for tourists, which may make them less attractive for them in favor of citizens' quality of life, can be introduced. This is not reasonable in those cities that may economically collapse without tourists' expenditures. However, many citizens there are not directly involved in tourism and as such do not perceive their prosperity as obtained from tourism. They suffer significantly from both the scale of tourism traffic and the behavior of particular tourists. The second issue seems to be an even more dramatic problem in places such as Palma de Majorca, which became typical 3S resorts, and participants of that kind of tourism tend to be particularly annoying for citizens. Finding a proper strategy for that kind of destination seems to be the most urgent and most challenging task for tourism academia and practitioners, as improving citizens' quality of life and maintaining a high level of income from tourism at the same time is extremely difficult, if possible. Still, Dubrovnik, Palma de Majorca or Venice should be perceived as urgent warnings for other cities not to follow their way and introduce some limits on tourism growth before they are stuck in a no-way-out situation.

Another important limitation of the paper presented and of wider suggested future development of the theory of the development of tourism in cities, is the fact that the problem of overtourism cannot be perceived as uniform in all cities. In fact, in many cities, the problem is not observed yet. Moreover, in cities where some symptoms of overtourism were detected, they often differ between one another in significant details. In such a case, it is difficult to create a universal theory that helps to solve many different problems. One more difficulty in creating a theory of tourism development in cities is the fact that tourism is neither easy to isolate from other development issues in a city, nor does such an action make any sense. There are so many aspects related to each other that discussing tourism development as an isolated issue is not a proper approach. Additionally, there are many issues that might be seen as not related to tourism in the city, but it may turn out that they actually are. The example of the new law proclaimed by local authorities in Berlin in October 2019 of freezing prices of long-term residential rental of houses and apartments can be presented here. The law was not intended to influence tourism traffic in the city. However, it may turn out that the growing difference in profitability of long-term rental and short-term tourism rental is going to be mirrored in more and more attempts to move real estates from the residential market into the tourism market, which will cause the number of real estates offered via Airbnb or similar platforms to grow, making shortages on the residential market even more painful.

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Article

Deconstructing the Overtourism-Related Social Conflicts

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Abstract: The debate on overtourism still lacks conceptual precision in its delineation of the constituent elements and processes. In particular, conflict theory is rarely adopted, even though the social conflict is inscribed into the nature of this phenomenon. This article aims to frame the discussion about (over)tourism within the perspective of social conflict theory by adopting the conflict deconstructing methods in order to diagnose the constructs and intensity of disputes associated with overtourism. In pursuit of this aim, the study addresses the following two research questions: (1) To what extent has the heuristic power of the conflict theory been used in overtourism discourse? and (2) How can overtourism be measured by the nature of the social conflicts referring to urban tourism development? The systematic literature review was conducted to analyze research developments on social conflicts within the overtourism discourse. In the empirical section (the case studies of the Polish cities, Krakow and Poznan), we deconstruct the social conflicts into five functional causes (i.e., values, relationship, data, structural, and interests) to diagnose the nature of the conflicts with respect to urban tourism development. This study shows that value conflicts impact most intensively on the nature and dynamics of the conflicts related to overtourism.

Keywords: overtourism; conflict management; social conflict; conflict analysis; circle of conflict; urban tourism; Poland

1. Introduction

In recent years, the contemporary discussion on the negative effects of tourism development in cities has unfolded under the label of overtourism, stemming from an increasing and uncontrolled tourists' flow concentration in urban centers [1–3]. The phenomenon is characterized primarily in a social context as there are, most of all, the residents who “suffer the consequences of temporary and seasonal tourism peaks, which have enforced permanent changes to their lifestyles, access to amenities and general well-being” [4]. Despite the discussion of whether or not the overtourism syndrome is new and limited to a few destinations and urban centers [1,2,5,6], many experts indicate the occurrence of open social conflicts. It seems to be the most characteristic constituent and manifestation of overtourism [7–9]. As Goodwin [3] noted, in circumstances of unacceptable deterioration of residents' quality of life (and also visitors' experiences) in the area, they take measures against it. In addition, the dynamic course of conflicts, their political overtones, and global media coverage are stressed [10,11]. This is why overtourism (or at least its “social landscape”) is associated synonymously with such terms as tourismphobia [12] and anti-tourism [13].

The problem is crucial as the danger for destinations affected by overtourism can lead to the creation of a protracted social conflict [14], fostered by changing actors and the lack of a clear beginning and end. Thus, responsible urban tourism governance requires the ability to diagnose the conflict and

conflict management [15,16] and work out the tailored-made solutions for managing overtourism. However, the nature of overtourism is complex, and its causes, range, and intensity are always conditioned by the local context [2,8,9]. Therefore, despite the efforts in [17], the literature lacks universal and commonly agreed methods and tools for measuring the phenomenon, while it is easier to propose techniques for limiting or preventing its development [18,19]. Therefore, even if the debate on overtourism seems to be exploited and even overused, it still lacks conceptual precision in its delineation of constituent elements and processes [1,2]. In this context, focusing on social tensions and the conflicts related thereto, overtourism opens avenues to reach the core of the phenomenon and also to learn about the most important and burning issues arising from it. As an indispensable part of social life, conflicts emanate errors or side effects of changes taking place in cities, calling for the need for corrections [9,15,20–23]. Therefore, by recognizing the cause and nature of social conflicts arising in cities potentially or actually affected by overtourism, one can explore the characteristics of the phenomenon itself profoundly.

This article aims to frame the overtourism discussion into the social conflict theory by adopting conflict deconstructing methods in order to diagnose the constructs and intensity of disputes associated with overtourism. Hence, we answer Kreiner's, Shmueli's, and Ben Gal's [24] call who state that tourism literature is "in need of a systematic theory of conflict in tourism that addresses factors such as the nature of the conflict, conflict management, conflict resolution, and conflict mitigation". In pursuit of this aim, this study addresses the following two research questions: (1) To what extent has the heuristic power of the conflict theory been used in overtourism discourse, including the delineation of social conflict types? and (2) How can the state and intensity of overtourism be measured by the nature of social conflicts referring to urban tourism development?

Thus, we have conducted a review of the extant literature on tourism to recognize the relationships between tourism development and conflict theory, as well as identify approaches, strategies, and tools developed to address overtourism issues. In the empirical section, we apply the multidimensional Circle of Conflict (CC) model, adapted from Moore [25], to diagnose the disputes related to urban tourism development. As overtourism is a particular city context-dependent phenomenon, we adopt the case study method by conducting field research in two Polish cities to verify the model, i.e., in Krakow and Poznan.

We contribute to a better understanding of the overtourism development mechanism and its management by including the social conflict theory in the discussion. We also propose and verify a method and tool for diagnosing the potential and actual disputes related to overtourism, assuming that overtourism is a social phenomenon, and thus it manifests through social conflicts. According to the findings, the presence of the phenomenon could be identified by studying the structure of the social conflicts related to it. Thus, the deconstruction of functional sources of conflicts expand the knowledge of the overtourism development process.

The remainder of this paper is structured as follows: First, the Materials and Methods Section is introduced. Next, the Systematic Literature Review Section presents a literature review, starting with the nature of social conflicts, then analyzing the conflict approaches in urban tourism development studies and focusing on strategies and tools used to manage the excessive tourism in cities. On the basis of the conclusions resulting from the theory, the local contexts and the findings of the study are presented, divided into two sections, the Krakow section and the Poznan section. The Discussion and Conclusions Section confront the findings with the existing literature. Finally, the contributions of this study are highlighted, as well as limitations of the study and roads for further research.

2. Materials and Methods

The study applied both secondary and primary sources of information and data. In order to address the question, “To what extent the heuristic power of the conflict theory has been used in overtourism discourse (including the delineation of social conflict types)?”, the traditional selection of narrative literature was conducted, focusing on such areas as social conflicts, tourism development, and overtourism.

To present the developed research paths on social conflicts within overtourism discourse, a systematic literature review was applied. Two scientific databases were used, Web of Science (Thomson Reuters) and Scopus (Elsevier). The bases were chosen because of the vast number of confirmed high-quality journals [26]. The research included only scientific articles indexed in both databases, dated on 14 November 2019. The procedure consisted of the following steps: First, the search terms were selected and included “overtourism and conflict*”, “overtourism and protest*”, and “overtourism and dispute*”. Secondly, to assess a volume of available studies, an initial scanning was conducted, accessing the Web of Science and Scopus databases. As a result, 24 records were yielded, which included at least one of the mentioned research phrases in the title, abstract, or keywords. After sieving the material and removing duplicates, 11 papers were considered for detailed content analysis (for the listing see Appendix A). The analysis focused mainly on recognizing the conflicts’ triggers and tools incorporated to address the particular matters. The retrieved works presented both empirical and theoretical articles, released from 2017 to 2019. The 11 core studies were also complemented by other studies relevant to the research problem, which were selected arbitrarily by the authors.

For the empirical layer of the study, the Moore’s [25] Circle of Conflict model was applied as the conceptual framework. The model is rooted in the conflict orientation perspective, which recognizes the perspectives the conflict parties identify and understands the issues and objectives of the conflict, and places these issues within the context of the conflict. According to the author, the model has a universal nature and can be adapted to every type of conflict situation and intervention level. In the tourism field, the model was used for the deconstruction of conflicts in the process of spatial planning for tourism in Troia-Melides Coast, Portugal [27], and for the assessment of key actors’ predispositions in urban tourism systems for managing the mediation process within conflicts caused by overtourism [16].

According to the model, the conflicts are usually caused by many coinciding factors. Only a few of them relate to the main problem domain. However, the characteristic feature of every type of collective conflicts is their reference to universal aspects of interpersonal relationships. Thus, it is crucial to identify them and adopt appropriate methods and tools of intervention. The model identifies the following components of universal conflict dimensions [25]: values, relationship, data, structural matters, and interests. As it is impossible to weigh their importance (only their intensity could be assessed) or study them separately, in the model they are presented as a circle of conflict (see Figure 1). Moore claims that a conceptual or “conflict map” is needed to work effectively on conflicts. Such a conflict map details why the conflict occurs, identifies barriers to settlement, and indicates procedures to manage or resolve the dispute. That is why the recognition of parties’ attitudes, relationships between them, shared and opposite values, the extent to which they can access and interpret information, their interests, and structural conditions of conflicts is more important than the recognition of the actual merits behind them. Nevertheless, convergences and discrepancies between all the causes are significant. The model can be applied to diagnose the conflicts, and also to propose intervention tasks according to the identified conflict cause types.

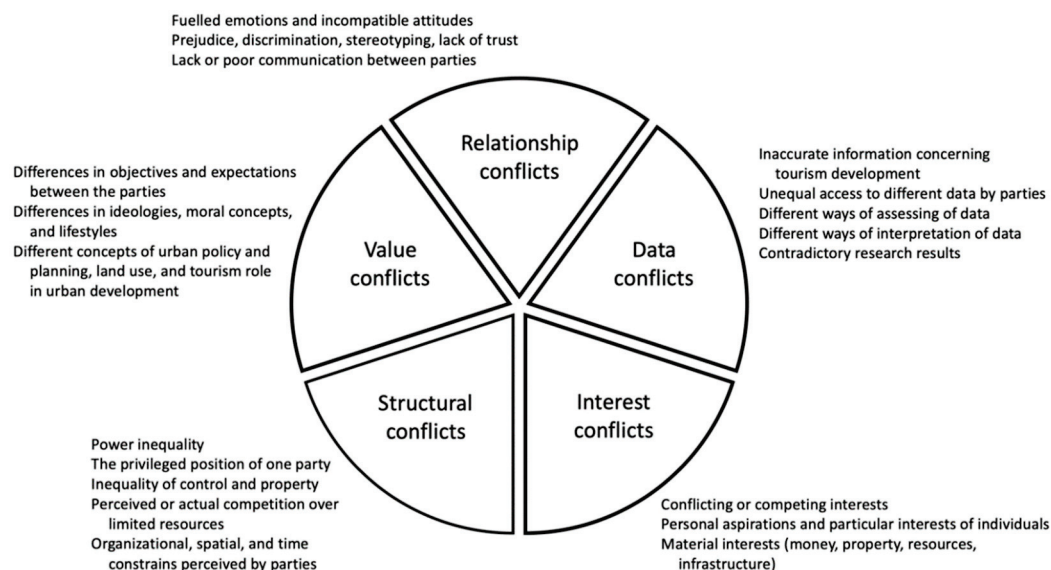


Figure 1. The Circle of Conflicts in the tourism context, adapted from Moore [25].

To verify the Circle of Conflict model [25] as a method for diagnosing and deconstructing disputes associated with overtourism, we used a two case-based approach. The case study method lets a researcher explain the rich context of the studied phenomenon and create analytical generalization [28,29]. We decided to research two Polish cities, Krakow and Poznan, which are similar in population potential, but at the same time they differ in the context of tourism potential. Thus, the cities were chosen on the basis of the following three criteria: (1) the size of the city, (2) connectivity, and (3) the tourism potential (see Table 1). Both cities are major metro areas of comparable size of more than one million inhabitants. The differences in other spheres are significant. The connectivity and tourism indicators are 3.5 times higher in Krakow than in Poznan. Moreover, the review of public reports, official documents, local press, and electronic media allowed us to evaluate the extent of overtourism issues experienced in both cities. In Krakow, the dispute related to overcrowding and tourismification of historical areas was manifested as a public issue; meanwhile, in Poznan, overtourism was discussed as a potential threat. We argue that these different overtourism development stages are the rationale base for verifying the proposed method.

Table 1. Selected statistics for metropolitan areas of Krakow and Poznan.

Feature/City	Krakow			Poznan		
Population, metro area (2016)	1.094 mn			1.029 mn		
Population, urban core (2018)	0.771 mn			0.536 mn		
Regular direct flight connections (2018)	112			31		
Year	2016	2017	2018	2016	2017	2018
Overnights (in mn)	4999	5271	5,579	1396	1438	1484
Available bed places in total	30,096	31,022	31,861	9070	9379	9410
Tourism Intensity Index (overnights per 100 inhabitants)	653	686	724	258	267	277

Sources: references [30–34].

In each city the representatives of the key institutions involved in tourism planning and management were interviewed, using the structured interview method [35]. The researchers in both cities used the same instruction to follow the logic of questions. The interviews were conducted with the representatives (managing directors or public officials) of key entities (public, private, and non-profit) engaged in a tourism destination. At first, the informants were selected purposefully based on the knowledge of the researchers of tourism governance in both cities. Additionally, the snowball method was applied to yield the samples.

In the interview guideline, there were two questions that referred to overtourism and five questions that discussed the nature and dynamics of conflicts concerning tourism development in each city (see Appendix B). The core of the interview was the informants' assessment of the causative element of the conflicts they recognized, as Furlong [36] notes, "managing conflict effectively is a simple two-step process that starts with how we assess the conflict we are facing, followed by what action (or inaction) we decide to take to address it". The informants were asked to rate (with a five-grade scale, where 1 referred to the lowest intensity and 5 referred to the highest intensity), and then justify or discuss the intensity of each causative factor of disputes forming five universal conflict meta-categories (dimensions), i.e., values, relationship, data, structural matters, and interests. The factors and their characteristics were derived from the CC model [25]. Due to the complex nature of overtourism and the number of factors forming meta-categories (16 in total), the grade element was applied to structuralize the interviews and to help the informants relate each assessment to other answers. As the CC model does not impose the form of measurement, the grading is a rarely used technique [16,25]. Most researchers focused on open questions, limiting the number of the discussed issues [27].

In addition to the main questions, the researchers were provided with ancillary options for refining the respective topics. The informants were able to assess the intensity of occurrence of conflict causes, according to the meta-categories (dimensions) of the CC model [25]. Additionally, two questions about the informants' organizational affiliation were used for coding purposes. In the interview guideline, we used open questions and rating questions; however, the interview consisted mainly of the informants' comments. For the interview design template, see Appendix B.

The research was carried in two rounds as follows: March to April 2018 in Krakow, and May to June 2019 in Poznan. Eventually, we conducted 15 interviews in total (given by 19 informants in total), including 6 in Krakow and 9 in Poznan. The most extended interview lasted 80 min and the shortest one 31 min. On collating the results, we conducted the descriptive and substantive content analysis. Two researchers read every interview. Given the low number of interviews and the nature of the problem and the need for generalization, the use of advanced methods of data analysis appeared to be unjustified.

3. Systematic Literature Study

3.1. Social Conflict: Theoretical Perspectives and Applications

Conflict is a term popularly used in contemporary colloquial, journalistic, and scientific language. The systematic studies started in the 1950s and led, among other things, to the rise of the science of conflict [37]. Taking into account the disciplines for which conflict is an essential issue, Adamus-Matuszyńska [38] listed the following research perspectives and approaches to this issue: (1) psychological perspective (including psychodynamic concepts); (2) psychosocial approach (from Georg Simmel's considerations, through Morton Deutsch's studies, to Axel Honneth's thoughts); (3) sociological perspective, developed in the 1950s in response to Talcott Parsons' functionalism (i.e., the works by Lewis Coser and Ralf Dahrendorf which are still the dominant paradigms in sociology); (4) political approach (socio-political, with John Burton and Johan Galtung as representatives); (5) economic approach (Kenneth E. Boulding); and (6) ecological approach.

As Boulding [39] and Coleman [40] point out, the complexity and multidimensionality of conflicts require an interdisciplinary approach to analyze the causes of conflict and the possibilities of resolving it. However, as Druckman notes [41], such an approach is associated with controversies. The result varies, among others, from the relationship between a basic and an applied research (or the theory and practice), the presence, since Wittgenstein–Popper dispute, of an epistemological dilemma, between a positivist and constructivist attitude towards knowledge, or a methodological dilemma.

Still, the most popular approaches to social conflict and also in tourism studies (see [15,27,42,43]) evoke Simmel's, Marx's, or Dahrendorf's approaches, and especially Lewis A. Coser's [44] framework [38]. According to the latter approach [44], conflict-generating mechanisms refer to

access to power and resources in a structured society. Thus, conflict does not always have to cause social change, and the play between entities does not always have a zero-sum response, which means that a victory of one entity does not always take place to the detriment of the other. Therefore, two kinds of social conflict can be distinguished, internal and external. The former concerns purposes, values, and interests. If it does not concern the foundations of local social relationships, it is positively functional for the structure of society (it rectifies problems associated with the system of power or an axio-normative system). The conflict reaching the fundamental values of a specific group carries a severe risk of destroying it. External conflicts are associated with the external enemy mechanism directed towards another group, i.e., a majority group can be perceived as hostile to goals, needs, and aims of minority groups. The presence of the enemy is perceived as a reason for power to defend a group's values and interests. Coser [44] also distinguishes between non-realistic and realistic conflict. The former, the stimulated one, aims at releasing tension and preserving the structure of a group rather than producing specific results. The latter derives from a situation in which failing to meet the specific needs brings about frustration with an objective and a real source. In Coser's view, social conflict creates various associations and coalitions, which, in effect, provide a structure for a broader social environment.

As far as the tourism studies perspective is considered, the most important recent founders of social conflict conceptualization should also be showcased as follows:

- Burton's [45] approach, which distinguishes contradiction and social conflict; with that, the former refers to the natural social situation, and the latter is associated with the inability to meet human needs (which is destructive to all, i.e., the individual, property, and systems);
- Horowitz's [46] approach, which focuses on ethnic conflict, interpreting this conflict as a lack of understanding of symbols and values by two or more parties;
- Honneth's [47] approach, which, among other things, opposes against approaching conflicts to differences of interest. According to Honneth, the essence of social conflict lies not in the struggle for social equality but the struggle for recognition. The approach takes into account the sense of the subjectivity of the individual (or social group) as causes and dynamics of conflicts, i.e., psychological (identity) aspects, moral (respect) issues, and interactions.

As already mentioned, there is a need, among modern conflict researchers, to apply an interdisciplinary approach in the conflict analysis process (see [38]). As Honneth [47] argues, interpreting conflict only in a political perspective or as concerning economic redistribution is short-term oriented as it does not reach the "moral grammar of social conflicts". As Furlong [36] stresses, it is not possible to resolve the conflict effectively without having an ability to translate conflict theory into models and tools that help to diagnose the specific conflict correctly and choose the suitable, tailor-made actions and effective interventions.

3.2. Social Conflicts in Tourism

The studies on social conflicts have gained increasing attention among researchers representing tourism studies (e.g., [15,24,42,48–50]). The conflict issue has been explored in different perspectives (e.g., cultural, economic, or political [51,52]) usually employing qualitative research methods [24,42]. Tourism researchers propose several additional dimensions referring to conflict within the tourism contexts. These include tourism and cultural conflict [51,53,54], tourism development conflict [49,55], environmental and functional conflict [56] and, last but not least, social conflict [42,57], referring directly to Coser's [44] concept.

By analyzing the genesis of conflicts in tourism space, Kowalczyk-Anioł and Włodarczyk [15] investigated its inevitability, the ambivalent nature of conflicts. They also identified the functions of conflicts in the perspective of local development, for example, whistleblowing (i.e., warnings and information signaling tourism disfunctions), stimulating (stimulating the search for innovative solutions), diagnostic (exposing weaknesses and problems of the local system, as well as revealing

differences and interest groups), and integrative (involvement against something). Referring to context-specific conflicts within the tourism development perspective and based on a literature review, Colomb and Novy [50] explored the context of contemporary urban tourism conflicts. Applying the grounded theory, Kreiner et al. [24] proposed a systematic conceptual understanding of the conflicts surrounding the development of religious-tourism sites. The authors stated that disputes revolve around the conflicting interests, values, and goals espoused by different stakeholders; by ethnic communities and outside developers (over the economic benefits of tourism); and by tourists and locals (over limited resources). Thus, three “super-frames” of the conflicting parties’ perception of the destination can be distinguished, i.e., issues (physical and spatial), procedure or process, and value-influenced function. High-intensity conflicts involve deviation within all three super-frames, and lower intensity conflicts typically involve deviation in only one or two super-frames, or possibly low-intensity deviation in all three [24].

As far as the specific real conflicts are concerned, the so-called “Chinese tourists’ wave” in Hong Kong has been relatively the most explored conflict in the tourist literature [58–61]. Tsaur et al. [60] conceptualized tourist-resident conflict and developed a scale for assessing this particular conflict type on the basis of the relationship between Hong Kong residents and tourists from mainland China. The authors claimed that from the perspective of residents, every tourism conflict can be perceived in terms of cultural, social, and resource/transactional issues. Within the cultural conflict, besides the traditionally indicated elements such as the commercialization of the host culture, the use of natural and cultural resources, and the degree of economic dependence of the destination community [51], it is crucial to understand the interactive influence of tourist stereotypes and the attribution process of residents’ encounters with tourists [62]. The resource/transactional conflict refers to physical space conflicts that result from residents’ physical space (e.g., leisure facilities and public transportation) being occupied by visitors [60,61]. The concept of urban hypertrophy of tourism conceptualized by Kowalczyk-Anioł [63] refers indirectly to the resource conflict.

In summary, although the social conflict issues have been gaining attention in the tourism studies, the need to deepen the studies on the theory of social conflict in a tourism context is still apparent, as stressed by Yang et al. [42] and Kreiner et al. [24]. In particular, since the first instance of overtourism as a (new) urban issue, the death of the comprehensive analysis of understanding and managing conflicts has been even more noticeable. That is why, in the next section, we identify the main research paths of overtourism, i.e., conflict scientific literature review.

3.3. Social Conflicts in Overtourism: Causes, Approaches, and Applied Tools

As cities have grown progressively to the leading tourism destinations [64–66], the tourism industry has become more and more integrated into local economic structures [67,68]. This effect has escalated in cities, which have incorporated tourism as a tool for economic development or renewal [69,70]. However, for a long time, tourism has been promoted as a tool to enhance the community’s quality of life [71–73] mainly owing to the sector’s interdisciplinary character, seemingly beneficial outcomes for a wide range of stakeholders, and a multiplier effect [74,75]. The constant development, liberalism, and boosterism, supported by associated optimism have been the dominant logic within the industry and among its advocates [76–78]. The overtourism phenomenon currently observed, particularly in European cities, is the harmful consequence of these policies to the sector’s evolution [16,69,79–83].

Regardless of whether overtourism is a buzzword, it has evolved, with the considerable role of new mechanisms of knowledge production (cf. [84]), from a news-media popular term to a comprehensive, but also blurring, relational, and stigmatizing concept [77,85]. Many researchers [1–3] stress that the problem behind it is not new. The concept of the vicious circle of tourism development in heritage cities was proposed by Russo [86] and is an antecedent study of overtourism. According to many researchers, it is rooted in the global discussion on the limits of growth, dating back to the 1970s (Club of Rome’s report [87]), as well as the concerns and theoretical discourses surrounding the idea of

sustainable development and resilience, which have been discussed both in the context of tourism and in general [88–96], and later in the strict overtourism context [77,83,97–99]. Hall [98] claimed that the debate on this phenomenon is (and should be) an inseparable part of the global discussion on the limits of growth. Nevertheless, one can limit the overtourism syndrome to visitors' volume and discuss it within the tourism seasonality concept [100–103]. In this context, overcrowding and disturbances caused by an excessive tourist traffic are the extreme manifestations of the so-called high season and ineffective or even incompetent destination management [1,2], consequently challenging the destination's economic sustainable development [102] and its social resilience [103].

In the conditions of overtourism, the interdisciplinary character of tourism that is usually perceived as a strength acts, on the other hand, as a weakness. The infrastructure necessary to run a tourism business is highly interrelated and shared with the infrastructure use daily by locals in cities, for example, public transport, restaurants, points of interest, shopping centers, train stations, and airports [7,104]. In this regard, urban tourism can quickly be taken for either a conflict trigger or a context, given that frequent protests against tourism are nested deeper in a broader urban change and social issues [78], such as city rights, cost of living, housing affordability [4,105], corporate developments that are deemed to damage the fabric of local communities, and exclusion of precarious groups [9]. On the basis of the conducted systematic literature review, Table 2 exhibits the types of disadvantageous overtourism effects identified, until now, in cities.

Table 2. Disadvantageous consequences of overtourism.

Negative Overtourism Effects	Example(s) of Impact(s)	Study
Gentrification and/or tourismification, heritagization	Transformations of city's districts/areas emerging of new tourism sites spatial fragmentation and segregation of the city	[9,12,16,21,77,78,106,107]
The proliferation of the private tourist rentals (short-term rentals, Airbnb)	excessive replacing of dwellings by tourist accommodation increase in housing prices (in rates of rent and purchase per sqm) housing shortage the problem of continually changing neighbors	[7,9,12,16,21,77,78,105–107]
Structural changes in local commerce and the urban network	employment outsourcing and precarization the exclusivity of the tourist-related shops increasing prices of leisure time activities	[9,12,16,77,106]
Congestion, overcrowding, oversaturation and overexploitation	crowds of people in the main public spaces (city center, bus stations, parking lots, museums, cultural and leisure facilities, gastronomy, shopping centers, etc.) public transport congestion unregulated free guided tours	[7,12,16,21,78,99,105,107]
Environmental changes, pollution and waste generation	littered streets and beaches (e.g., as a result of cruise tourism or night-time activity) excessive air traffic	[12,21,107]
Producing or deepening social inequalities, violation of fundamental laws	introduction of the "Anti-Meeting Law" in Sevilla, which violated fundamental laws to assembly; protest and freedom of speech the squandering of public money in a local context, together with unemployment and precariousness at the expense of staging sport mega-event	[9,12,21,77]
Privatization of public spaces and services, commercialization of the city	building a city brand, which has low or no correspondence between the image created and the social reality of most inhabitants converting publicly owned historical buildings into private businesses (e.g., into hotels, etc.) engaging private companies into management of local services (water supply; garbage collection) introducing or increasing fees/taxes for the use of services or access to public spaces increased dependence on global actors with an economic and political power loss or decrease in the residents' purchasing power competition for public space: mainly taken-up parking spaces and congestion, taking up public space by electric vehicles for tourists, use of public space by cafés and restaurants	[9,12,16,21,77,106]
Safety issues	street crime more severe legal restrictions and increased public control	[21,106]
Tourists' improper and invasive behavior	irritation and anti-tourism attitudes of residents towards tourism and hospitality sector interventions into the residents daily/nightlife due to the "live like locals" trend and night-time economy	[7,16,21,78,99,107]

Source: Author's elaboration upon the systematic literature studies.

One of the underlying conditions to enable tourism development in a destination is the local community acceptance [108,109]. The residents' attitude is often based on objections or refusal towards further growth, manifested through social movements' activity [21,70,77,110]. This situation indicates a rise in real conflicts and calls for integrated management procedures [74,104]. The works selected for our study build upon the following four concepts: economic growth, sustainable development, power, and conflict management (Table 3).

Table 3. Conflicts around overtourism: approaches and tools applied.

Core Concept (Analyzed Studies)	Identified Conflicts' Background/Cause	Discussed Tools/Strategies to Handle Conflicts
economic growth [4,9,21,78,105]	gentrification and/or tourismification, heritagization	not addressed directly
	proliferation of the private tourist rentals (short-term rentals, Airbnb)	not addressed directly
	structural changes in local commerce and the urban network	not addressed directly
	congestion, overcrowding, oversaturation and overexploitation	tourism activity optimisation in destinations in Norway [105]
	environmental changes, pollution and waste generation producing or deepening social inequalities, violation of fundamental laws	not addressed directly
	privatization of public spaces and services, commercialization of the city	not addressed directly
sustainable development [7,99,107]	safety issues	not addressed directly
	tourists' improper and invasive behavior	appointing a Night Mayor to deal with nighttime economy-related problems in Budapest [21]
	gentrification and/or tourismification, heritagization	not addressed directly
	proliferation of the private tourist rentals (short-term rentals, Airbnb)	conceptual model of conflict drivers and irritation factors [7]
	congestion, overcrowding, oversaturation and overexploitation	social carrying capacity [107]; social impact assessment with the hysteresis model [99]
	environmental changes, pollution and waste generation	not addressed directly
power [12,106]	tourists' improper and invasive behavior	not addressed directly
	gentrification and / or tourismification, heritagization	not addressed directly
	proliferation of the private tourist rentals (short-term rentals, Airbnb)	policy adjustments: introducing by municipal governments of Palma de Mallorca, Amsterdam, Madrid and Barcelona partial or total restrictions on the licensing of tourist accommodation [12]
	structural changes in local commerce and the urban network	not addressed directly
	congestion, overcrowding, oversaturation and overexploitation	5D: de-seasonalization, decongestion, decentralization, diversification and deluxe tourism [12]
	environmental changes, pollution and waste generation producing or deepening social inequalities, violation of fundamental laws	not addressed directly
conflict management [16]	privatization of public spaces and services, commercialization of the city	introducing the Anti-Meeting Law in Sevilla [106]
	safety issues	not addressed directly
	tourists' improper and invasive behavior	more severe legal restrictions and public control [106]
	gentrification and/or tourismification, heritagization	not addressed directly
	proliferation of the private tourist rentals (short-term rentals, Airbnb)	not addressed directly
	structural changes in local commerce and the urban network	not addressed directly
congestion, overcrowding, oversaturation and overexploitation	multidimensional Circle of Conflict model, adapted from [25]	
privatization of public spaces and services, commercialization of the city		
tourists' improper and invasive behavior		

Source: Author's elaboration upon the systematic literature studies.

The majority of the analyzed papers relate the social conflicts to the notion of economic growth. The studies associate the problem's origin with the neoliberal boosterism model [78]. According to them, urban policymakers have, in many cases, introduced tourism into local economic development plans or adopted it as an urban renewal tool without proper planning [9]. Tourism is also perceived as a popular and easy tool to promote economic activity, which needs neither much public investment nor control to bear the fruits [21,78]. Such misconduct based on the maximization strategies has resulted in

adverse impacts on the residents' quality of life [105]. The detrimental effects include [9,21,77,78,105]: gentrification or tourismification of the cities, heritagization, proliferation of the private tourist rentals (short-term rentals and Airbnb facilities, influencing the housing market), structural changes in local commerce and the urban network (e.g., high dependence on the hospitality services), congestion, overcrowding, oversaturation and overexploitation, environmental changes, pollution and waste generation, producing or deepening social inequalities, violation of fundamental laws, privatization of public spaces and services, commercialization of the city, safety issues, and tourists' improper and invasive behavior (for a more detailed list of the consequences see Table 2). The adverse outcomes appear to undermine the existing economic paradigm and entail the tension between growth and degrowth [4,105].

The studies analyzed also reveal that there are two explicit social unrests' triggers, i.e., overcrowding and night-time entertainment connected with the so-called "party-tourism" [4,21,105]. With this in view, the industry with the local authorities have put forward the institution of Night Mayor, for example, in Budapest [21], and the academia elaborated the tourism activity optimization [105]. Oklevik, Gössling, Hall, Jacobsen, Grøtte, and McCabe [105] proposed the theoretical model of optimization to handle the overcrowding issue, based on the data retrieved from Norwegian destinations. The underlying assumption of the strategy is to increase profits and the value gained from maintaining or decreasing the numbers of arrivals. This aim should be achieved by extending visitors' length of stay and incrementing the local government revenue by imposing a departure tax. Nevertheless, the authors concluded that the suggested solution requires further development.

In the sustainable development concept, (Table 3, row 3) the interest concentrates mainly on a community's long-term well-being (embracing three dimensions, i.e., economic, social, and environmental), rather than on financial gains and market mechanism of sustaining the constant economic growth [7]. This research path focuses on determining the residents' perceptions and acceptance of tourism and tourist activity and its impact on the local environment, as well as on attempting to determine the destination's carrying capacity which limits the tourism development without producing adverse outcomes [107]. The main factors playing roles in the conflicts' upsurge, which are mentioned in the relevant reviewed papers, include gentrification or tourismification, heritagization, proliferation of the private tourist rental (short-term rentals, Airbnb), congestion, overcrowding, oversaturation and overexploitation, environmental changes, pollution and waste generation, and tourists' improper and invasive behavior [7,99,107].

From this approach, Postma and Schmuecker [7] developed a conceptual model to define conflict drivers and irritation factors between residents and visitors. The framework's building blocks constitute visitors and their attributes, residents and their attributes, conflict mechanisms, areas of conflict between both parties, and indicators of quality and quantity of tourist facilities. A study of the accommodation situation in Hamburg against the overtourism background, identified the following two focal conflict mechanisms: (1) cultural distance (cultural differences between tourists and locals), and (2) spatial and temporal distribution (the number of tourists gathered in space or time, overcrowding occurring this way can cause irritation irrespective of "cultural distance"). However, the authors recommend conducting more in-depth research to refine the model.

The carrying capacity concept [91,111] is another method implemented to scrutinize the tourism-related conflicts at a destination. The carrying capacity term refers to a numerical threshold of visitors received in a particular area, the exceeding of which results in the social and cultural changes the local community no longer accepts [99,107]. On the one hand, Namberger and others [107] investigated Munich residents' opinions in terms of the social carrying capacity and the overcrowding in the city. The study revealed two triggers of local contentions ignited by tourism from the perspective of the inhabitants, "crowds of tourists" and "disturbances by smaller groups of tourists" (e.g., from different cultures). These findings converge partially with the research carried out by Postma and Schmuecker [7]. On the other hand, Cheung and Li [99] revised the physical carrying capacity in Hong Kong. The researchers incorporated the notion of hysteresis (the irreversible impact) in the tourism

field. They proved that uncontrolled and immediate growth of the same-day visitors' number at a destination, in the long run, negatively and permanently impacts the visitor and resident relations, regardless of further introduction of crisis management or neutralization of the conflict's antecedents. Nevertheless, similar to the previous cases, further analyses are necessary to draw more general conditions in which the hysteresis can take place as a result of overtourism.

Overtourism-induced conflicts have also been studied through the lens of social power theory (Table 3, row 4) [12,106]. In this context, the relation between social policy and the tourism policy is considered, with reference to neoliberalism. Briefly, tourism is perceived as a tool of exerting power by the governmental bodies and the prime benefit to the quality of the residents' life [12]. Similar to the economic growth case, the range of social conflicts' antecedents include all of the nine identified triggers (see Tables 2 and 3). However, this issue emanates mainly through the "right to the city" discourse [112], where the social circles struggle to maintain or win back the public space and put the public value first, contrary to the market-oriented strategies [106]. Considering the city of Barcelona as an example, Milano [12] indicated the failure of the following methods applied by the local governments to alleviate these kinds of local disputes: de-seasonalization, decongestion, decentralization, diversification, and deluxe tourism. These strategies are based mainly on the quantitative adjustments, which do not address the qualitative drivers of overtourism (e.g., structural changes in local commerce and the urban network). However, there are also rare cases when city authorities intervened in the proliferation of private tourist rentals by introducing policy adjustments. In Palma de Mallorca, Amsterdam, Madrid, and Barcelona partial or total restrictions on the licensing of tourist accommodation were imposed [12]. The research also illustrated the extreme means of handling the public protests, such as in the case of Anti-Meeting Law in Sevilla, which violated fundamental laws to assembly and the freedom of speech. To maintain a tourism-friendly image and provide safety, the municipal government banned, among others, the social gatherings and the street art practices in the public spaces [106].

Finally, the conflict management (CM) emerging from the organizational conflict theory is the last concept applied for analyzing the social conflicts around excessive tourism in cities (Table 3, row 5). This approach proposes a tool for deconstructing such conflicts by recognizing their complex functional structures within urban conditions. It also allows us to determine what the conflict causes are, what activities form the process of the CM, and who should initiate and carry it out. Moreover, the tool is useful to identify the structure of conflicts at various stages of their development (including potential conflicts) and the level of overtourism development (including the pre-overtourism and the mature-overtourism stage).

3.4. Conclusions

Although the researchers analyzing the nature of the conflicts within the tourism context refer mainly to the fruitful achievements of the social studies in this area, relatively few studies apply the specific conceptual frameworks for deconstructing the conflict structure and dynamics. The majority of studies focus on identifying the causes and substantial subjects of conflicts due to the proposed solutions related to the specific conditions of tourism development in the destinations. Otherwise, two studies refer to more universal concepts. Kreiner et al. [24] identified interests, procedure and process, and values as "super-frames" of the conflicts between stakeholders due to the measuring of their intensity extent. Tsaur et al. [60] recognized the cultural, social, and resource/transactional dimensions of the conflict between residents and visitors.

As far as the studies on overtourism relating to conflicts are concerned, the contemporary discussion seems to offer a somewhat limited understanding of methods and tools referring directly to the deconstruction of the conflicts related to the excessive growth of tourism or their mitigating (see Table 3). Nevertheless, the studies which address the conflict issue can be grouped into those which refer to the substantial subject of disputes and those which refer to the nature of conflicts itself. In the former group, there is no shortage of studies which analyze the causes of the conflicts and suggest adequate solutions in the form of imposing new policies towards tourism development,

public interventions, adjustments in measuring tourism impact and visitor management, changing the governance structure, or verifying the marketing strategies [12,21,99,105–107]. In all these studies, the researchers stress the scarcity of the data characterizing the core of the conflicts as the significant challenge in mitigating them.

The researchers representing the latter group of studies [7,16] tried to abstract from the specific context of tourism development in studied destinations and identify the universal factors and mechanism behind the overtourism-related conflicts. Regardless of the core of the conflicts, their structure and dynamics are driven by interrelated powers whose nature is universal for every dispute. Postma and Schmucker [7] identified cultural distance and spatial and temporal distribution as the elements of the mechanism of formation of the concrete conflicts. Zmysłony and Kowalczyk-Anioł [16] recognized conflicting values, interests, relationships, data, and structural matters as the causes of the conflicts. This model is also in line with Kreiner et al.'s [24] approach. What is essential, both studies propose the empirical frameworks that could be applied to other destinations affected by the overtourism syndrome. However, considering difficulties in obtaining reliable information measuring both the scale of overtourism and the extent of the related conflicts, only the Circle of Conflict model used in the last-mentioned study could be verified as the method of diagnosing the intensity and nature of the disputes associated with overtourism.

4. Results of the Empirical Verification

4.1. The Conflict Situation in Krakow

Krakow, included in the UNESCO World Heritage List since 1978, belongs to the most prominent tourist destinations in Central and Eastern Europe. The city has also grown into a flagship travel destination in Poland, and the second-most populous urban area, inhabited by 0.76 mn residents. In 2019, Krakow received 14 million visitors, out of whom 10.15 million were tourists (among them 30% foreigners, mainly the Europeans) [113]. The role of tourism in the local economy has been increasing, and the sector contributed 8% to local GDP, generating 10% of the available workplaces in 2018 [114].

Over the last decade, the steadily booming inbound of visitor flows have concentrated in the historic city center, The Old Town Quarter. Consequently, the area has started undergoing the tourismification, gentrification [115], and commodification processes. These have incited a discussion on the ongoing center's depopulation, disturbances caused by the constant city users' and tourists' circulation, and the night-time economy, both in the local media [116–118] and among academics [16,114,115,119]. Although the issues have been addressed in the city's latest strategic documents [113,120], the operationalization of the general action frameworks remains the burning question. In 2011, Mika [121] identified the tourism-related conflict factors by stressing the Old Town's multifunctional character and the ensuing differences in the ways it is used, especially the conflict between the tourist and residential functions, overcrowding during the peak season, and contradictions among various forms of tourist traffic. Moreover, the short-term rentals' expansion [122] and popularization of the amenities for low-budget entertainment tourism [123] have exacerbated the situation. As a result, the touristic pressure on housing resources [124], in particular those due to the tourist rentals proliferation via the Internet platforms (such as Airbnb), impacts the entire Old Town Quarter and the adjacent areas, such as Podgórze [120]. All these changes have led to the conclusion that the city has evolved from a mature to an overtourism destination. This opinion is supported both by the academic voices [16,114,115,125] and the ongoing public debate, with the local authorities' active participation [122,126,127].

For the purpose of the research, the following ten informants representing six key stakeholders were interviewed: the local chamber of tourism, the residents' social movement, the public city tourism administration, the city council as a policy-maker body, a regional tourism organization, and the destination service providers.

Almost all the informants perceived overtourism as a significant problem of the urban development. In detail, the most significant issues listed were the following: spatial concentration of tourist activities

and a progressive change in the structure of services and retail in the city center; noise and other arduousness associated with the night-time entertainment; the depopulated but crowded city center; growth of the grey tourist market; problems on the housing market (boosting short-term rental accommodation, growth of buy-to-rent offers, increase in rental rents, and real estate prices, residential gentrification); and progressive loss of the city atmosphere. However, the informants stressed that such a significant linkage between these issues and the uncontrolled tourism growth, especially in the city center and other tourist spots, was perceived in terms of the overtourism problem. The majority of them assessed its intensity as high, and two assessed it as moderate. Only the representative of the local tourist chamber stressed that the problem was not as acute as the local media reported. However, none of the informants could provide the detailed data confirming the extent of the phenomenon, they claimed they relied on the knowledge of experts and the media reports (at the time of the interviews the study conducted by Szromek and others [114]).

Following the interview logic, four informants claimed that overtourism manifestations induced the conflict within the city, which had already turned into the manifested stage. Although the problem areas and conflict parties (stakeholders) have been outlined, it is difficult to determine the scale and the future course of the dispute. In the opinion of the representatives of the city tourism administration and the regional tourism organization, the conflicts were not visible and identifiable. However, their symptoms and the growing interest inconsistencies were already noticed by the professionals and decision makers, and it is them who should be addressed.

In the opinion of up to five informants, the city authorities, the residents' community and local tourism entrepreneurs were the main parties of the dispute on overtourism. One of them added the international capital representatives (i.e., the real-estate companies, multinational corporations, and property owners from outside Krakow) to this group. The city hall representative claimed that the disputes were local and involved local communities and neighborhoods and local tourist entrepreneurs. Nevertheless, the lack of long-term vision of the tourism development and inactive city authorities were pointed out as the main antecedents of the conflict.

On the one hand, when asked to assess the conflict using the specific criteria (see Table 4), the stakeholders rated the complex core of the dispute (mean assessment 4.17 on a 5-point scale, where 1 represented the lowest and 5 represented the highest level). In addition, the inequality between the parties and the emotional level of the dispute were considered relatively high (respectively, 3.33 and 3.17). On the other hand, the length and the number of parties were considered as the least intense characteristics of the conflict (respectively, 2.50 and 2.00). Moreover, the differentiation in the stakeholders' ratings was noted only in terms of the emotional level and of the length of the conflict. In detail, the representatives of the city council, the city tourism administration, and the regional tourism organization perceived them as less intensive than other participants.

Table 4. The intensity of the conflicts in Krakow and Poznan.

Conflict Features/ Informants	The Complexity of the Conflict Core	Length of Conflict	Number of Parties Involved	The Emotional Level of Dispute	Parties' Ability to Resolve the Dispute	The Advanced Negotiation Procedures Used by the Parties	Inequality between the Parties
Krakow	4.17	2.50	3.00	3.17	3.50	2.00	3.33
Poznan	3.66	4.10	3.61	3.05	2.69	2.03	2.88

There were no significant differences in how the informants identified the functional causes of the conflict-related issues to overtourism (see Figure 2 and Table 5). The informants mainly stressed the differences in values (mean value 4.44 on a 5-point scale, where 1 represented the lowest and 5 represented the most significant impact). In particular, almost all the informants attached the greatest significance to different aims and expectations of the stakeholders. The interest conflicts, notably inconsistent and competing interests of the parties to the conflict and their material causes, turned out to be another category of the conflict source for most of the informants (4.06). The data conflict was assessed as the third influential category of the causes of the conflict (3.72). Most informants paid

attention to a high number of different interpretations of information by the parties to the conflict and incorrect information on its subject. Less intensity was assigned to the relationship and structural aspects of conflicts. The discrepancy between the stakeholders' opinions was observed in terms of the perceived intensity of the universal conflict constructs. Except for value dimension, all the constructs were valued lower by the public stakeholders, i.e., the city tourism administration and the city council. Significantly, these institutions were considered by other stakeholders as the main parties to the conflict. At the same time, the community and tourist business representatives and also the regional DMO perceived the higher intensity of almost each conflict constructs.

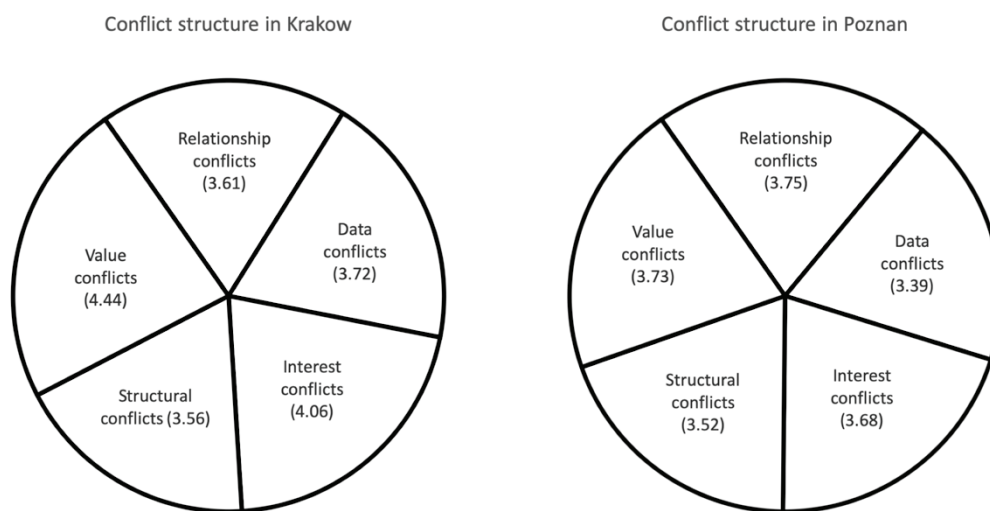


Figure 2. The circles of conflicts in Krakow and Poznan.

Table 5. The informants' assessment of functional causes (universal constructs) of the conflicts in Krakow and Poznan.

Key Stakeholders	Data	Relationship	Structural	Value	Interest	All Categories (Mean Value)
Krakow						
RTO	4.67	4.00	4.33	4.33	5.00	4.47
CTA	2.67	3.25	2.67	4.33	3.67	3.32
CC	2.33	3.27	2.00	4.00	2.67	2.85
CTB	4.00	3.43	4.00	5.00	4.00	4.09
RSM	5.00	4.50	5.00	5.00	5.00	4.90
TB	3.67	3.13	3.33	4.00	4.00	3.63
Average	3.72	3.61	3.56	4.44	4.06	3.88
Poznan						
LTO	4.00	4.00	3.00	3.00	3.33	3.47
CTA	2.50	2.50	3.00	3.67	3.33	3.00
CC	3.00	3.33	3.22	3.67	3.33	3.31
DC	4.67	4.00	4.33	4.33	4.67	4.40
CTB	3.33	3.42	3.06	3.44	2.44	3.14
RSM	2.50	4.50	3.67	4.00	4.67	3.87
CI	3.75	4.50	4.33	4.00	4.00	4.12
Average	3.39	3.75	3.52	3.73	3.68	3.61

Acronyms: RTO/LTO—regional and local tourism organization; CTA—city tourism administration; CC—city council; DC—district council; CTB—local tourist chamber/tourism entrepreneurs; RSM—residents' social movement; TB—tourism business; CI—cultural institutions.

Summing up, the overtourism in Krakow was perceived as the significant issue which triggered the conflict that was fueled primarily by different values and concepts of the tourism's role in urban policy and planning tourism, as well as competing interests of the engaged parties.

4.2. The Conflict Situation in Poznan

Poznan represents the fifth major urban area in Poland, inhabited by approximately 0.54 million citizens [30]. The tourism function in the city has principally developed on the basis of the business and event tourism product [128,129] thanks to the Poznan International Fair infrastructure, one of the most spacious exhibition and conference venues in Central and Eastern Europe [130]. Poznan has hosted to international trade fairs since 1925 [131], while large-scale events such as UN Convention on Climate Change COP 2008 [132] or the 2012 UEFA European Football Championship have played a role in creating the city's international, business-friendly, and visitor-open image [133]. The incorporation of the tourism sector in the local economy, which paved the way to its contemporary growth, dates back to 1995 when the strategy of Poznan growth was developed with the aim to build a balanced economy, open to investors, economic partners, and tourists [130]. In addition, Poznan aimed to boost the leisure and cultural tourism segments, bundling and promoting offerings related to local historic attractions, for example, the Royal-Imperial Track [134] or the fortifications [135]. According to the latest data available, in 2018, total number of overnights in Poznan amounted to 1.4 million, out of which 27% was realized by foreign tourists, who were mainly from Europe [30]. The five most frequently visited tourist attractions are located in the city center or its neighboring areas [136].

During the research, twelve representatives of the following seven key stakeholders were examined: city tourism organization, the city council, tourism entrepreneurs representing the local chamber of tourism or the independent ones, the residents' social movement, the public city administration, a key cultural institution, and the old town district council.

According to the vast majority of the informants, tourism had positively impacted the development of the city. Moreover, they claimed that there was still an untapped tourist potential hidden in the city. Thus, in their general opinion, the intensity or even threat of overtourism was scarce and fractional.

Nevertheless, the stakeholders listed many challenges identified as significant in terms of the overall development of the city. The informants identified problems grouped in such categories as night-time entertainment (eight indications), uncontrolled growth of the short-time rental accommodation sector (five indications), pollution of the public space (four indications), transport infrastructure issues (four indications), and loss of local authenticity of urban leisure offerings (two indications) as the most significant. Consequently, the majority of the crucial tourism stakeholders claimed that the disputes triggered by these issues were in the latent stage of evolution and were not identifiable by public opinion. Therefore, they could not yet be precisely addressed. According to the informants, there were no conflicts directly caused by an excessive growth of tourism. Only three out of twelve informants claimed that the conflicts had entered the manifested stage. However, similar to the Krakow interviews, the informants stressed that their assessments were based on subjective opinions, and not the facts and figures.

It should be noted that the informants claimed that the identified nuisances were not strictly associated with the growth of tourism. They perceived tourists just as one of the actors involved in these issues. The city authorities, the residents' community, and the local entrepreneurs were most often identified as the main parties of the disputes. Additionally, the city and district councilors, and the local tourism organization pointed to the real-estate developers, the party-goers, and the managers and owners of night-time premises. Nevertheless, the informants perceived the challenges interdependently as associated with an uncontrolled consumption of the city's offerings in general, and not with the overtourism syndrome, as it was demonstrated collaboratively by city dwellers, visitors from metro area, and tourists. Thus, the following results refer to the conflicts related to this complex issue: The informants pointed out the length of the conflict (average assessment 4.1), the complexity of the conflict core (3.66), and the number of parties involved as the most powerful features of the

conflict (see Figure 2). They also assessed that the negotiations procedures used in the dispute were not advanced (2.03), and the inequality of the parties was not perceived as significant.

None of the functional causes were assessed as significantly impacted by the nature and dynamics of the conflict (see Figure 2). The relationship and value dimensions were assigned with the highest (and almost equally) impacts (3.75 and 3.73, respectively). However, the differences between the other conflict source constructs, i.e., the interest (3.68) and structural (3.52) were slight. In addition, the informants did not seem to stress the issues of information referring to the conflict core. The intensity of the data sources was assessed as the least important conflict source (3.39); however, still very close to the previously mentioned constructs.

The differences in the informants' assessments were identified (see Table 5). In general, both the representatives of the formal governmental bodies (i.e., the city council, the city administration) and the representatives of the collective tourism bodies (i.e., the local tourism organization and the chamber of tourism) recognized the lower intensity of conflict source dimensions than the representatives of local community (i.e., the district council and the residents' association). The average assessments of the former ones ranged between 3.00 and 3.47 as compared with the latter ones, whose evaluations ranged between 3.87 and 4.40. Going into a more in-depth analysis, the significant differences in the opinions grouped as the data dimension were noticed. In detail, they ranged from 2.5 with reference to the city tourism administration and the residents' social movement, to 4.67 with reference to the old town district council. However, such a discrepancy in the assessment of information is in line with the complex nature of the urban tourism issues. Moreover, the representatives of the city authorities (i.e., the city council and the city tourist administration) and also the tourism entrepreneurs assessed the intensity of the relationship and the interest dimensions lower than the informants representing the residents' social group, the district city councilor, and the culture institution, who perceived them as the sources which impact the conflict dynamics to the largest extent. Nevertheless, two dimensions of the conflict construct, i.e., the structural sources and the value sources, were assigned with similar rates.

Summing up, even though the informants claimed a lack of the overtourism-related issues in the city's everyday life, the conflicts related to an uncontrolled consumption of the city offerings were raised. However, the general level of intensity of the conflict sources' hidden behind it, referenced by the summary of average values in Table 5, is not much lower than in the Kraków conflicts related to overtourism, i.e., 3.61 in Poznan as compared with 3.88 in Kraków. Consequently, no leading commonly recognized source of the conflict was identified.

5. Discussion and Conclusions

As many researchers have highlighted, [1,2,78,137] overtourism is a very complex and multilayer issue. Thus, it also appears to be a hard, measurable, and examinable phenomenon. Moreover, the way it evolves reminds us of the paradoxical position of a boiled frog, which is not aware of being boiled until it is too late. That is why the cases of the destinations affected by the overtourism syndrome [18,70,79,138] tell stories of violent reactions and disruptive changes, although the experts are convinced that its enablers and symptoms could be visible much earlier. However, the dynamics of a conflict situation is determined by the content of the conflict [139]. Thus, the explanatory power of this approach allows for a better understanding of the complicated nature of overtourism through the lens of the social conflict sources incrustrated in the disturbances triggered by this syndrome. In this paper, we tried to "map" them using Moore's CC model. As many conflict theory researchers have indicated, understanding the causes is understanding the social potential to resolve the conflict [37,38,45].

The case studies conducted in two Polish cities which were similar in population and economic potential but different in terms of the tourism development and a recent overtourism experience, let us reveal the social layer of the conflict process and shed more light on the universal (or primary generating) causes of the social disputes accompanying it. In Krakow, the destructive nature of the powers represented by overtourism were revealed. The value dimension had the biggest and the most intense impact on the nature and dynamics of the conflicts related to overtourism. According

to Moore [25], the value-related conflicts are difficult to resolve as their nature limits the space for negotiation and compromise. This could explain the rapid course of anti-tourists protests and the conflicts accompanying overtourism. However, the nature of other types of the conflicts referring to interest, data, or relationship dimensions whose intensity was assessed to be also high, are much easier to resolve as there is more space for negotiation, collaboration, and compromise. Therefore, while bearing with the complexity of the whole overtourism process, the key stakeholders should focus primarily on mitigating emerging interest, data, and relationship conflicts induced by the tourism development.

According to the second case study results, although overtourism has not appeared in Poznan as a public issue and the informants manifested the overtourism-free spirit, the city is exposed to this syndrome. First, overtourism is a place-specific phenomenon [1,2], i.e., it does not transmit itself in the same form to other cities. However, it could mean that it is deeply rooted and fares well in the specific local conditions. As overtourism is a negative manifestation of the tourism development, the already existing conflicts and deficiencies could be the cause of this unsustainability. According to the informants' opinions, the value and structure dimension of the conflicts in Poznan had the most acute and similarly intense impact. As Moore [25] noted, the former is more difficult to resolve than the latter. Since the stakeholders perceived the most subjective dimension as one of the least interacting, it means that they could underestimate the objective, i.e., the rational nature of conflicts related to the development of tourism in the city. Instead, they considered the nature of these problems as subjective. It could be a warning signal of not perceiving the essence of the threat. Second, the identified discrepancies in the informants' assessment of the functional conflict sources' intensity indicated that the representatives of the public bodies responsible for tourism governance (the city council, the city tourism administration) and tourism entrepreneurs underestimated the problems. In comparison, the informants representing the "local side" of the conflicts, i.e., the district councilor, the residents' social movement, and the culture institution, were more aware of the intensity of the conflict in each dimension, which could be a warning signal. Third, the core of the disputes indicated by the informants, i.e., the night-time entertainment, the uncontrolled growth of the short-time rental accommodation sector, and the pollution of public spaces, could also apply to the tourism realm in the city. On the basis of the literature on overtourism [1–3], one can argue that almost all the mentioned issues could be the drivers or constituents of the phenomenon.

This article contributes to the knowledge of tourism development within urban destinations by adopting the method adapted from the conflict theory to study the intensity and structure of social conflicts induced by overtourism. In particular, this article verifies the utility of Moore's [25] Circle of Conflict model in the overtourism context to elaborate on the examination of the structure of conflicts imposed by overtourism. Recent studies dealing with potential social conflicts in the context of overtourism [9,20,21,107] have focused on finding a substantial core of conflicts. Adopting the CC model to two cities let the researcher not only study the substantial causes of the conflicts, but also understand their functional structure, rooted in the relationship, data, interest, structural, and value causes. Thus, the article complements the method of studying overtourism in urban destinations with the method of deconstructing the conflicts which are the part of the phenomenon. Moreover, the observed symptoms allow to assume that the overtourism and the challenges posed by it will evolve and will impact a growing number of destinations. In this vein, it appears sound to further continue developing and validating the tools to diagnose and manage the conflicts. Future research could benefit by incorporating the view Horowitz [46] applied and reflected on the ethnic conflict. This approach focuses on recognizing the lack of understanding between two or more parties with regard to symbols and values. As Burton [45] noted, the desirable solution to the conflict consists of taking into account the broad context of the given situation and building an environment which creates valuable relations between the parties to the conflict. This perspective should be an inspiration for seeking solutions in theoretical and practical discussion on (over) tourism conflict. Furthermore, the article contributes to the conflict studies by applying Moore's [25] Circle of Conflict model to identify and understand the

social conflicts caused or related to such a very complex, multilayered, and dynamic phenomenon as overtourism.

In our opinion, some of the previous studies on conflicts are in line with the current debate on handling overtourism. Among others, a key approach is the tourism sustainable development, notably the inclusion of a broad range of stakeholders (residents' empowerment, governance). As Morton Deutsch explains, the father figure in the field of the conflicts research, the relations between the parties involved influence both the antagonism creation and the dispute course. Yet, as the author adds, the dynamics of the conflict situation is determined by the content of the conflict [139]. Therefore, the study presented in this article contributes to the body of literature on overtourism, indicating a potential level of the phenomenon by deconstructing the functional structure of the conflicts related to it. As both study cases showed, the value dimension had the biggest and the most intense impact on the nature and dynamics of conflicts. It is usually associated with the social valuation of space (local and national identity space) in which the competition between residents and guests takes place.

As Burton [45] notes, in each conflict, human traits play a significant role (constituting the ontological basis and universal essence of the conflict); generalizing, it points to three basic sources of the conflict situations, i.e., needs, values, and interests. The results of our research correspond with this statement. The deprivation of residents' needs of (often gradually increasing over time) is widely commented on in the overtourism literature (see, among others, issues of gentrification intensified by the tourism development [16,115]). The problem is also related to the problem of social control, whose lack (or its unreliability) is perceived in the overtourism destinations as a threat or a way to social anomy. They are the genesis of variously expressed anti-tourist protests [7–9,16]. Some of the protests, as some of the authors in the overtourism field, allude in the narration to the dichotomous division introduced by Marx and continued by Dahrendorf. The social world splits between the dominant and subordinate groups, where each of them presents counter interests. Yet, as Adamus-Matuszyńska [38] observed, the contemporary interests of groups stemmed from complex economic, social, and politic phenomena. These factors hinder the conflicts interpretation in terms of the social class dichotomous division. Following Axel Honneth [47], the core of the present social conflict (including overtourism) is rather the recognition of the realm and not of the social equality. The conflicts caused by overtourism (as long as they are not in the conflict with fundamental values and interests) also stimulate the emergence of new rules and institutions (e.g., the Night Mayor) as well as the norms ordering social relations in the group, which is in line with Coser's assumption [44].

The escalating conflicts of overtourism are emanation of an unsustainable situation that signals the disfunctions and stimulates the key institutions to search for and undertake necessary actions [15]. Moreover, the emerging protests, which are an integral constituent of the overtourism social phenomenon [7–9] could have a diagnostic role in overtourism and overtourism management, because they expose some weaknesses and problems of the local tourism system and urban policy, as well as reveal the differences and the existence of interest groups. As Kreiner et al. [24] note, "(i)n many tourism-focused communities, tourism development significantly influences social conflict. By bringing in more groups and subgroups, tourism development alters and complicates the scope and nature of conflicts, thereby influencing the social structure and bringing about cultural change within local communities. The disputes that emerge typically revolve around the conflicting interests, values, and goals espoused by different stakeholders". Moreover, following Burton [45], it is worth noting that the current deeper social problems are also reflected in the conflicts. In this sense, the overtourism conflict (usually associated with urban transformation) is their signal. As an attribute of social change [39], (over)tourism conflict can simultaneously be the cause of other social processes [38]. Despite the assumption adopted in the literature about the normality of conflicts in the social system, their ubiquity and, to some extent, utility (. . .), there is an agreement on the need to overcome them.

Finally, the limitations of the study should be identified. First, the literature almost entirely exclusively focused on international (i.e., English language) journals indexed in Scopus and Web of Science, with the exclusion of the tourism-related work published elsewhere (books, book chapters,

and conference papers). In addition, due to delineation of the scope of the core analysis, only those papers in which the term “overtourism” was used were included. Secondly, the limitations related to the case study method as having limited potential for generalization and limited readability [35] should be mentioned. The contextual character of the research, possible response bias, and the limited number of informants limits the conclusions.

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Appendix A

List of Papers Included in the Core Systematic Literature Review

- i. Cheung, K.S.; Li, L. Understanding visitor—resident relations in overtourism: developing resilience for sustainable tourism. *J. Sustain. Tour.* **2019**, *27*, 1197–1216.
- ii. Milano, C. Overtourism, malestar social y turismofobia. Un debate controvertido. *Pasos. Rev. Tur. y Patrim. Cult.* **2018**, *16*, 551–564.
- iii. Milano, C.; Novelli, M.; Cheer, J.M. Overtourism and degrowth: A social movements perspective. *J. Sustain. Tour.* **2019**, *27*, 1857–1875.
- iv. Sánchez Cota, A.; Salguero Montaña, Ó.; García García, E.; Rodríguez Medela, J. Urban social struggles in Andalusia: Approaches to the politicization of our daily lives. In *Andalusia: History, Society and Diversity*; Bermúdez-Figueroa, Roca, B., Eds.; Nova Science Publishers, Inc.: Jerez, Spain, 2018; pp. 157–195. ISBN 9781536144406.
- v. Namberger, P.; Jackisch, S.; Schmude, J.; Karl, M. Overcrowding, Overtourism and Local Level Disturbance: How Much Can Munich Handle? *Tour. Plan. Dev.* **2019**, *16*, 452–472.
- vi. Novy, J.; Colomb, C. Urban Tourism as a Source of Contention and Social Mobilisations: A Critical Review. *Tour. Plan. Dev.* **2019**, *16*, 358–375.
- vii. Novy, J. Urban tourism as a bone of contention: four explanatory hypotheses and a caveat. *Int. J. Tour. Cities* **2019**, *5*, 63–74.
- viii. Oklevik, O.; Gössling, S.; Hall, C.M.; Jacobsen, S.; Grøtte, I.; McCabe, S. Overtourism, optimisation, and destination performance indicators: A case study of activities in Fjord Norway. *J. Sustain. Tour.* **2019**, *27*, 1804–1824.
- ix. Postma, A.; Schmuecker, D. Understanding and overcoming negative impacts of tourism in city destinations: Conceptual model and strategic framework. *J. Tour. Futur.* **2017**, *3*, 144–156.
- x. Smith, M.K.; Sziva, I.P.; Olt, G. Overtourism and Resident Resistance in Budapest. *Tour. Plan. Dev.* **2019**, *16*, 376–392.
- xi. Zmyślony, P.; Kowalczyk-Anioł, J. Urban tourism hypertrophy: Who should deal with it? The case of Krakow (Poland). *Int. J. Tour. Cities* **2019**, *5*, 247–269.

Appendix B

Table A1. The interview design template.

Main Topic	Questions Asked/Ancillary Options for Researcher
A. Extent of overtourism in the city	<p>What problems and challenges resulting from the development of tourism do you observe in the city?</p> <p>What is the importance of mentioned issues in terms of further development of tourism and the entire city?</p>
B. The nature and dynamics of the conflict referring to tourism	<p>At what stage is the conflict caused by the excessive development of tourism in the city?</p> <p>What are the main antecedents/causes of conflict?</p> <p>What are the key parts of this conflict?</p> <p>Rate the intensity of the conflict according to the following criteria: the complexity of the subject of the conflict; levels of emotions; imbalance among the parties; the parties' ability to solve the conflict; duration of the conflict; number of the participating parties; advancement of procedures.</p> <p>To what extent do the following factors influence the nature and dynamics of the conflict?</p> <ul style="list-style-type: none"> – Fueled emotions and incompatible attitudes – Prejudice, discrimination, stereotyping, lack of trust – Lack or poor communication between parties – Inaccurate information concerning overtourism – Unequal access to different data by parties <p>– Different ways of assessing and interpretation of data, contradictory research results</p> <ul style="list-style-type: none"> – Conflicting or competing interests – Personal aspirations and particular interests of individuals – Material interests (money, property, resources, infrastructure) <p>– Power inequality, the privileged position of one party resulting from legislation, procedures, policies, hierarchical structure, or decision-making power in the problem domain</p> <ul style="list-style-type: none"> – Inequality of control and property – Perceived or actual competition over limited resources <p>– Organizational, spatial, and time constrains perceived by parties</p> <ul style="list-style-type: none"> – Differences in objectives and expectations among the parties – Differences in ideologies, moral concepts, and lifestyles <p>– Different concepts of urban policy and planning, land use, and tourism role in urban development</p>
C. Organizational affiliation	<p>Name of organization</p> <p>Its role in the tourism governance system</p>

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Article

Experiencing Nature: Physical Activity, Beauty and Tension in Tatra National Park—Analysis of TripAdvisor Reviews

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Abstract: The aim of this article is to analyse the experiences gained by tourists visiting one of the most visited protected areas in Poland—the Tatra National Park (TNP). The authors focused on the following question: does the natural heritage of the national park affect visitors' unique experiences or is environmentally valuable area not important for their experiences? This article uses mixed quantitative (Text Mining, co-occurrence network analysis) and qualitative (narratives research) methods. Data for analysis—reviews posted by users between April 2011 and September 2019—were downloaded from TripAdvisor.co.uk. Reviews on TripAdvisor indicate that the most important for visiting tourists were the experiences of physical activity. This confirms the trend of maintaining health and the desire to regenerate physical strength. The group of reviews related to connection to nature experiences is extremely small, which indicates that tourists probably did not come to TNP as a result of a preference for experiences related to ecological awareness. Some tourists felt tension, which indicates that the carrying capacity was exceeded. There is a doubt as to whether tourists who want to engage in physical activity must necessarily visit the area with the highest degree of nature protection.

Keywords: tourist experiences; ecological awareness; protected areas; Tatra National Park; TripAdvisor

1. Introduction

The decision-making process in tourism is complex and includes choices regarding both travel destination, services and attractions [1] (pp. 53–54). Many different, often interdependent factors influence consumers' decisions. Along with the increase in purchasing funds, the scope of consumer decisions is expanding, and psychological and social factors have a greater impact on decisions [2,3]. These factors include experience preferences, including those related to relaxation in natural areas.

The need for new experiences while traveling is becoming more and more common [1,4–7]. The fact that participation in tourism is no longer reserved for privileged social classes means that some tourists no longer want to participate in ready-made tours and take advantage of banal offers. They want to give meaning to their travels and are looking for elite forms of rest in which experience can play a distinctive role. In response to changes in tourism demand on the tourism supply side, a shift from service-oriented economy to experience economy can be seen [8]. Experiences can be the basis for creating a product regardless of the restrictions of mass tourism [9] (p. 10).

The aim of this article was to analyse the experiences gained by tourists visiting one of the most visited protected areas in Poland—the Tatra National Park (TNP). The authors focused on the

following question: does the natural heritage of the national park affect visitors' unique experiences or is environmentally valuable area not important for their experiences?

It was assumed that tourists who visit TNP voluntarily post on TripAdvisor an opinion reflecting their impressions and experience about their visit [10]. What is credible to them is what has been verified in person or by other objective consumers [11]. The Authors agree with Sue Beeton, Heather E. Bowen and Carla Almeida Santos, who outlined the notion of social construction and mass media's powerful role in constructing tourism and tourist experiences. [12] (p. 34).

Richard Butler noted that contemporary volatile demand in tourism does not always mean that tourists are sophisticated, considerate, environmentally and culturally sympathetic, affluent and discerning visitors, which many destinations aspire for [13] (p. 18). The results of the current research will show whether tourists visiting one of the most crowded and at the same time, the most attractive areas in Poland, show behavior consistent with the idea of ecological awareness.

1.1. Experience Preferences and Ecological Awareness

The problem of experience gained by visitors of natural areas has been the subject of research in the field of outdoor recreation for many years. This is the so-called "experiential approach", which is one of the lines of leisure motivational research [14]. The experiential approach suggests that recreation is not only an activity (like hiking or fishing) but is a psychophysiological self-rewarding experience [15]. Four levels of demands for outdoor recreation were identified, of which level 4 refers to the higher-order benefits that can flow from satisfying experiences derived from recreation participation [16] (p. 159).

It can be argued that the desire for experiences is also an important motivation for tourist trips. Authenticity, existential authenticity, sincerity, hyperreality and simulacra are overlapping concepts often used in accounting for the tourist experience [17].

Experiences are understood as the knowledge or feeling obtained through direct impressions [18]. According to Erik Cohen [19] tourist experiences refer to a quest for strangeness while Carmen Antón et al. [20] (p. 2) emphasized that experience is something that goes beyond everyday life, becomes unforgettable and contributes to the personal enrichment of the person who experiences it. Jianyu Ma, Jun Gao and Noel Scott [21] (p. 5) stated that experiences have four attributes: subjectivity, commitment, emotions and learning. Kathleen Andereck, Kelly S. Bricker, Deborah Kerstetter and Norma Polovitz Nickerson stated that an experience is not a snapshot, but rather a complex process that involves multiple parties, evolves over time, and retains value long into the future [22] (p. 82).

Tourists still expect new information from the world. Dean MacCannel [4] stated that being a tourist entails a certain way of spending free time by collecting impressions. Chris Ryan [1] added that a greater frequency of positive experiences generates higher scores on measures of well-being and satisfaction with life, although the intensity of the experiences seems to add little to the total score. In the end, people buy total experiences that products or services provide. That is why experience management, understood as a way to remain competitive in markets where globalization and technology have turned products and services into commodities, plays a very important role [23].

A tourist is looking for new experiences and these can only be provided by what he has not seen, or at least something that is different from everyday life. People may also perceive travel as a means of escape after encountering personal troubles or failures with the gained travel experience [24,25]. Protected areas are places where tourists can experience this difference. The scenery provides a quality experience for them, often because it is different from what they have at home. In addition, the natural environment is the conduit for spiritual connection, which, in turn, provides quality tourism experiences. [26] (p. 230). National parks came into being with the more noble and inspiring purpose to protect areas of wild lands for a nation rather than for a privileged few, and at the same time, encourage access to those areas by all those who can travel there [27].

The purpose of creating areas with a high degree of protection is to preserve the ecosystem in accordance with ecological objectives. If there were no paradox that tourism destroys the object of its desire [28] (p. 868), the condition would be the ecological awareness of tourists, which

takes into account not only the process of “raising awareness” but also the effects of this process. According to this definition, environmental awareness is the awareness of people’s dependence on the rest of nature and the awareness of the impact that human activities have on the surrounding environment [29]. Ecotourism plays an important role because “ecotourism experiences enhance environmental knowledge, which is a key component in the transformation of environmental attitudes and the development of an environmental consciousness that could result in changed environmental behaviors” [30] (p. 146).

Improper behavior of tourists in relation to the environment cause its destruction. This occurs both through a lack of ecological awareness, as well as through the lack of implementation of ecological behavior despite knowledge of the problem. As Brendan Canavan noted [31], despite the growing environmental awareness, leisure is still a hedonistic experience for many tourists, far from being responsible. David Fennel [32] noted, however, that not all types of nature tourists are necessarily compatible with the environment. Therefore, one should firstly consider the experience preferences under which tourists come to protected areas and secondly, whether tourists’ behavior is related to environmental awareness. The answer to these questions can be found by analyzing the experiences of tourists visiting natural areas.

1.2. Tourist Experiences in Natural Areas

An important trend characteristic of modern tourists is “return to nature”. This includes the desire for experiencing tranquility, viewing scenery, as well as keeping physically healthy surrounded by soothing nature [33–35].

Susanna Curtin and Gitte Kragh [36] argued that the experience of urbanization and detachment from the nature of modern man prompts him to experience nature and contact with animals. The authors pointed to a number of benefits resulting from human being surrounded by trees and natural landscape. These include relaxation, less anxiety, lack of anger and depression. Being in nature and admiring animal behavior provides a sense of flow [37], a peak experience [38] and a sense of connection with nature [39]. There are also reports about forest therapy that considered a therapeutic method of rapidly growing popularity [40–42]. Mike Peters, Klaus Weiermair, Phunthumadee Katawandee [5] mentioned experience of nature, peace and quiet, relaxation, seclusion, among other dimensions of the destination product.

Jennifer Hill, Susanna Curtin and Georgie Gough [43] identified a number of experiences of embodied encounters with nature. These include sensory interaction (visitors articulated an ecological gaze), affective/emotional response which was manifested in five oppositions: wonder and awe, empathy/anthropomorphism, immersion versus alienation, security versus vulnerability and calm versus excited.

Jan Packer and Roy Ballantyne [44] reviewed the understanding of the concept of nature experience. They identified ten groups of visitor experiences: physical (i.e., movement, action, physical stimulation), sensory (perceptual, aesthetic, sensory responses to surroundings), restorative (escape, relaxation, revitalization), introspective (contemplation, imagination, reflection), transformative (inspiration, capability, mastery), hedonic (excitement, enjoyment, fun), emotional (surprise, respect, joy), relational (social interactions, belonging), spiritual (transcendence, connection with sacred, communion with nature) and cognitive (intellectual, learning, novelty).

Analyzing reviews taken from TripAdvisor and using the dimensions of experiences identified by Jan Packer and Roy Ballantyne [44], Oana Stoleriu et al. [45] analysed the experiences of people visiting the Danube Delta. Analyzing reviews from TripAdvisor, Oana Stoleriu et al. [45] identified four groups of nature experiences: sensory experiences, awe and wonder or emotional experiences, cognitive (reflective) experiences and spatiotemporal experiences.

Thus, one can notice the simultaneous occurrence of the trend of seeking solace in nature and the search for experiences by modern tourists. The condition of a tourist trip fulfilling this assumption is a destination with a high degree of conservation of natural values. In Poland, these include protected

areas, among which National Parks are the highest form of protection. One of the most famous and most visited national parks in Poland is the Tatra National Park [46] (p. 25).

1.3. Tatra National Park—Characteristics of the Area

Tatra National Park is the most famous tourism destination among national parks in Poland. In the nineteenth century, the area of the Tatra Mountains was a very fashionable place where well known painters, writers and poets rested. Already in this period, the influx of tourists caused activities for the protection of nature. In 1873, the Tatra Society (the first tourist organization in Poland) was founded to bring together scientists and people from the world of science and politics. In this group, the idea of creating a National Park in the Tatra Mountains arose, which was realized only after World War II in 1954 [47] (pp. 22–23). Tatra National Park covers an area of 211,000 square kilometers and in this respect, is one of the largest among 23 national parks in Poland. The Park is a natural habitat of endemic animal species, such as the Tatra chamois, marmot, bear, lynx, wildcat and wolf. TNP borders cover the entire area of the Polish part of the Tatra Mountains and nearly 3700 ha of adjacent forest complexes. Approximately 70% of the Park area is occupied by forests and thickets of mountain pine, and about 30%—alpine grasslands, rocks and waters. Nearly 12.3 thousand ha of TNP area are strictly protected areas. They are excluded from the economy and human interference. Due to its attractiveness and history of tourist traffic, TNP belongs to the most crowded protected areas in Poland [46] (p. 25). Yet, its Alpine character and rich landscape attract a record number of tourists each year—according to TNP data, this amounts to 4 million tourists annually [48].

2. Materials and Methods

Data for analysis were downloaded from the English-language TripAdvisor site [49]. It is the world's largest aggregator of reviews of tourist products visited monthly by 490 million users. It contains 760 million reviews and opinions of 8.3 million accommodations, restaurants, attractions and excursions, airlines and cruises. TripAdvisor operates in 49 markets in 28 languages [50]. With the help of the Web Scraper package [51], all opinions from the 'Things to do' category were collected regarding places located in the Tatra National Park (attractions that had at least 10 reviews). In total, they were 624 reviews in 10 categories: 2 mountain ponds, 3 valleys, 2 peaks, 2 waterfalls and the Tatra Mountains as a whole (Table 1). The oldest opinion was from April 2011 and the latest from September 2019. The number of experiences by reviewers was very high. The average number of reviews written by one person was 155.24, and the median was 41. The average number of likes received by one person was 72.82 and the median was 21. The maximum number of reviews about TNP made by one person was 6, with an average of 1.70.

Table 1. Distribution of opinions regarding the 'Things to do' category for Tatra National Park.

Place	N	%	Mean Traveler Rating	Standard Deviation
Morskie Oko (lake)	344	55.128	4.542	0.891
Koscielisko Valley	17	2.724	4.411	0.507
Black Pond	51	8.173	4.450	0.944
Rysy (Mt.)	24	3.846	4.916	0.282
Chocholowska Valley	11	1.763	4.363	1.206
Mickiewicz Waterfall	16	2.564	3.562	1.152
Giewont (Mt.)	77	12.340	4.506	0.788
Strazyska Valley	10	1.603	4.800	0.421
Tatra (range)	64	10.256	4.734	0.597
Siklawica Waterfall	10	1.603	4.111	1.054
SUM	624	100	4.530	0.862

A number of software packages were used in the data analysis. The Statistica 13.0 package was used for a Text Mining analysis. Tag clouds were made with the QSR NVivo Pro 11.0 package.

Grouping of words (co-occurrence analysis) and coding of experiences were performed using the KH Coder package.

3. Results

This section is divided by subheadings. It provides a concise and precise description of the experimental results, their interpretation as well as the experimental conclusions that can be drawn.

3.1. Identifying the Most Common Words in Reviews

In the first stage of the analysis, in order to identify the most common words in opinions, the Text Mining procedure was performed. It consists in counting the most frequently repeated words. The analysis used the list EnglishStopList.txt (“a”, “the”, “and” etc.) for words which were omitted in the analysis. A procedure of lemmatization was also performed, which involves grouping inflected forms of words to the dictionary form. In this way, different grammatical forms of the same word were combined into one category. Thus, 149 words were obtained, which appeared in at least 1% (62) of opinions. Table 2 presents the 52 most frequently repeated words in the reviews, and Figure 1 illustrates them in the form of a tag cloud.

Table 2. List of the 52 most frequent words in reviews.

Words	TF	Words	TF	Words	TF	Words	TF
lake	807	mountains	236	view	172	carriage	131
walk	660	hike	235	see	169	nice	128
take	318	views	231	back	165	easy	127
way	305	worth	223	bus	162	well	126
beautiful	304	mountain	220	road	161	visit	117
oko	292	day	217	took	159	tatra	111
get	285	people	217	trip	152	like	108
around	276	park	201	walking	152	car	107
horse	267	good	198	long	151	hour	107
morskie	265	time	195	just	150	early	105
zakopane	254	hours	184	amazing	145	climb	104
place	252	top	179	also	133	trail	104
one	247	great	174	really	132	many	103



Figure 1. The cloud of tags for Tatra National Park reviews (source: own research).

3.2. Identification of the Most Common Problems in Opinions—Quality Analysis

In order to identify the problems most frequently appearing in opinions, a co-occurrence network analysis using the KH Coder package was performed. The analysis took into account 124 most frequently repeated words in opinions that appeared in at least 1% of opinions.

The co-occurrence network of words analysis allows to plot a network of relationships between words with a high degree of co-occurrence. These words were connected with each other by lines (Figure 2). In order to determine the mutual position of words, the co-occurrence network of words uses a method developed by Thomas Fruchterman and Edward Reingold [52]. Words being close together does not always mean that they often occur together. It is important that these words are connected with each other by lines. As a result of the analysis, 5 groups of words co-existed simultaneously in the analyzed opinions.

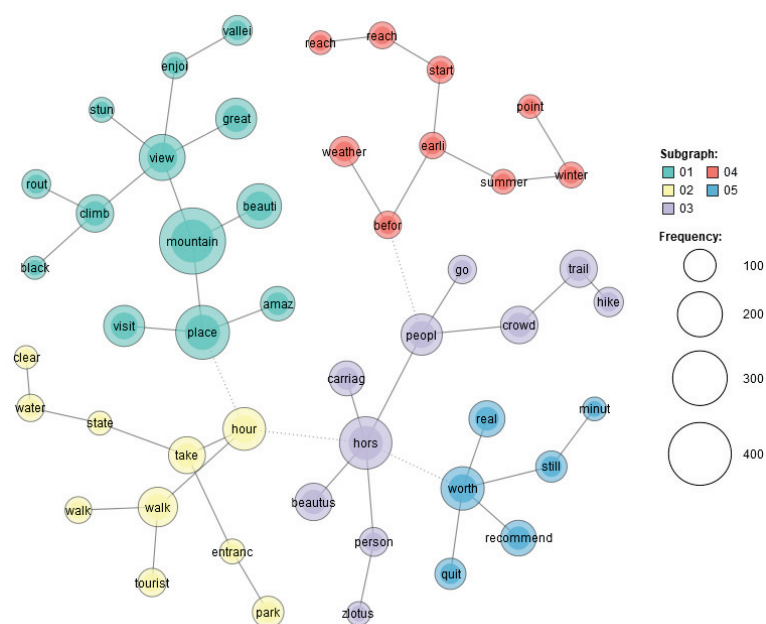


Figure 2. Co-occurrence network of frequently occurring words (source: own research).

The five most recurring problems are discussed below, with some examples of opinions.

The first group of opinions contains words such as mountain, place, view, great, climb, place visit, amaz (ing). It relates to sensory experiences related to mountains appearing during climbing and visiting unusual places in the Tatra.

It was really amazing trip to this beautiful place (...), adorable place (...) you will see this breath-taking view! The Lake with crystal pure blue-green water, surrounded by mountains, like dream or fantasy. (Nastya_Lampy, St. Petersburg, Russia, 5 *)—Morskie Oko (lake)

Morskie Oko is one of the main destinations for trips in the Tatra Mountains. It is the largest lake in the Tatra (area 34.94 ha), of postglacial origin, located in the Valley of the Rybi Potok at an altitude of 1395 m a.s.l. at the foot of Mięguszowieckie Szczyty (2435 m a.s.l.). This location determines the unique landscape that surrounds it. The lake is relatively easily accessible because an asphalt road that leads to it from a car park (8.5 km), which can be covered on foot or on bulls pulled by horses.

One of the most incredible places I had seen on the planet. Beautiful mountains, amazing lakes and everything in an easy access. (Sara P, Barbacena, MG, 5 *)—Tatra Mountains

The Chocholowska Valley (Dolina Chochołowska), with a tourist chalet (schronisko) located at its end, is the second place that sees a huge interest of tourists in TNP. It is the longest and largest valley in the Tatra (approx. 35 km², 10 km long). You can get to the chalet on foot or in a highlander carriage. The valley is surrounded by a number of peaks, including Grześ (1653 m a.s.l.), to which the popular trail leads:

*Dolina Chochołowska (. . .) is the most appealing part of the Polish Tatra Mountains. The Dolina Chochołowska mountain hotel is arguably the most impressive. The views from Grzes (Mt.) are fantastic, spanning a 360 degree vista of the western Tatra Mountains. (BordRestaurant, Cameron Park, California, 5 *)—Chochołowska Valley*

The second group of reviews contains the words: hors (e), carriag (e), beatus, peopl (e), crowd, trail, zlotus. It mainly concerns trips to Morskie Oko, during which many people take the opportunity to ride a horse-drawn carriage. This road is usually very crowded and tourists are forced to make many more unexpected charges for them (in PLN zlotys). Emotional experiences dominate here.

Overcrowded Tourist Trap. The whole experience is a bitter one, mostly because of the 10,000 visitors per day. You park 9 km away for 25 PLN. You pay 5 PLN to access the park. You pay 50 PLN to go up in a shabby smelly uncomfortable horse kart and 30 PLN for same trip back . . . and you arrive at what sounds and look like an overcrowded municipal pool: too many people, too much noise, too many picnics. (Fred B., Nice, France, 2)—Morskie Oko*

Morskie Oko is the most popular tourist destination in the Tatra. During the two holiday months, it is visited by up to 0.5 million tourists, which causes overcrowding and recreational conflict:

Crowds Spoil Everything. Unfortunately this quaint little town and the stunning mountain views are spoiled by the interminable traffic, the jams that come with it and the overwhelming number of people. The town center (Zakopane) is nothing more than a tourist trap—expensive shops and restaurants line the street and all you can see is the never-ending crowds of people in front, beside and behind you. (annal 335, Brantford, Canada, 2)—Tatra Mountains*

The accommodation and tourist emission center in the Tatra Mountains is Zakopane, a city with less than 30,000 inhabitants, where ca. 30,000 tourist accommodation places are officially registered in the Tatra district [53] and probably another 30,000 beds are provided unofficially [54]. This huge number of tourists in such a small area causes very emotional feelings in visitors. A lot of emotions are aroused by the view of horses pulling overloaded highlander carriages:

*When you are walking up or down you constantly see the horses struggling to go up or down the path. It's animal cruelty at its finest. The horses had their tongues out, foam around their mouths and any individual could tell they were struggling. It was an unpleasant heart breaking sight. Before entering the park they have a sign that no more than 12 individuals should be on a carriage or it strains the horses. Of course almost every carriage we saw had more than 12! It was ridiculous! I wanted to quickly leave just because of how the horses were being treated. (Joselyn 715, Chicago, 3 *)— Black Pound*

Despite the supervision that TNP exercises over the carriage of horse-drawn carriages, this situation is widely reflected in the media. Cases of horses falling from exhaustion are described, carriages with tourists are overloaded, animals quickly reach the slaughterhouse, because their price is relatively low compared to the revenues obtained by highlanders (górale) [55].

The next—third—group of words includes: take, hour, walk, touris, entranc (e), park. Opinions containing these words relate mainly to descriptions of walking tours in the Tatra National Park. Cognitive experiences dominate here.

The city of Zakopane is a center from which tourists take buses to the outlet of the valleys, where the entrances to the National Park are located, with ticket outlets:

*Entry to the valley at the very busy road junction in Kiry village. Entry tickets are sold here. There's a few junctions with other long distance trails, or there are short distance trail, of about 1 h each, that will let tourists explore some attractions on the side of the main course of the valley. (endrju_74, Ipswich, United Kingdom, 5 *)—Chochołowska Valley*

Admission tickets are moderate (2.5 PLN—approx. 0.5 EUR), and the carriage ride is significantly shortened by a rather monotonous march through the valley:

*We took a bus from the centrum to Koscielisko. The Park is really lengthy to walk and there is an entrance fees which is very nominal. You can take horse cart if you are looking for a quick ride. Very nice view with lot of fresh air, caves, river streams. (Krishnakumar B, Michalowice, 4 *)—Kościeliska Valley*

Some places in the Tatra are less frequented and require better physical condition. Black Pond is such a place, to which a steep trail from Morskie Oko leads:

*This trip is a fantastic experience, the black pond (Czarny Staw, Fekete tó) is a hidden jewel of the Zakopane region. Besides this is a place which is horribly tough to reach but you do not need mountain climbing experience or an outstanding physical condition. The way is quite steep in some places and quite tiring. (975 Katalin, Varpalota, Hungary, 5 *)*

The next group of opinions consists of the words: worth, recommend, quit, still, real, minute. They relate to the assessment of attractiveness and rank of tourist attractions visited (cognitive experiences).

For experienced mountain tourists who have visited the Alps, the Tatra Mountains may seem unattractive:

*If you've traveled to other mountain ranges in the world, and seen their lakes, then Morskie Oko isn't worth the effort. If you're in the area, I'd recommend going, but to travel here from the Austrian or Swiss Alps, or even Slovenia, would be a bit of a let-down. (dacky2, Tromso, Norway, 3 *)*

However, for other people, the same landscape seen from the road to Morskie Oko, despite the large number of people, is amazing and worth recommending:

*Had a fantastic day hiking up to morskie oko, (...) the view was amazing and well worth it. It was fairly busy, quite a few people. Would definitely recommend this to everyone. (eloiseb113, Bournemouth, UK, 5 *)*

The last group of opinions is dominated by words such as weather, early, summer, start, before. These are recommendations on how to organize mountain hikes (cognitive experiences):

*A walk trip to the famous Valley of 5 Ponds. It is exceptional experience. You would go the route to Morskie Oko pond—then when you will see Mickiewicz waterfall on the right you need to turn right and start ascending in beautiful Dolina Roztoki Valley. Check weather forecast before climbing Szpiglasowy. It is a bit demanding route. (Michal M, Warsaw, Poland, 5 *)*

One of the most common tips that appear in this group is the need to check the weather forecast before going to the mountains and start the trip early in the morning:

*The hike in normal weather conditions can be done in about 4, 5 h. We started our hike a little before 9 am and it was already like a highway to Rysy, so I recon, the best experience would be to start the hike around 7 am or even a little bit earlier. (jurgisk_lv, Grobina, Latvia, 4 *)*

3.3. Identification of the Most Common Experiences in Opinions—Quantity Analysis

In order to identify opinions in which words related to experiences appeared, a procedure of coding opinions was carried out. Packer and Ballantyne [44] and Packer, Ballantyne and Bond [56] distinguished 15 dimensions of experiences which they then characterized using different words. The authors of the article used these words to identify the experiences described by the authors of the opinions. Then, the coding procedure was started. The KH Coder software searched for the appropriate words (content of visitor experiences) and then assigned them to individual dimensions of visitor experiences (Table 3).

Table 3. Frequency of codes (N = 625).

Dimensions of Visitor Experiences	Content of Visitor Experiences	N	%
Physical activity	activ mobil vigor energet physical climb visit walk hike	516	82.56
Excitement	excit exhilarate enthusiast enjoyment relation enjoistun fun amuse indulgem breath tak	12	1.92
Aesthetic appreciation	aestheti cl appreciation beauty grandeur senses beauti beautus	44	7.04
Peacefulness	peace full serene relax refresh restore quit	18	2.88
Togetherness	social e togetherness fellowship companionship community	1	0.16
Spiritual engagement	spirit reverent worship sacred	4	0.64
Attention	attentive alert observant concentration mental	1	0.16
Fascination	fascinated amaz intrigue wonder imagin	6	0.96
Privilege	privilege honor fortunate grateful respect	3	0.48
Compassion	concern compassion	0	0.00
Reflective engagement	reflective thoughtful introspective thought ponder	5	0.80
Connection	connection attachment nostalgia nature love	84	13.44
Autonomy	independent confident choice control deciding	12	1.92
Personal_growth	accomplishment fulfillment growth self-discovery self-actualization	2	0.32
Tension	tense frustrated stress overload uncomfortabl crowd	103	16.48
No codes		68	10.99

Source: Packer and Ballantyne (2016), Packer, Ballantyne and Bond (2018) and own research.

Most opinions (82.45%) contained words related to the experiences of physical activity. These are both descriptions of trips around the valleys “easy road, you are just walking, looking around” (Nastya_Lampy, St. Petersburg, Russia, 5 *), as well as mountain climbing on the demanding trails “some parts were very steep. Climbing up took 30 min” (specas, Lithuania, 5 *).

Another group of experiences is tension, which appears in 16.48% of opinions. Both approach roads (“road asphalted road and very crowded”, Maikel 1989, Ghent, Belgium, 3 *), shelters (“Tee-house it was really crowded”, erzs_betp, Szeged, Hungary, 5 *) and surroundings of ponds (“Lake is nice, but too crowded”, Maikel 1989, Ghent, Belgium, 5 *,” The number of people hiking in this area is phenomenal! We have never seen so many people (of all ages) walking in nature before! “, Carl_and_janelle, Queensland, Australia, 4 *).

The third group is connection to nature experiences (13.44%). (“Once you love nature, make this journey!”, Tatimtch 8, Minsk, Belarus, 5 *, “Lovely fish to watch under the clear aqua water.”, Jim H, Bath, UK, 4 *, “water is so clear! We loved it, a really stunning area”, RoboMc, Colchester, UK, 5 *).

Aesthetic appreciation experiences were identified only in 44 reviews (7.04%) (“large stones completely around the beautiful lake surrounded by mountain peaks”, Michael S, Boston, Massachusetts, 5 *, “Still some magnificent views along the way”, CM 9493, Scotland, 5 *, “wow you with their natural grandeur”, mekydro, Chertsey, United Kingdom, 5 *).

Other experiences were identified in less than 5% of opinions except for compassion, which was not found in any of the opinions.

4. Discussion

The analysis made it possible to identify the main topics of opinions about Tatra National Park in TripAdvisor reviews and experiences associated with communing with nature. The words related to the experiences of physical activity have a special advantage. This result confirms the role of the Tatra Mountains as the mountains in which active recreation is undertaken. This result is in line with the conclusions of Norma Polowitz Nickerson who noted that “activities engaged in” are frequently reported as the highlights of a travel experience. Importantly, the activities were intricately connected to the environment in which the activity took place [26] (229). This is due to the mountainous nature of the analysed area, where there are no other options than walking to reach the most interesting places (except for two routes that can be overcome by horse-drawn carriage). This area is quite different from the Danube Delta, for example, where physical activity in visitors’ opinions was almost absent [45]. However, this was an exception because experiences of physical activity often accompany tourists in natural areas [36,57,58]. This result is also different from Kathleen Andereck’s, Kelly S. Bricker, Deborah Kerstetter and Norma Polovitz Nickerson conclusions that tourists articulate three dimensions of meaning: the social aspects of the experience, the environmental aspects of the experience, and the aspect of activities within those environments as the experience [22] (p. 93).

However, there is doubt whether tourists who want to engage in physical activity must necessarily visit the area with the highest degree of nature protection. Those preferences do not indicate ecological awareness and it should be remembered that the purpose of creating National Parks is not only to make them available to the public, but also to educate, care for nature diversity and restore natural habitats [59]. The key to solving this problem may be analyzing the motivation of tourists and experience preferences. If preferences are more about active recreation and are not associated with the desire to explore the most valuable areas, tourists could spend time in less-endangered places than National Parks [60,61].

Confirmation of these problems is another result of this analysis: the experience of tension is the second most frequently described group of experiences gained. This is the tension resulting from the crowd on access roads to shelters (to a lesser extent on mountain trails), as well as in Zakopane itself, which is described by tourists as a tourist trap. This phenomenon occurs especially often in natural areas near urbanized areas as well as near well known holiday resorts [62–64].

Despite the crowds, tension and overload, many tourists feel the connection with nature—this is the third largest group of identified experiences. Jan Packer and Roy Ballantyne [44] put them in a group of spiritual experiences as well as introspective experiences. Indeed, wildlife tourism has great potential to reawaken human connection with the natural world and can instill greater environmental awareness and a deep sense of wonderment [36,39].

It can therefore be concluded that tourists notice crowding and relationships with nature, but the share of these associations in responses is six times less frequent than in the case of physical activity. It is amazing that experiences with aesthetic recognition make up only 7.04% of all associations. Aesthetic experiences are mentioned as dominant in nature tourism by many researchers [65–67]. Thus, the observation confirms that tourists who visit TNP for reasons of physical activity do not always attach importance to the beauty and uniqueness of the natural environment. This uniqueness was, after all, a source of tourism development in the studied area as early as the 19th century and constituted the basis for creating a protected area in Tatra. Based on the prevailing opinions, it cannot be concluded that tourists were interested in experiences resulting from a high level of ecological awareness.

Recommendations of tourists after the visit to the destination can also be treated as part of the assessment of their own experience. TNP visitors most recommended going on early trips to the mountains, checking the weather, and breaking away from the crowds besieging the most popular places. Some of them even recommended giving up attempts to visit TNP and go to the Slovak side of the Tatra Mountains. These recommendations, and especially the last of them, can be of great importance for the image of TNP, Polish Tatra Mountains and Zakopane and can significantly affect the decision of choosing a destination by other tourists [68,69].

The analysed opinions lack experiences related to heritage interpretation, which, according to Gregory Benton [70] plays a key role in educating visitors, improving heritage protection, cultural respect and site promotion. These results contradict the findings of other authors [71–73]. This may be due to the nature of hiking in the Tatra: individual and not guided tours predominate there. Tourist trails in the TNP are very well marked and reaching almost all peaks does not require a tourist guide company. Nevertheless, TNP, together with the National Park on the Slovak side of the Tatra Mountains, are protected in form of UNESCO biosphere reserve (Man and Biosphere Program). The purpose of the UNESCO biosphere is to reserve is education, training and building regional identity [74]. According to the regulations of the National Park, highlanders who carry tourists on horse-drawn carriages are obliged to provide tourists with information on nature protection, history, ethnography, etc. However, this range of experiences is hardly visible in the opinions of visitors. This is because of the poor knowledge of foreign languages among highlanders, and the authors of the analysed opinions being mainly foreign-speaking tourists.

In this context (especially the building of regional identity by TNP), the lack of tourist experiences related to local culture, which is so strong in the Podhale region (highlander ‘góral’ folklore), is also striking. This is even more strange because highlanders transporting tourists with horse-drawn carriages must wear a regional outfit and use the highlander dialect [75]. It follows that the contact of tourists with highlanders is very superficial. Is it because the carriage ride, although implemented in traditional folk costumes, seems to them not very authentic? As indicated by studies by David Weaver [76] and Jennifer Chan and Tom Baum [57], local culture is an important motivational factor for ecotourists. Perhaps these encounters are realized while eating local dishes or listening to folk music in restaurants in Zakopane. However, the lack of these experiences, in the opinions of visitors, requires a deeper look at the quality of the interpretation of natural and especially cultural heritage in TNP. The authors assumed that reviews in TripAdvisor reflect the most important elements of the experience, but readers should be aware that the lack of references to ecological awareness in the descriptions is not proof that the person (who generates the content) does not have such an awareness.

5. Conclusions

In tourism, an uncontaminated environment is very often the basis for creating a tourism product and determines the arrival of a tourist. Therefore, the level of ecological awareness of people using this environment is extremely important and should be reflected in the experience preferences and experiences gained.

Reviews on TripAdvisor indicate that the most important for visiting tourists were the experiences of physical activity (82.45%). This confirms the trend of maintaining health and the desire to regenerate physical strength. It should be remembered that awareness of the importance of the environment for health and quality of life is not the same as protecting nature; tourists can take care of themselves and not wonder what effects the burden of the visited area brings.

The group of answers related to the connection to nature experiences is extremely small (14.44%), which indicates that tourists probably did not come to TNP as a result of preferences related to ecological awareness. Some tourists feel tension (16.48%), which indicates that the carrying capacity is exceeded [77]. A small group of opinions reflect experiences related to aesthetic appreciation experiences (7.04%). TNP is a unique place with extremely valuable natural values and at the same time, one of the most crowded tourism destinations in Poland. Therefore, there is a need for activities related to ecological education and a search for ways to encourage active tourists to look for other places less sensitive to congestion. This can be a challenge for TNP managers. As stated by Richard Butler [27], national parks came into being with a more noble and inspiring purpose to protect areas of wild lands for a nation rather than for a privileged few, and at the same time, encouraging access to those areas by all those who can travel there.

Just being aware of the importance of the environment for health and quality of life is not the same as protecting nature, but it can be a starting point for deeper interest and broadening knowledge, which can ultimately translate into real environmental efforts.

This is in line with the results of the Aunkrisa Sangchumrong [78] study, which found that in environmentally valuable areas, the developing of sustainable tourism should take into account the education of the local community, which will bring beneficial effects for both this community and the environment.

One should also agree with Peter Weinberg [79], who showed that the experience profile should correspond to the unique nature of the area, and with Holly Donohoe and Roger Needham [80], who proved that the internet provides the primary mechanism for promoting ecotourism opportunities (providers) and for researching and planning ecotourism experiences (consumers).

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Article

The Effect of Visitors on the Properties of Vegetation of Calcareous Grasslands in the Context of Width and Distances from Tourist Trails

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Abstract: Over the last decades, valuable natural areas considered as zones of silence and rest have been increasingly struggling with the problem of mass tourism. In this study, an investigation of the effect of visitors on the properties of vegetation of calcareous grasslands in the context of width and distances from tourist trails is performed. The study was conducted in seven localities in Cracow (southern Poland) involving calcareous grasslands impacted by tourist trails. The results show that the lower height of plants, the greater number of species and the greater percentage of plant cover damaged by trampling in plots located close to the edge of tourist trails, as well as lower total plant cover and greater mean cover-abundance degree per species along narrow pathways. The dominance of meadow and grassland species, as well as the prevalence of native species, suggests that the composition of the examined vegetation has not been drastically changed. In the majority of the study plots, the dominance of hemicryptophytes and chamaephytes, inconsiderable share of phanerophytes and therophytes, as well as the low share of geophytes, were observed. The infrequent occurrence of species presenting *Bidens* dispersal type along narrow pathways, as well as in plots located close to the edge of tourist trails, suggests low external transport of epizoochorous seeds by passing people, while the prevalence of species presenting *Cornus* type in plots located away from the edge of tourist trails might be the effect of dung deposition by animals.

Keywords: life form; overtourism; dispersal mode; semi-natural habitats; trampling; vascular plants

1. Introduction

The phenomenon of overtourism, which is understood as the opposite of sustainable tourism, has been known and described so far mainly in the urban areas (e.g., [1–4]). However, it is also beginning to appear in regions considered as zones of silence and rest [5–7]. According to numerous authors [8–16], valuable natural areas are increasingly struggling with the problem of mass tourism. The negative consequences of the excessive tourist traffic represented, among others, by excessive water intake and sewage production, waste generation, noise, increased probability of fire initiation, synanthropisation of flora and fauna, scaring away of animals, as well as changes in the structure of biocoenoses were repeatedly noted in protected areas. Another consequence of excessive tourist traffic is trampling, which leads to the creation of informal trails. The trampling might contribute to changes in vegetation through mechanical damage of plants and species loss [17,18], as well as the influence on seed germination, seedling establishment, growth functions after establishment, vigour and biomass production, as well as flowering and fruiting [19]. Moreover, the trampling might improve the dissemination of diaspores over long distances [20,21], particularly the dispersal of non-native taxa [22].

To date, investigations of the impact of intensity, frequency and season of human trampling on vegetation properties and traits of selected plants have been the main focus of numerous experimental research on sustainable use of natural habitats for recreation in many different habitat types around the world e.g., [23–30]. In the last decades, an increase in the number of studies focusing on the impact of trampling and tourist dispersion on the surrounding environment has been observed. Generally, such studies have been carried out in areas protected by law or in hot spots of biodiversity e.g., [29,31–34], and mostly they concentrated on the causes and consequences of tourist dispersion around the trails. At the same time, investigations of the impact of pathway dimensions and/or distance from pathway edge on adjacent vegetation traits e.g., species richness and diversity, height of plants and proportions of species representing different life forms were carried out in forests [35–40] and scrublands [41], as well as in open habitats such as mires and feldmark vegetation [42], heaths [38,43], meadows [38] and dunes [44]. Despite the growing interest in the aforementioned issue, the current state of knowledge is still insufficient, especially in the case of semi-natural calcareous grasslands (*Festuco-Brometea*), which are nowadays considered as one of the most endangered plant communities in Europe, covered by the Natura 2000 network [45].

In this study, we focused on the impact of width of tourist pathways and distance from pathways on (i) plant cover features i.e., height of the tallest plant shoot, species abundance, damaged plant cover percentage by trampling, total plant cover percentage, cover-abundance degree of particular species, and (ii) occurrence of species presenting different habitat affiliations, dispersal modes, life forms and origin (native or alien status in the flora). We aimed to test the hypotheses that (i) the height of plants is lower in plots located near pathways than that in plots located away from pathways, (ii) the percentage of plant cover damaged by trampling is higher in plots located near pathways than that in plots located away from pathways, (iii) the percentage of plant cover damaged by trampling is higher along narrow pathways than that along wide pathways, (iv) the number of species is higher in plots located near pathways than that in plots located away from pathways, and (v) the spectra of habitat affiliation, life form, dispersal mode, and origin of species occurring in plant cover vary significantly among plots situated along pathways with different width, as well as among plots located in diverse distance from tourist trails.

2. Materials and Methods

2.1. Location of the Study Sites

Seven study sites located in the southwest part of Cracow (southern Poland) have been selected: Bogucianka, Fort Bodzów, Górka Pychowicka, Tyniec, Uroczysko Kowadza, Uroczysko Wielkanoc and Zakrzówek. All the study sites are situated on limestone hills within the Bielańsko-Tyniecki Landscape Park (BTPK), a part of the Jurassic Landscape Parks Complex, which constitutes a valuable area protected by law due to its excellent natural, cultural and historical properties.

The vegetation is mainly represented by beech and hornbeam forests from the *Quercus-Fagetum* class and by calcareous grasslands from the *Festuco-Brometea* class. In calcareous grasslands the following vascular plants are commonly found: *Achillea millefolium* L., *Coronilla varia* L., *Dianthus carthusianorum* L., *Echium vulgare* L., *Euphorbia cyparissias* L., *Fragaria viridis* Weston, *Plantago media* L., *Plantago lanceolata* L., *Potentilla arenaria* Borkh., *Thymus austriacus* Bernh. and *T. glabrescens* Willd. In most of the study sites, the plants did not create the continuous cover and gaps in the turf were observed. The study sites are influenced by similar climatic conditions. According to Matuszko and Piotrowicz [46], the mean annual air temperature achieves 8.6 °C, while the average annual sum of actual sunshine duration amounts to 1539.3 h. The average annual relative humidity amounts to 78%, the highest average monthly values during the year occur in autumn and winter, during spring the humidity drops quickly and achieves the minimum in April. The average annual number of dry days reaches 17.8 and they occur mainly in the warm half-year as single days or two-day periods. The atmospheric precipitation achieves ca. 690 mm and the peak of precipitations occurs in July.

Due to their location within the border of Cracow and easy access by public transport, all the study sites are exposed to the recreational activities of citizens and tourists. “The Cracow City Forest Trail” is a marked walking and cycling route leading, among others, through Bogucianka, Górka Pychowicka, Uroczysko Kowadza and Uroczysko Wielkanoc. Moreover, Perzanowska [47] pointed out that Fort Bodzów and Uroczysko Kowadza are perfect places suitable for outdoor recreation (Table 1).

Table 1. The Characteristics of Study Sites.

Study Site	Tourist/Recreation Infrastructure		Width of Pathway (cm)		Coordinates and Elevation of Pathway	
	within the Study Area	in the Vicinity of the Study Area	Narrow	Wide	Narrow	Wide
Bogucianka	Vantage point, information board	Football stadium	46	150	50°00.555′ N/19°48.909′; 244 m a.s.l. ¹	50°00.675′ N/19°48.914′; 251 m a.s.l.
Fort Bodzów	Vantage points, benches, bins, shelters, motor sports paths	Rope park	50	240	50°02.031′ N/19°52.576′; 250 m a.s.l.	50°01.978′ N/19°51.891′; 238 m a.s.l.
Górka Pychowicka	Vantage points, benches, bins, shelters, fire circles, information board	Motor sports paths, bike paths	50	180	50°01.823′ N/19°52.996′; 225 m a.s.l.	50°01.850′ N/19°52.996′; 225 m a.s.l.
Tyniec	Vantage point, motor sports paths,	-	36	335	50°00.301′ N/19°49.095′; 256 m a.s.l.	50°00.313′ N/19°49.125′; 254 m a.s.l.
Uroczysko Kowadza	Vantage point, benches	-	35	131	50°00.884′ N/19°46.638′; 268 m a.s.l.	50°00.880′ N/19°49.648′; 266 m a.s.l.
UroczyskoWielkanoc	Vantage point, benches, bins, information board	-	30	115	50°00.959′ N/19°48.850′; 264 m a.s.l.	50°00.938′ N/19°48.840′; 260 m a.s.l.
Zakrzówek	Vantage points, climbing walls, information board	Lagoon created inthe lime quarry, bike paths	33	120	50°02.365′ N/19°54.987′; 203 m a.s.l.	50°02.415′ N/19°54.752′; 213 m a.s.l.

¹ above sea level.

2.2. The Overview of the Study Design and Characteristics of the Study Plots

In each location, two visitor-created (informal) pathways were selected: a narrow one (up to 50 cm in width) and a wide one (at least 115 cm in width) based on the assumption that the width of the path is positively correlated with the intensity of tourist traffic (Table 1). The narrow trail can be used by one person, while the wide trail allows at least two people to pass in one direction or to pass each other. The pairs of 1 × 1 m research plots were established along each pathway. The pairs were systematically distributed every 2 m (alternately on both sides of the pathway). Each pair consisted of a plot labelled CL situated close to the edge of the pathway at a distance of 10 cm, and a plot labelled FU located much further at a distance of 150 cm from the plot CL (Figure 1). The distance from the edge of the trail was chosen arbitrarily on the basis of the behavior of tourists. Plots CL were established in places often trampled by tourists to avoid the trail after rainfalls, when the surface is muddy and slippery. Plots FU were established at a greater distance from the trail where descending from the pathway is due to willingness of taking photographs, curiosity, repose, or other causes.

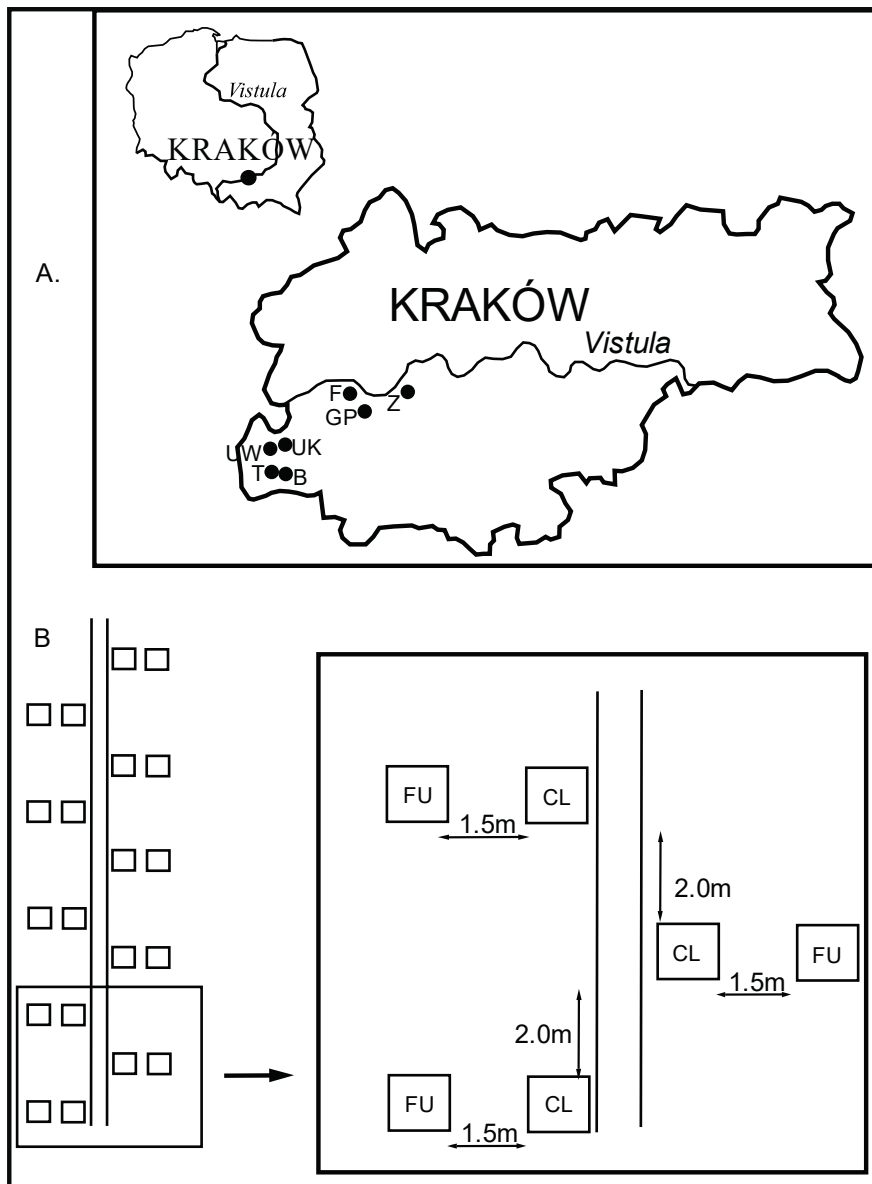


Figure 1. The localisation of the study sites (A) and the plot sampling design (B). Abbreviations of study sites: B—Bogucianka, FB – Fort Bodzów, GP—Górka Pychowicka, T—Tynec, UK—Uroczysko Kowadza, UW—Uroczysko Wielkanoc; Z—Zakrzówek; abbreviations of plots: CL—located close to the edge of tourist trail, FU—located away from the tourist trail.

The measurements of the abiotic habitat conditions, which were tested in particular plots by using the handheld device BIOWIN, evidenced that light intensity ranged from 740.0 Lx to 2000.0 Lx, soil moisture ranged from 1.0 to 6.7, whereas soil pH was from 7.1 to 7.8 (Table 2). The ANOVA analysis of main effects evidenced that the values of light intensity were similar in both the narrow and wide patches, the soil moisture was significantly greater in the plots CL than in the plots FU ($F = 9.85$, $p < 0.01$), and the soil reaction achieved greater values in the plots located along the wide pathways than in the narrow ones ($F = 10.30$, $p < 0.01$).

Table 2. The mean light intensity (Lx) (\pm SD), soil moisture (\pm SD) and soil pH (\pm SD) noted in closer (CL) and further (FU) plots located along the narrow (width \leq 50 cm) and wide (width \geq 115 cm) pathways situated within the investigated study site.

		Study Sites							
		Górka Pychowicka	Fort Bodzów	Bogucianka	Uroczysko Wielkanoc	Zakrzówek	Uroczysko Kowadza	Tyniec	
Light intensity	Narrow	CL	2000 (\pm 0.0)	1150 (\pm 400.6)	2000 (\pm 0.0)	2000 (\pm 0.0)	1720 (\pm 489.4)	2000 (\pm 0.0)	740 (\pm 508.1)
		FU	2000 (\pm 0.0)	1020 (\pm 498.4)	2000 (\pm 0.0)	2000 (\pm 0.0)	1690 (\pm 499.8)	2000 (\pm 0.0)	690 (\pm 499.8)
	Wide	CL	1820 (\pm 423.73)	1850 (\pm 337.4)	2000 (\pm 0.0)	1950 (\pm 158.1)	1460 (\pm 614.9)	2000 (\pm 0.0)	1090 (\pm 502.1)
		FU	1680 (\pm 474.6)	1680 (\pm 518.1)	2000 (\pm 0.0)	1800 (\pm 421.6)	1270 (\pm 551.8)	1900 (\pm 316.2)	830 (\pm 447.3)
Soil moisture	Narrow	CL	2.5 (\pm 0.6)	1 (\pm 0.0)	1.3 (\pm 0.3)	6.7 (\pm 2.1)	4 (\pm 1.0)	3.7 (\pm 2.3)	4.5 (\pm 2.2)
		FU	1.7 (\pm 0.8)	1 (\pm 0.0)	1.2 (\pm 0.3)	4.3 (\pm 2.3)	3.6 (\pm 1.1)	3.5 (\pm 1.5)	4.6 (\pm 2.2)
	Wide	CL	1 (\pm 0.0)	1 (\pm 0.0)	1.2 (\pm 0.2)	5.8 (\pm 1.9)	4.9 (\pm 1.6)	3.7 (\pm 1.8)	5.5 (\pm 1.8)
		FU	1 (\pm 0.0)	1 (\pm 0.0)	1.1 (\pm 0.2)	5.4 (\pm 1.8)	3.9 (\pm 1.1)	3 (\pm 0.7)	4.4 (\pm 1.7)
Soil pH	Narrow	CL	7.4 (\pm 0.2)	7.5 (\pm 0.0)	7.5 (\pm 0.0)	7.3 (\pm 0.4)	7.3 (\pm 0.3)	7.4 (\pm 0.2)	7.2 (\pm 0.3)
		FU	7.5 (\pm 0.2)	7.5 (\pm 0.0)	7.5 (\pm 0.0)	7.4 (\pm 0.2)	7.4 (\pm 0.2)	7.2 (\pm 0.3)	7.1 (\pm 0.2)
	Wide	CL	7.8 (\pm 0.3)	7.5 (\pm 0.2)	7.5 (\pm 0.0)	7.3 (\pm 0.3)	7.4 (\pm 0.2)	7.2 (\pm 0.3)	7.3 (\pm 0.3)
		FU	7.7 (\pm 0.3)	7.5 (\pm 0.0)	7.5 (\pm 0.0)	7.5 (\pm 0.2)	7.4 (\pm 0.3)	7.4 (\pm 0.2)	7.4 (\pm 0.2)

2.3. The Field Trial

Field study was conducted in July 2019. The height of the tallest plant shoot from the ground level to the top of the stem was measured in each study plot using a folder tape. Within each plot, the total percentage of plant cover and the percentage of plant cover damaged by trampling were visually estimated using a cover-abundance scale with an interval of 5%. Furthermore, the vascular plant species growing in the herbaceous layer within each plot were inventoried. The seedlings and saplings were removed and determined according to Csapodý [48] and Muller [49]. The degree of cover-abundance of each species was visually estimated according to a scale of Braun-Blanquet [50]. The explication of particular points of scale is as follows:

- -“+”- species covers less than 1% of the studied area,
- -“1”- species covers 1–5% of the studied area,
- -“2”- species covers 6–25% of the studied area,
- -“3”- species covers 26–50% of the studied area,
- -“4”- species covers 51–75% of the studied area,
- -“5”- species covers 76–100% of the studied area.

2.4. The Species Groups

To assess the species response to tourist activities, we selected four traits (i.e., habitat affiliation, life form, native or alien status in the flora and mode of seed dispersal) that were “ecologically meaningful” in accordance with the ability to persist in the stressful conditions caused by man (trampling) and accompanying animals (ground browning, wallowing). The traits of particular vascular plant species evidenced in the plots are presented in Table A1.

Habitat affiliation was assigned according to Matuszkiewicz [51]. The species were assigned to (i) grassland species (occurring in calcareous grasslands from the *Festuco-Brometea* class, thermophilic fringe communities representing the *Rhamno-Prunetea* and *Trifolio-Geranietea sanguinei* classes, grasslands

and heaths from the *Nardo-Callunetea* class, pioneering communities on mobile or poorly fixed screes *Thlaspietea rotundifolii*, rocky grasslands *Seslerio-Festucion duriusculae*, calamine grasslands *Violetea calaminariae*, sandy grasslands *Koelerio glaucae-Corynepherea canescentis*), (ii) meadow species (occurring in communities representing the *Molinio-Arrhenatheretea* class), (iii) forest species (occurring in communities from the *Quercu-Fagetetea* class), and (iv) ruderal species (occurring in ruderal communities of perennial plants from the *Artemisietea vulgaris* class, nitrophilous communities of logging, trampled and ruderal areas from the *Epilobieteae angustifolii* class, semi-ruderal xerothermic pioneer communities from the *Agropyreteae intermedio-repentis* class, communities of arable fields *Stellarieteae mediae*, segetal weeds community *Papaveretum argemones*, and annual plant and biennial ruderal plant communities *Sisymbrietalia*).

The life form of species proposed by Raunkiaer [52] was assigned according to the database “Ecological Flora of the British Isles” [53]. The following life forms were distinguished: phanerophytes, chamaephytes, hemicryptophytes, geophytes and therophytes. In the case of missing data the publication of Ellenberg et al. [54] was included.

The dispersal mode of species was assigned based on the database “Pladias” [55]. The following dispersal types were distinguished: *Allium* (mainly autochory, as well as anemochory, endozoochory, epizoochory), *Bidens* (mainly autochory and epizoochory, as well as endozoochory), *Cornus* (autochory and endozoochory), *Epilobium* (mainly anemochory and autochory, as well as endozoochory, epizoochory). The detailed description of dispersal modes can be found in the publication of Sádlo et al. [56].

The origin of species was assigned based on the database “Alien species in Poland” [57]. The alien species was understood as a species or lower taxon, introduced outside its natural past or present range that might survive and subsequently reproduce. The native species to a given area is a species that has been observed in the form of a naturally occurring and self-sustaining population from historical times.

Data concerning habitat affiliation and life form of *Erigeron acris* ssp. *serotinus* (Weihe) Greuter, which are lacking in the aforementioned sources, were taken from the publication of Pliszko [58]. Plants identified solely to the rank of a genus (e.g., *Carex* sp.) were excluded from the analyses. Moreover, the cultivated plants such as *Cerasus vulgaris* Mill. and *Malus domestica* Borkh. were excluded from the analysis of habitat affiliation.

2.5. The Data Analysis

The mean height of the tallest plant shoot, number of species, percentage of aboveground biomass damage by trampling, total plant cover percentage, as well as degree of cover-abundance of a particular species (\pm SD) were calculated in the research plots CL and FU, as well as in the plots located along narrow and wide pathways in each study site.

The normal distribution of the untransformed data was tested using the Kolmogorov-Smirnov test, whereas the homogeneity of variance was verified using the Levene test at the significance level of $p < 0.05$. The ANOVA analysis of main effects followed by the post-hoc Tukey HSD test was applied to check the statistical significance of the effect of pathway width and plot distance from the pathway on (i) the height of the tallest plant shoot, (ii) the number of species, (iii) total plant cover percentage, (iv) percentage of plant cover damaged by trampling, as well as (v) degree of cover-abundance of a particular species within the study plots. The aforementioned analyses were computed using a STATISTICA software (version 13). The chi-square test with Yates correction for continuity was applied to check whether there were significant differences among the plots located along the narrow and wide pathways, as well as in the plots situated at a diverse distance from the border of trails in cover-abundance degree of species showing various habitat affiliation, life form, seed dispersal mode and species origin. The chi-square test was conducted using the interactive calculation tool [59].

3. Results

3.1. The Plant Cover and Richness

The mean height of the tallest plant ranged from 66.2 cm to 123.7 cm (Figure A1) and it was similar in the plots situated along the narrow and wide pathways ($F = 0.08, p = 0.77$), at the same time it was significantly greater in the plots FU than in the plots CL ($F = 31.64, p < 0.001$). The mean number of species per plot amounted from 11.1 to 17.6 (Figure A1) and it did not differ in the plots situated along the narrow and wide pathways ($F = 0.17, p = 0.67$) but it was greater in the plots CL than FU ($F = 5.39, p \leq 0.05$). The mean percentage of total plant cover achieved from 43.0 to 85.0 (Figure A2). The statistical analysis evidenced, that the values noted in the plots located along the narrow pathways were significantly lower than along the wide ones ($F = 5.19, p \leq 0.05$) and they were similar in the plots CL and FU ($F = 0.22, p = 0.63$). The mean percentage of plant cover damaged by trampling achieved from 0.0 to 82.5 (Figure A2). It was similar in plots located along narrow and wide pathways ($F = 0.01, p = 0.90$) and remarkably greater in the plots CL than in the plots FU ($F = 145.93, p < 0.001$). The mean cover-abundance degree of particular species per plot according to the Braun-Blanquet scale ranged from 0.1 to 0.7 (Figure A3). The values recorded along the narrow pathways were greater than along the wide ones ($F = 12.00, p < 0.001$), whereas values noted in the plots CL and FU were similar ($F = 0.15, p = 0.69$).

3.2. The Species Groups Characteristics

Along the narrow and wide pathways, meadow and grassland species prevailed over ruderal plants, while forest taxa occurred sporadically. The statistical analysis showed a lack of differences in most study areas (Figure 2). The similar spectra of habitat affiliations were observed in the plots CL and FU in the majority of the study sites. Only in one study area, in closer plots, was the considerable dominance of ruderal taxa evidenced (Figure 3). The statistical analysis proved significant differences in life form spectra among the narrow and wide pathways (Figure 4), as well as among the plots CL and FU (Figure 5) regardless of the dominance of hemicryptophytes and chamaephytes, slight presence of phanerophytes and therophytes, as well as the lowest cover-abundance degree of geophytes in the majority of the study areas. The cover-abundance degrees of species with particular dispersal mode occurring in plots situated along pathways with different width varied significantly (Figure 6). In the majority of plots situated along the narrow pathways, the lowest cover-abundance degree showed species with dispersal type *Bidens*, while taxa with *Allium*, *Cornus* or *Epilobium* dispersal type prevailed in at least one study site. In the plots located along the wide pathways, different patterns of dispersal mode spectra were noticed. The statistical analysis showed that also the cover-abundance degrees of species with particular dispersal mode occurring in the plots CL and FU differed significantly (Figure 7). In most plots CL, species with *Bidens* type occurred sporadically, whereas in plots FU species with type *Cornus* dominated in the majority of places. Despite the prevalence of native species over alien species, the statistical analysis showed significant differences among the narrow and wide pathways (Figure 8), as well as among the plots CL and FU (Figure 9).

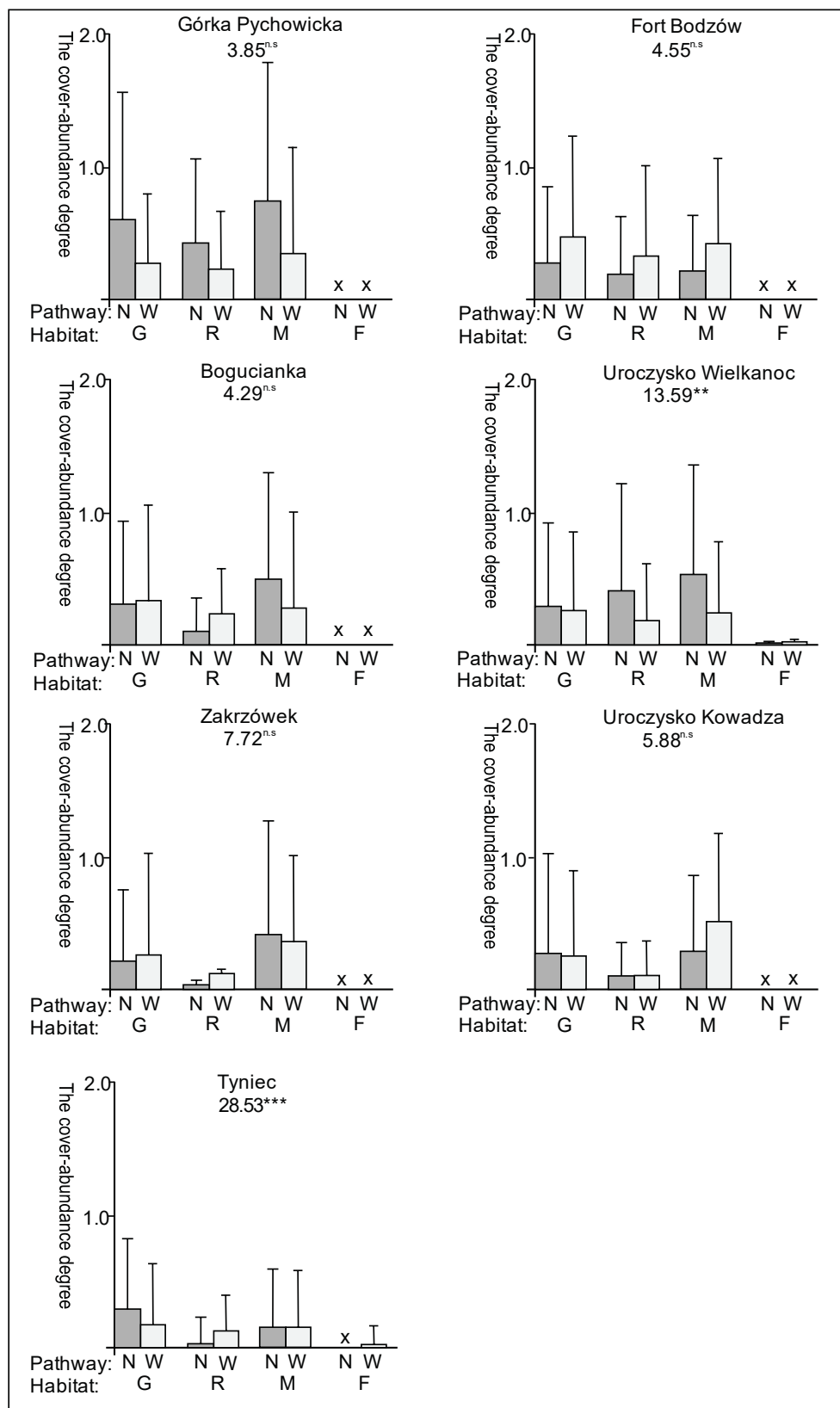


Figure 2. The mean cover-abundance degree of a species (\pm SD) affiliated to the forest (F), meadow (M), grassland (G), and ruderal habitats (R) per plot located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways situated within the investigated study sites. The statistical significance level of χ^2 test (df = 3): ns – not significant, * $p \leq 0.05$, ** $p < 0.01$, *** $p < 0.001$.

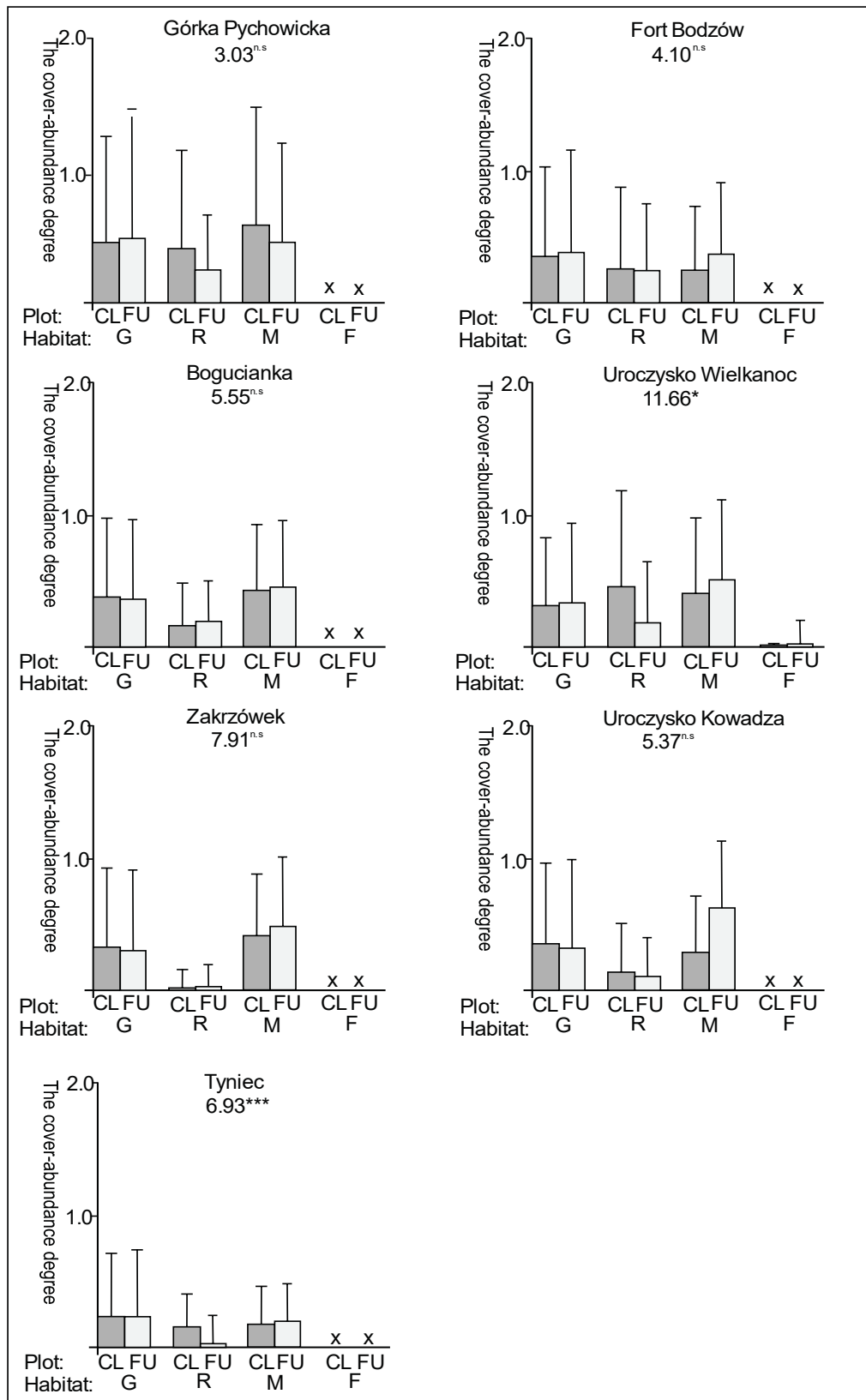


Figure 3. The mean cover-abundance degree of a species (\pm SD) affiliated to forest (F), meadow (M), grassland (G), and ruderal habitats (R) per closer (CL) and further (FU) plot within the investigated study sites. The statistical significance level of χ^2 test (df = 3) is given in Figure 2.

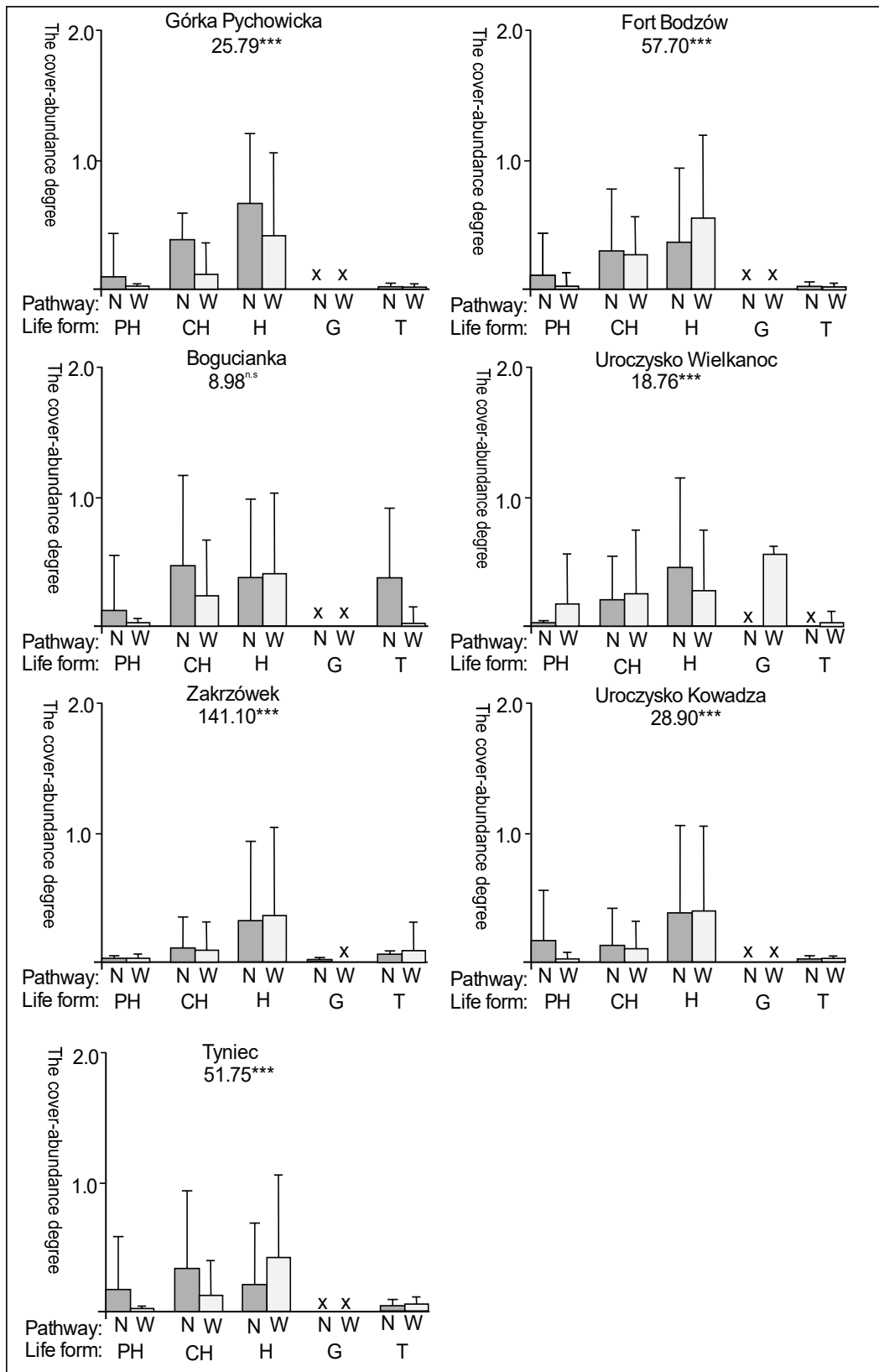


Figure 4. The mean cover-abundance degree of a species (\pm SD) representing phanerophytes (PH), chamaephytes (CH), hemicryptophytes (H), geophytes (G) and therophytes (T) per plot located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways within the investigated study sites. The statistical significance level of χ^2 test (df = 4) is given in Figure 2.

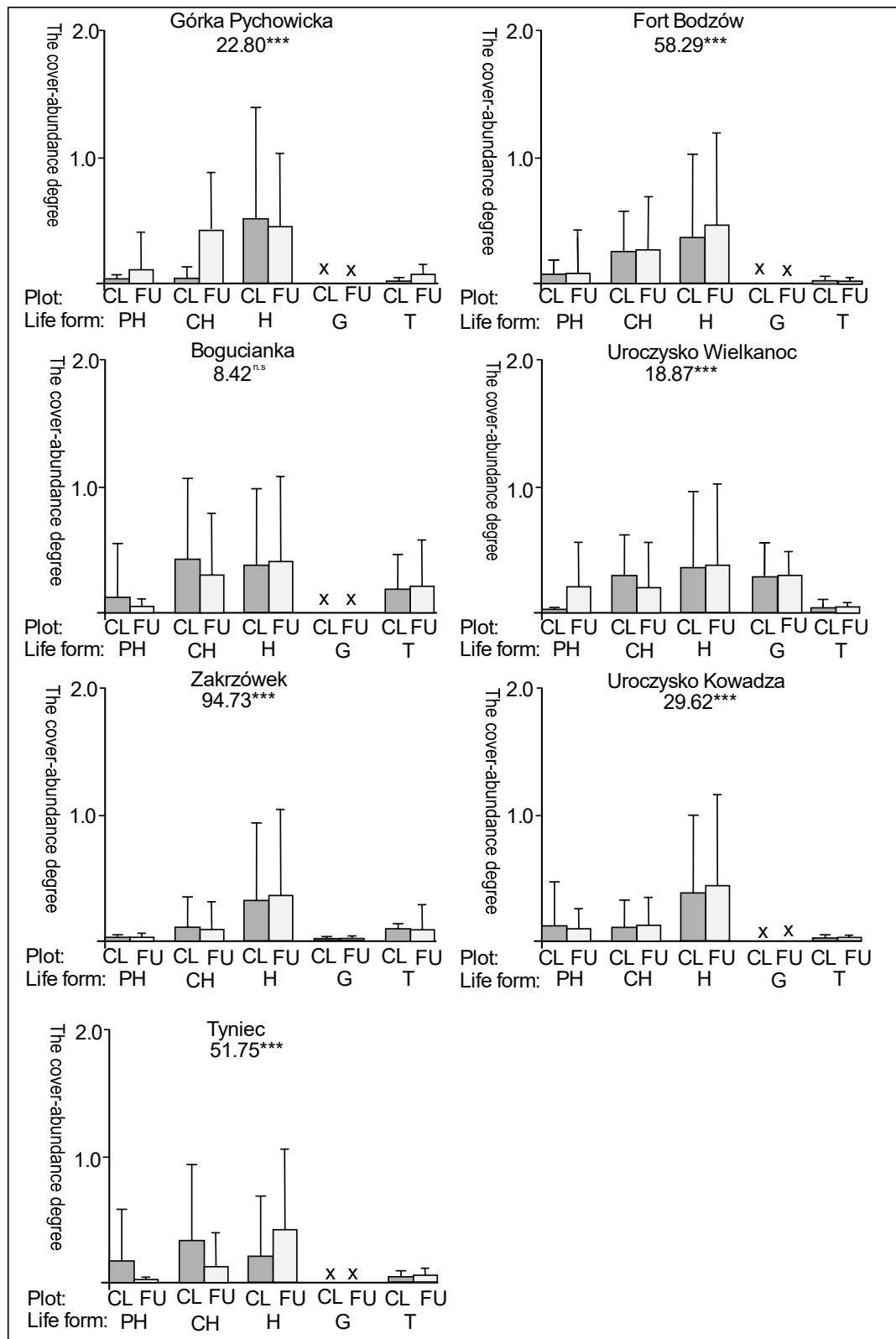


Figure 5. The mean cover-abundance degree of a species (\pm SD) representing phanerophytes (PH), chamaephytes (CH), hemicryptophytes (H), geophytes (G) and therophytes (T) per closer (CL) and further (FU) plot within the investigated study sites. The statistical significance level of χ^2 test (df = 4) is given in Figure 2.

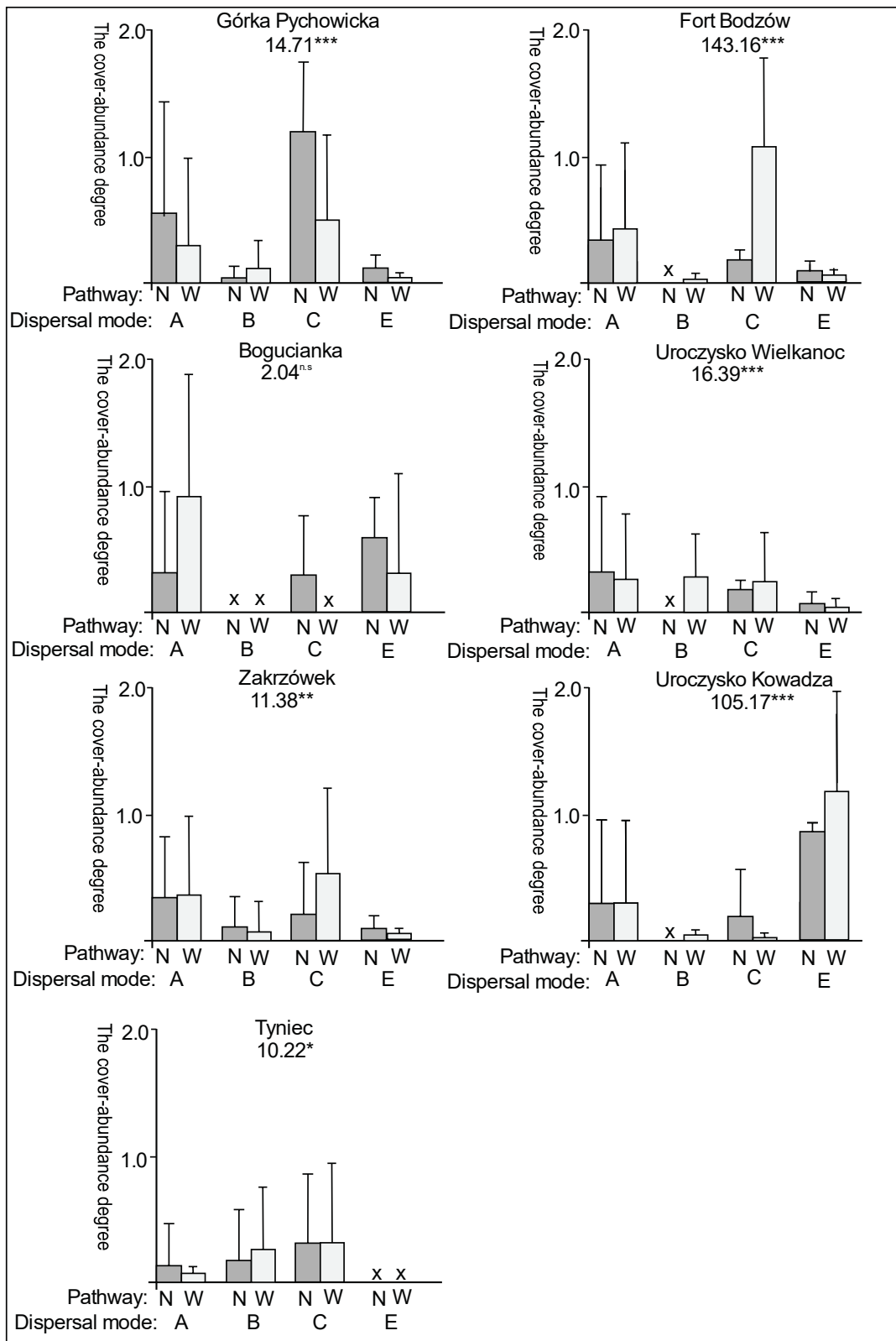


Figure 6. The mean presence of a species (\pm SD) representing dispersal mode *Allium* (A), *Bidens* (B), *Cornus* (C) and *Epilobium* (E) per plot located along narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways situated within the investigated study sites. The statistical significance level of χ^2 test (df = 3) is given in Figure 2.

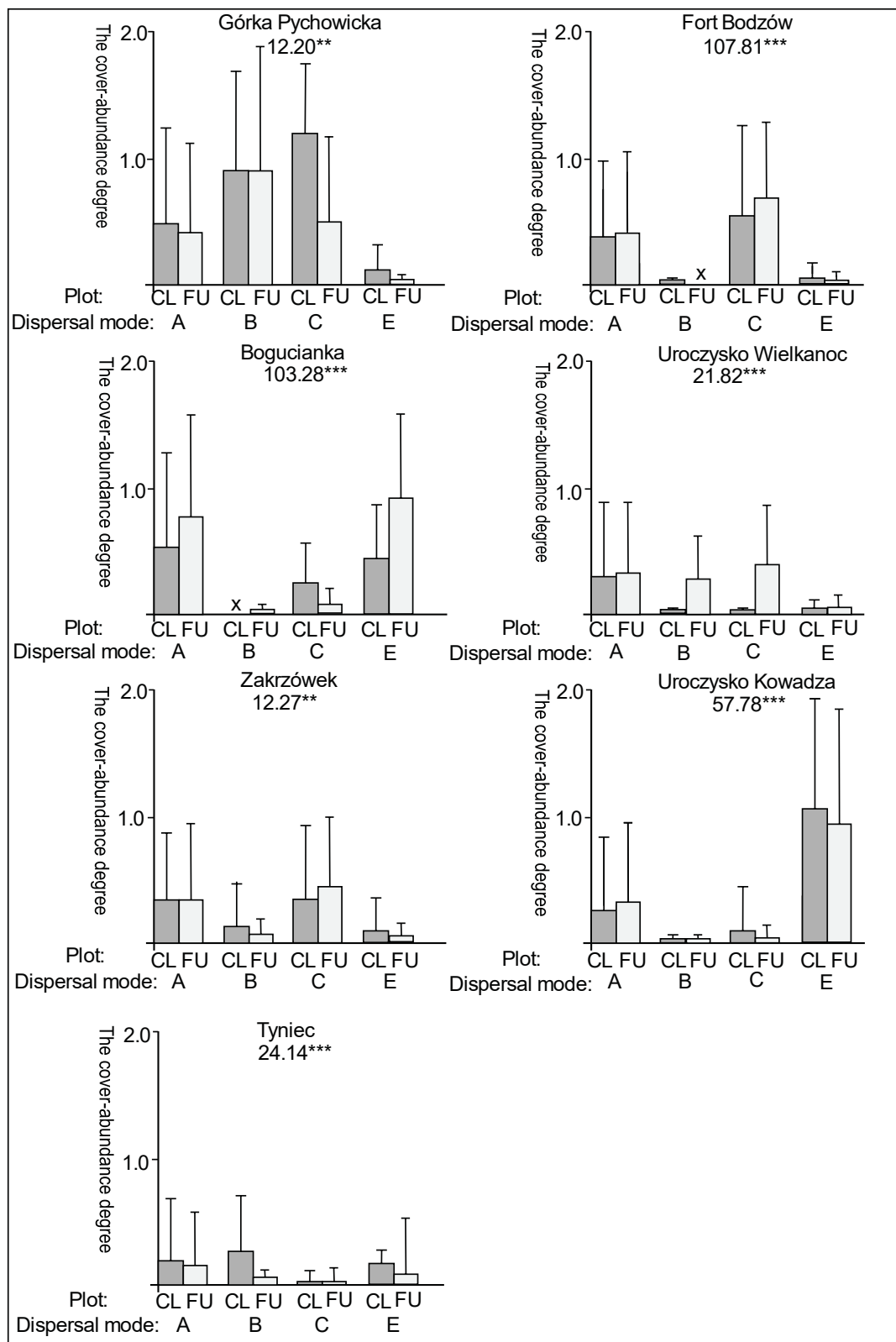


Figure 7. The mean presence of a species (\pm SD) representing dispersal mode *Allium* (A), *Bidens* (B), *Cornus* (C) and *Epilobium* (E) per closer (CL) and further (FU) plot within investigated study sites. The statistical significance level of χ^2 test (df = 3) is given in Figure 2.

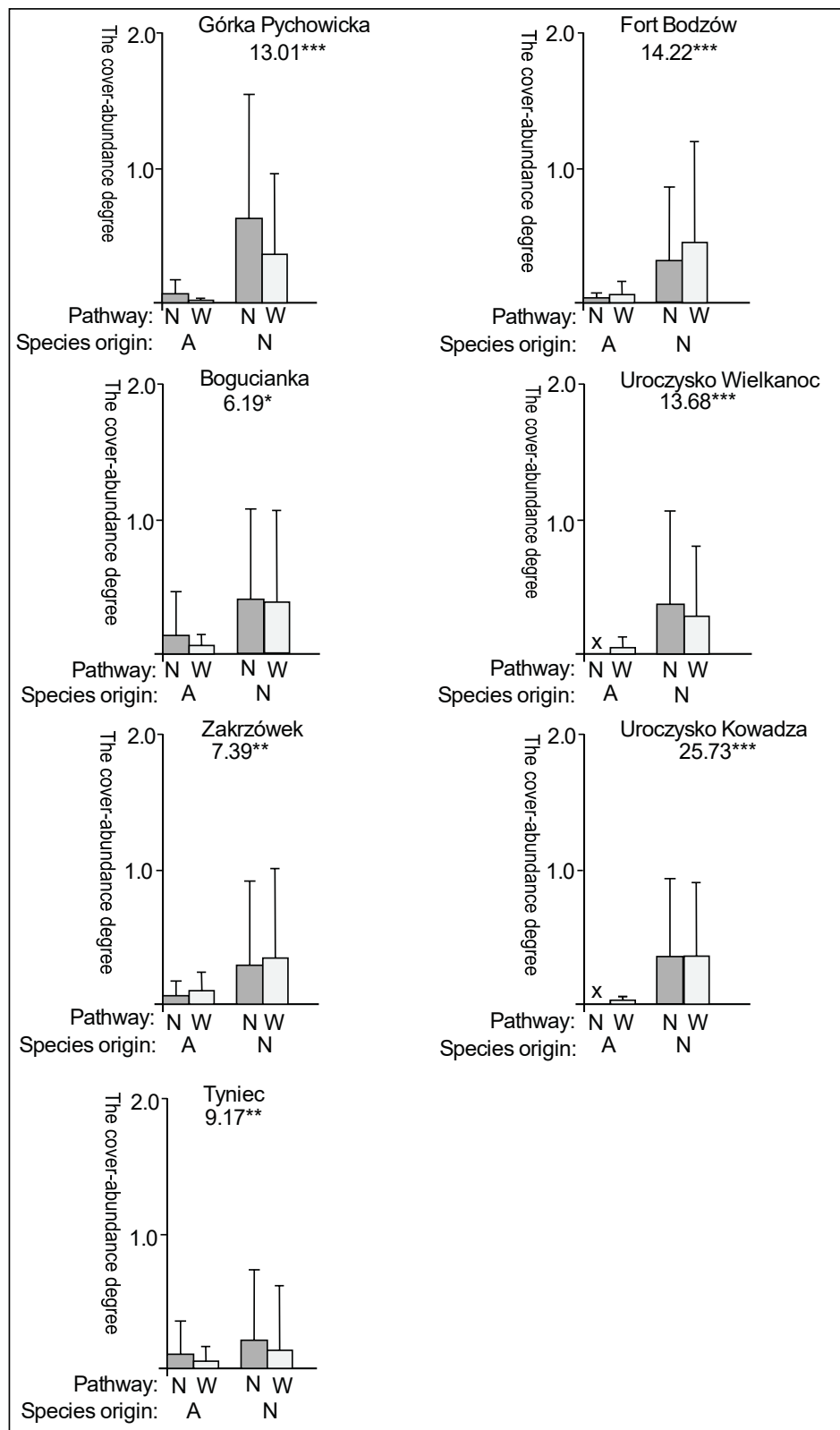


Figure 8. The mean cover-abundance degree of alien (A) and native (N) species (\pm SD) per plot located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways within the investigated study sites. The statistical significance level of χ^2 test (df = 1) is given in Figure 2.

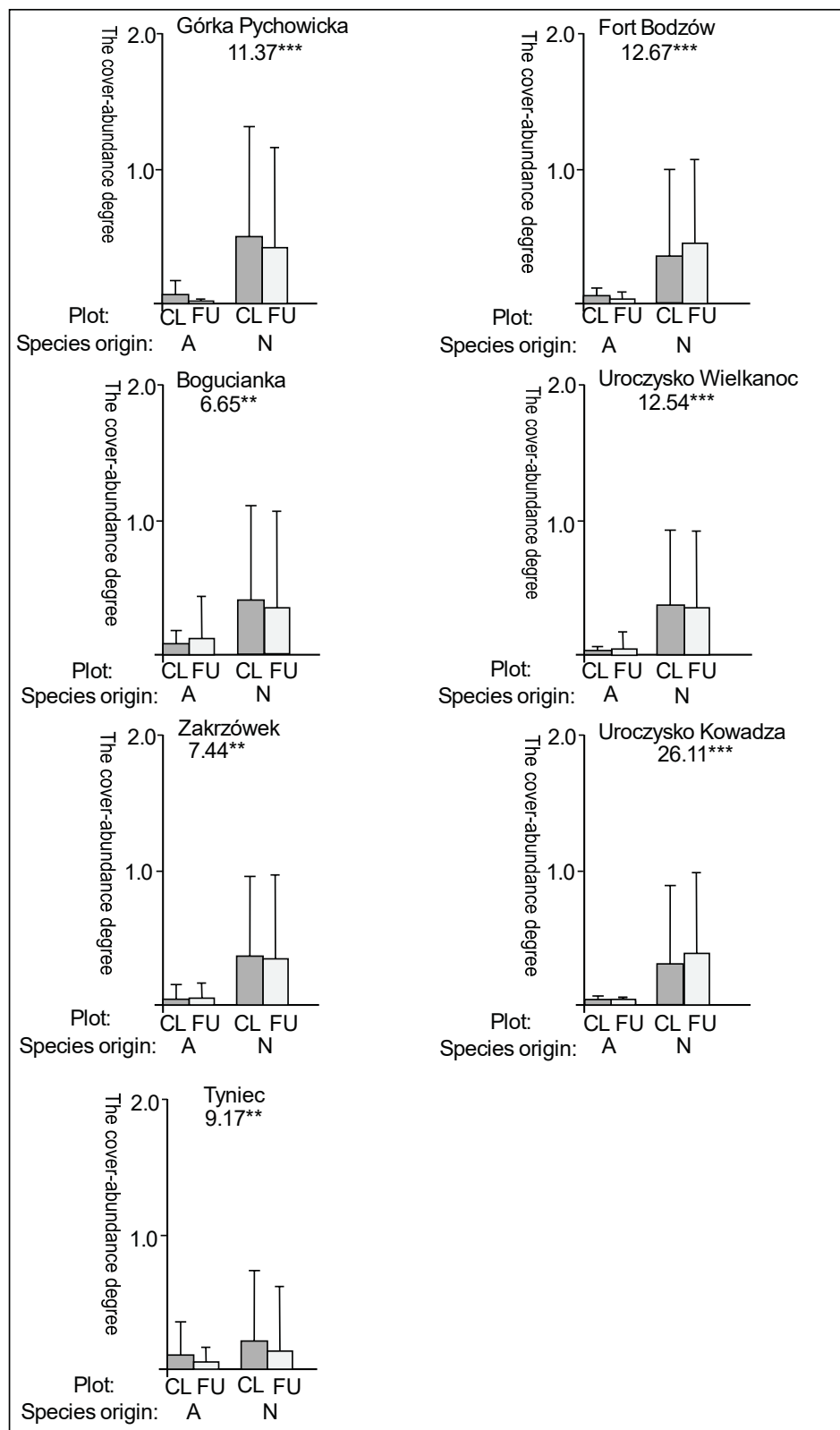


Figure 9. The mean cover-abundance degree of alien (A) and native (N) species (\pm SD) per closer (CL) and further (FU) plot within the investigated study sites. The statistical significance level of χ^2 test (df = 1) is given in Figure 2.

4. Discussion

4.1. The Plant Cover Characteristics

The performed observations evidenced that the values of height of the tallest plant shoots, species richness, as well as the percentage of plant cover damaged by trampling did not differ in the narrow and wide pathways. The height of the tallest plants achieves greater values in the distant plots than in the plots situated closely to the pathways, while species richness and percentage of plant cover damaged by trampling show an inversed trend. Therefore, our hypotheses that (i) the height of plants is lower in plots located near pathways than that in plots located away from pathways, (ii) the percentage of plant cover damaged by trampling is higher in plots located near pathways than that in plots located away from pathways, and (iv) the number of species is higher in plots located near pathways than that in plots located away from pathways can be fully accepted. At the same time, the hypothesis (iii) that the percentage of plant cover damaged by trampling is higher along narrow pathways than that along wide pathways must be rejected.

The lower height of the tallest plant in plots situated close to the tourist trails might be an effect of damage to plant tissue, especially shoot fractures by passers-by. Also, a much greater percentage of damaged plant cover by trampling in the close plots might be linked with the activity of visitors bypassing the pathways or descending from them due to the taking of photographs, curiosity, repose or other causes. Such tourist dispersion was frequently observed in trails by numerous authors e.g., [32,34].

The obtained results proving much greater species richness close to tourist trails correspond with the findings of Root-Bernstein and Svenning [60], while other investigators observed an inversed tendency [61]. A higher number of plant species near the tourist/recreation pathways within the calcareous grasslands can be explained by the fact that plant diaspores are easily transported on shoes, clothes and vehicles. Similarly, it was evidenced by Tikka et al. [62] that road verges serve as dispersal corridors for grassland species. It is also worth mentioning that some plants such as *Lolium perenne* L. and *Trifolium repens* L. tolerate trampling and often occur on roadside verges [23,63]. However, their abundance in the examined plots was rather low (except some plots with *L. perenne*). Moreover, tourist trails are often used for migration by wild animals (e.g., [64]), which may also promote the plant dispersal along the pathways.

The performed observations evidenced that the distance from the trails does not have an influence on total plant cover percentage, as well as the cover-abundance degree of a particular species per plot. The obtained results are not consistent with the studies of Jägerbrand and Alatalo [43], who noted that due to the decrease in understory cover, the abundance of litter, rock and soil increased with the proximity to the trail in alpine heath. The noted in the present studies lower values of total plant cover in the plots situated along the narrow pathways might indicate the occurrence of a greater number of gaps where bare substratum is visible. It is worth mentioning that such openings in continuous turf are considered as safe sites for seedling recruitment *sensu* Harper [65], regeneration niche *sensu* Grubb [66] and space “free from competition” [67]. The beneficial role of small-scale gaps enabling spontaneous recruitment and establishment of seedlings in calcareous grasslands was repeatedly proved in naturally originated [68], as well as experimentally made openings [69,70]. In the present study, the recorded greater mean cover-abundance degree of a species along the narrow pathways than along the wide ones might suggest the successful generative propagation and/or undisturbed vegetative spread, leading to the multiplication of individuals and/or ramet number, as well as an area of individuals presumably owing to the non-intensive use of trails by visitors. The increase of pathway width as the result of the augmentation of the intensity of tourist traffic, as well as the frequency of passes, was previously recorded among others by Kiszka [16].

4.2. The Species Groups Characteristics

Our study, showing that regardless of pathway width and distance from the trail, meadow and grassland species prevailed over ruderal plants, while forest taxa occurred sporadically, suggest that hypothesis (v) about the variability of habitat affiliation spectra must be rejected. Moreover, we evidenced the dominance of native species over alien species irrespective of pathway width and distance from the edge of the trail. Although the area of calcareous grasslands in Cracow has significantly decreased over the last decades [71], their semi-natural value is still high [72]. However, the presence of some alien species such as *Erigeron annuus* (L.) Desf., *E. canadensis* L., *Robinia pseudoacacia* L., *Solidago canadensis* L. and *Vicia grandiflora* Scop., which are invasive in Poland [73], suggests the negative effect of human activities on calcareous grasslands in the area of the city. These species can be easily introduced to calcareous grasslands from nearby located roadside verges, abandoned allotment gardens and waste ground. Nevertheless, it might be stated that despite the significant statistical differences regarding the presence of native and alien species along the narrow and wide pathways, as well as among the plots CL and FU, the dominance of native taxa suggests the rejection of hypothesis (v) about the variability of species origin spectra.

Also, in spite of recorded differences in the degree of cover-abundance of species representing particular life forms, depending on trail width and plot location, the similar patterns of life form spectra noticed in the majority of the study areas indicate the rejection of hypothesis (v) about the variability of species life form spectra. The performed investigations evidencing a dominance of hemicryptophytes and chamaephytes supports the findings of Dobay et al. [74], arguing that the species representing the aforementioned life forms are often found in grassland areas. Roovers et al. [38] observed the dominance of hemicryptophytes regardless of level recreational use in meadows, heaths, and forests, while Pescott and Stewart [75] added that vegetation dominated by hemicryptophytes recovers from trampling to a greater extent than vegetation dominated by other life forms. The observed in the present studies scarce number of phanerophytes is not remarkable considering the occurrence of forests in the vicinity of the study sites, whereas the slight abundance of therophytes seems to be very surprising and might be an effect of slight occurrence of diaspores in the soil seed bank and/or unsuitable conditions for seedling recruitment. Additionally, it is worth mentioning, that Skłodowski et al. [39], as well as Zdanowicz and Skłodowski [40], found the greater number of therophytes along wide pathways than along narrow ones in forests. Apart from this, other researchers recorded a considerably greater share of therophytes in the borders of trails than in more distant sites in forests [37] and meadows [38].

According to Sádlo et al. [56], the dispersal strategies of *Allium*, *Bidens*, *Cornus*, *Epilobium* and *Lycopodium* are found within the plants occupying dry grasslands. In our study, we evidenced the presence of species with the strategies of *Allium*, *Bidens*, *Cornus* and *Epilobium*. The occurrence of different patterns of dispersal mode spectra among the plots located along the narrow and wide pathways, as well as among the plots CL and FU, allows confirming the hypothesis (v) about the variability of species dispersal mode spectra. Simultaneously, the results showing the lowest cover-abundance degree of species presenting *Bidens* dispersal type (mainly epizoochory and autochory, as well as endozoochory) in plots situated along narrow pathways, as well as in plots located close to the trail edge, might suggest low activity of tourist and visitors passing by pathways in the external transport of diaspores possessing mechanisms to adhere to clothes equipment, vehicles and animals. On the other hand, the prevalence of taxa with *Cornus* type (endozoochory and autochory) in plots located at a greater distance might be an effect of dung deposition by animals. The considerable recruitment of endozoochorous species seedlings from dung samples was observed in numerous habitats (e.g., [76–78]).

5. Conclusions

The height of the tallest plant shoots, species richness, as well as the percentage of plant cover damaged by trampling did not differ in the narrow and wide pathways. The significantly lower height of plants in close plots and the greater species number and percentage of plant cover damaged by

trampling recorded there is the effect of passers-by contributing to the mechanical fracture of plant organs and the dissemination of diaspores. The distance from trails does not impact the total plant cover percentage, as well the cover-abundance degree of a particular species per plot. The lower value of plant cover percentage along narrow trails creates the opportunities for successful generative propagation and/or vegetative spread, resulting in a greater mean cover-abundance degree of a species.

The dominance of meadow and grassland species over ruderal plants and sporadic occurrence of forest taxa, as well as the prevalence of native species irrespective of pathway width and distance from trail edge, suggests that the composition of the examined patches of grasslands has not been drastically changed by secondary succession and human activity. The dominance of hemicryptophytes and chamaephytes, slight presence of phanerophytes and therophytes and the low cover-abundance degree of geophytes was observed in the majority of study areas regardless of path width and distance from the edge of the trail. The lowest cover-abundance degree of species presenting *Bidens* dispersal type in plots situated along narrow pathways, as well as in plots located close to the trail edge might suggest the low activity of visitors passing by pathways in the external transport of epizoochorous seeds. The prevalence of taxa with *Cornus* type in plots located at a greater distance might be an effect of deposition of dung containing endozoochorous seeds by animals.

The investigations performed enlarge the current state of knowledge about the properties of vegetation in the vicinity of visitor-created (informal) tourist trails in calcareous grasslands - areas of high conservation value. Our results can be applied in further studies to evaluate the temporal changes of species composition and plant traits, as well as for comparison with other popular semi-natural areas, where trampling is also an issue.

According to assumptions of plans of protection [79], to preserve the calcareous grasslands in the Natura 2000 areas, it is important to make awareness-raising efforts among the local population and tourists through educational campaigns. Moreover, the monitoring of frequently visited patches, enabling the identification of existing and potential threats caused by visitor activities, is desired.

Author Contributions: K.K.-G. conducted methodology of research and project administration, field research, data analysis, manuscript preparation and correction. A.P. conducted field research, data analysis, manuscript preparation and correction. K.G.-G. conducted field research, manuscript preparation and correction. All authors have read and agreed to the published version of the manuscript.

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Appendix A

Table A1. The characteristics of species found in the plant cover of the studied calcareous grasslands regarding habitat affiliations according to Matuszkiewicz [61], life form according to Fitter and Peat [63], dispersal type according to Pladias [55]. Database of the Czech flora and vegetation [65], and origin according to Alien species in Poland [67].

Taxon	Habitat	Life Form	Dispersal Type	Origin
<i>Acer platanoides</i> L.	Forest	Phanerophyte	<i>Epilobium</i>	Native
<i>Acer pseudoplatanus</i> L.	Forest	Phanerophyte	<i>Epilobium</i>	Native
<i>Achillea millefolium</i> L.	Meadow	Chamaephyte	<i>Allium</i>	Native
<i>Acinosarvensis</i> (Lam.) Dandy	Grassland	Therophyte	<i>Allium</i>	Native
<i>Aegopodium podagraria</i> L.	Forest	Hemicryptophyte	<i>Allium</i>	Native
<i>Agrimonia eupatoria</i> L.	Grassland	Hemicryptophyte	<i>Bidens</i>	Native

Table A1. Cont.

Taxon	Habitat	Life Form	Dispersal Type	Origin
<i>Agrostis capillaris</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Ajuga genevensis</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Allium montanum</i> F. W. Schmidt	Grassland	Geophyte	<i>Allium</i>	Native
<i>Alyssum alyssoides</i> L.	Grassland	Therophyte	<i>Allium</i>	Native
<i>Anchusa officinalis</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Alien
<i>Anthyllis vulneraria</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Anthoxanthum odoratum</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Arabidopsis thaliana</i> (L.) Heynh.	Ruderal	Therophyte	<i>Allium</i>	Native
<i>Arabis hirsuta</i> (L.) Scop.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Arenaria serpyllifolia</i> L.	Grassland	Therophyte	<i>Allium</i>	Native
<i>Arrhenatherum elatius</i> (L.) P. Beauv. ex J. & C. Presl	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Artemisia campestris</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Artemisia vulgaris</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Asperula cynanchica</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Astragalus glycyphyllos</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Avenula pratensis</i> (L.) Dumort.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Avenula pubescens</i> (Huds.) Dumort.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Briza media</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Bromus erectus</i> Huds.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Bromus hordeaceus</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Bromus sterilis</i> L.	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Calamagrostis epigejos</i> (L.) Roth.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Calystegia sepium</i> (L.) R. Br.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Carduus acanthoides</i> L.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Alien
<i>Carex caryophylla</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Carex hirta</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Carex ovalis</i> Gooden.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Carex praecox</i> Schreb.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Carex</i> sp.	-	-	-	-
<i>Carlina acaulis</i> L.	Grassland	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Centaurea stoebe</i> Tausch	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Cerastium arvense</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Cerasus</i> sp.	-	-	-	-
<i>Cerasus vulgaris</i> Mill.	-	Phanerophyte	<i>Cornus</i>	Alien
<i>Cerinthe minor</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Cichorium intybus</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Alien
<i>Convolvulus arvensis</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Cornus sanguinea</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Coronilla varia</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Crataegus</i> sp.	-	-	-	-
<i>Cuscuta epithimum</i> L.	Grassland	Therophyte	<i>Allium</i>	Native

Table A1. Cont.

Taxon	Habitat	Life Form	Dispersal Type	Origin
<i>Dactylis glomerata</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Daucus carota</i> L.	Meadow	Hemicryptophyte	<i>Bidens</i>	Native
<i>Deschampsia caespitosa</i> (L.) P. B.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Dianthus carthusianorum</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Echium vulgare</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Elymus hispidus</i> (Opiz) Melderis	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Elymus repens</i> (L.) Gould	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Erigeron acris</i> ssp. <i>serotinus</i> (Weihe) Greuter	Grassland	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Erigeron annuus</i> (L.) Desf.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Alien
<i>Erigeron canadensis</i> L.	Ruderal	Therophyte	<i>Epilobium</i>	Alien
<i>Euonymus europaeus</i> L.	Forest	Phanerophyte	<i>Cornus</i>	Native
<i>Euphorbia cyparissias</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Euphrasia stricta</i> J. P. Wolff. ex Lehmann	Grassland	Therophyte	<i>Allium</i>	Native
<i>Fallopia convolvulus</i> (L.) Á. Löve	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Festuca pratensis</i> Huds.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Festuca rubra</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Festuca rupicola</i> Heuff.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Festuca</i> sp.	-	-	-	-
<i>Fragaria viridis</i> Weston	Grassland	Hemicryptophyte	<i>Cornus</i>	Native
<i>Galium mollugo</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Galium verum</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Geranium pratense</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Geum urbanum</i> L.	Meadow	Hemicryptophyte	<i>Bidens</i>	Native
<i>Helianthemum nummularium</i> (L.) Mill.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Hieracium pilosella</i> L.	Grassland	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Holcus lanatus</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Hypericum perforatum</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Knautia arvensis</i> (L.) J. M. Coult.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Koeleria macrantha</i> (Ledeb.) Schult.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Leontodon autumnalis</i> L.	Meadow	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Leontodon hispidus</i> L.	Meadow	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Leucanthemum vulgare</i> Lam.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Ligustrum vulgare</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Linaria vulgaris</i> Mill.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Linum catharticum</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Lolium perenne</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Lotus corniculatus</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Malus domestica</i> Borkh.	-	Phanerophyte	<i>Cornus</i>	Alien
<i>Medicago falcata</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Medicago lupulina</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native

Table A1. Cont.

Taxon	Habitat	Life Form	Dispersal Type	Origin
<i>Medicago sativa</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Alien
<i>Pastinaca sativa</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Alien
<i>Peucedanum oreoselinum</i> (L.) Moench	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Phleum phleoides</i> (L.) H. Karst.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Phleum pratense</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Picris hieracioides</i> L.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Pimpinella saxifraga</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Plantago lanceolata</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Plantago major</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Plantago media</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Poa compressa</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Poa pratensis</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Polygonum aviculare</i> L.	Ruderal	Therophyte	<i>Allium</i>	Native
<i>Populus tremula</i> L.	Ruderal	Phanerophyte	<i>Epilobium</i>	Native
<i>Potentilla arenaria</i> Borkh.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Potentilla argentea</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Potentilla reptans</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Prunella vulgaris</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Prunus</i> sp.	-	-	-	-
<i>Prunus spinosa</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Rhamnus cathartica</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Ranunculus bulbosus</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Robinia pseudoacacia</i> L.	Forest	Phanerophyte	<i>Allium</i>	Alien
<i>Rosa canina</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Rubus caesius</i> L.	Grassland	Phanerophyte	<i>Cornus</i>	Native
<i>Rumex crispus</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Rumex obtusifolius</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Rumex thyrsiflorus</i> Fingerh.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Salvia pratensis</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Salvia verticillata</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Sanguisorba minor</i> Scop.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Sarothamnus scoparius</i> (L.) Wimm.	Grassland	Phanerophyte	<i>Allium</i>	Native
<i>Scabiosa ochroleuca</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Sedum acre</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Sedum sexangulare</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Senecio jacobaea</i> L.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Seseli annuum</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Setaria viridis</i> (L.) P. Beauv.	Ruderal	Therophyte	<i>Bidens</i>	Alien
<i>Silene otites</i> (L.) Wibel	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Solidago canadensis</i> L.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Alien
<i>Solidago gigantea</i> Aiton	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Alien

Table A1. Cont.

Taxon	Habitat	Life Form	Dispersal Type	Origin
<i>Solidago virgaurea</i> L.	Grassland	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Sonchus oleraceus</i> L.	Ruderal	Hemicryptophyte	<i>Epilobium</i>	Alien
<i>Stachys recta</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Taraxacum</i> sp.	-	-	-	-
<i>Thymus austriacus</i> Bernh.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Thymus glabrescens</i> Willd.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Thymus pulegioides</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Tragopogon pratensis</i> L.	Meadow	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Trifolium arvense</i> L.	Grassland	Therophyte	<i>Allium</i>	Native
<i>Trifolium campestre</i> Schreb.	Grassland	Therophyte	<i>Allium</i>	Native
<i>Trifolium montanum</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Trifolium pratense</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Trifolium repens</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Trisetum flavescens</i> (L.) P. Beauv.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Verbascum lychnitis</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Verbascum thapsus</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native
<i>Veronica arvensis</i> L.	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Veronica austriaca</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Veronica chamaedrys</i> L.	Ruderal	Chamaephyte	<i>Allium</i>	Native
<i>Veronica spicata</i> L.	Grassland	Chamaephyte	<i>Allium</i>	Native
<i>Vicia cracca</i> L.	Meadow	Hemicryptophyte	<i>Allium</i>	Native
<i>Vicia grandiflora</i> Scop.	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Vicia hirsuta</i> (L.) S. F. Gray	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Vicia tetrasperma</i> (L.) Schreb.	Ruderal	Therophyte	<i>Allium</i>	Alien
<i>Vincetoxicum hirundinaria</i> Medik.	Grassland	Hemicryptophyte	<i>Epilobium</i>	Native
<i>Viola hirta</i> L.	Grassland	Hemicryptophyte	<i>Allium</i>	Native
<i>Viola odorata</i> L.	Ruderal	Hemicryptophyte	<i>Allium</i>	Native

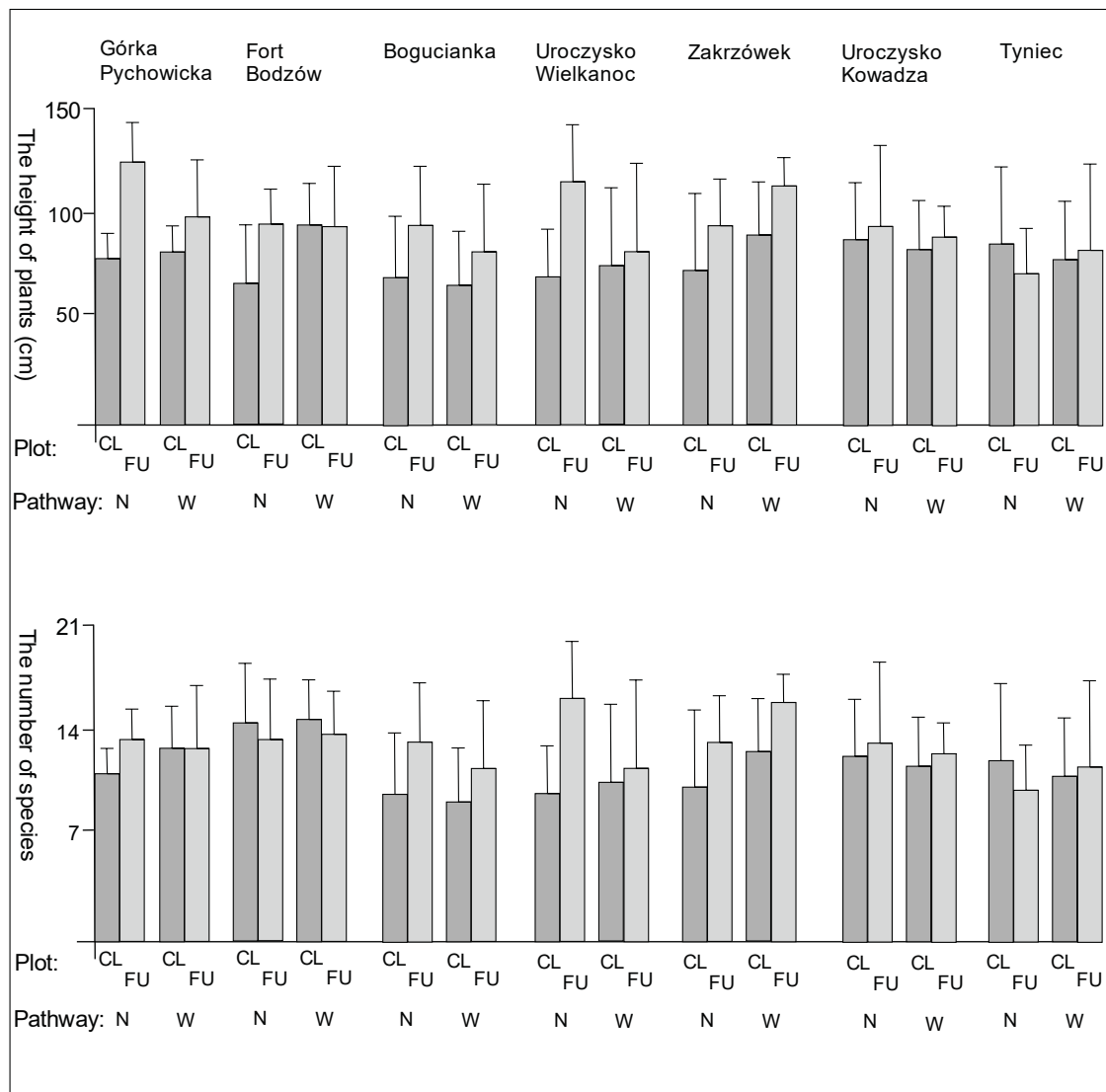


Figure A1. The mean height (cm) of the tallest plant (\pm SD) and number of species (\pm SD) in the closer (CL) and further (FU) plots located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways situated within the investigated study sites.

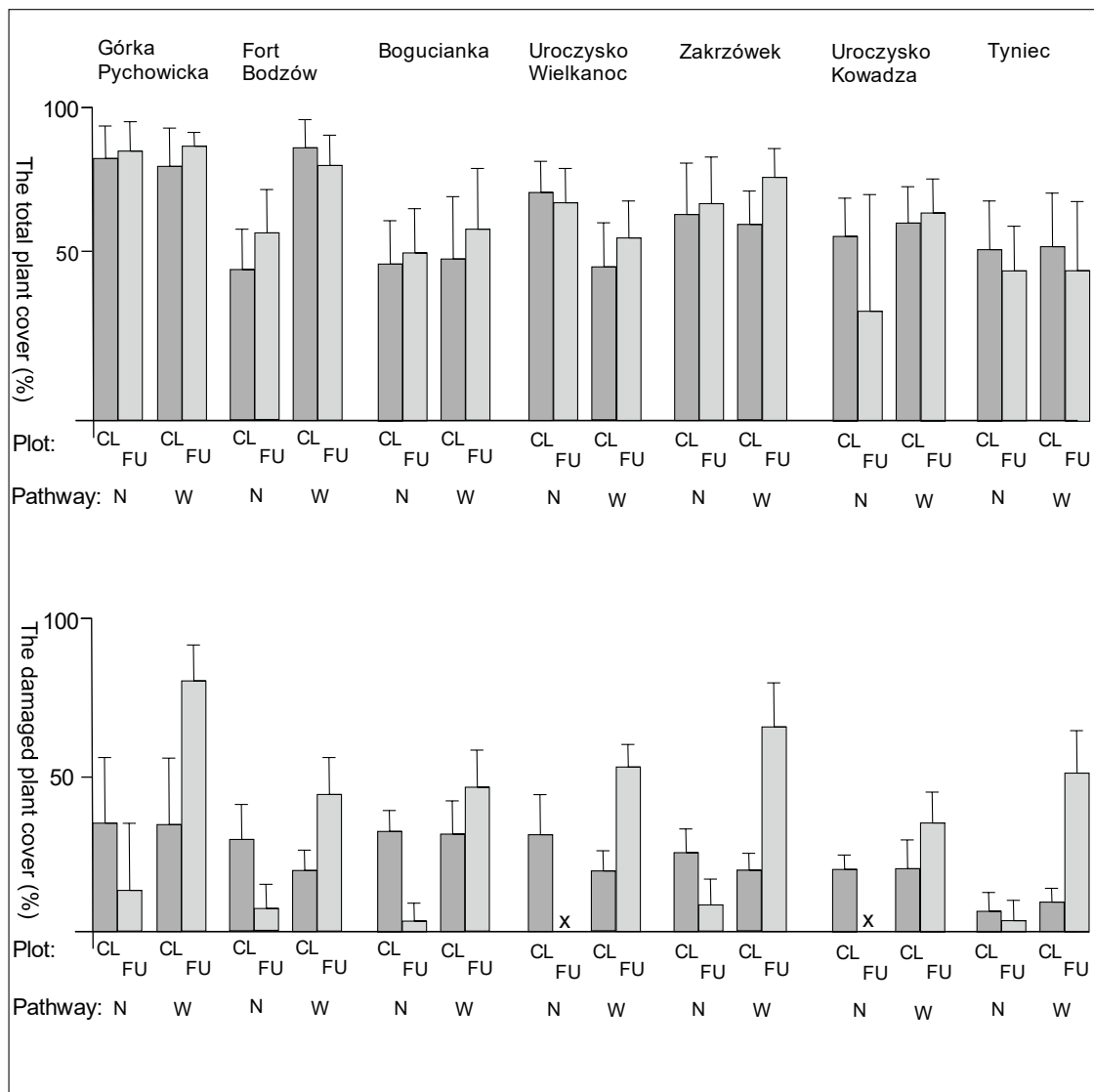


Figure A2. The mean percentage of total plant cover (\pm SD) and the percentage of plant cover damaged by trampling (\pm SD) in the closer (CL) and further (FU) plots located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways situated within the investigated study sites.

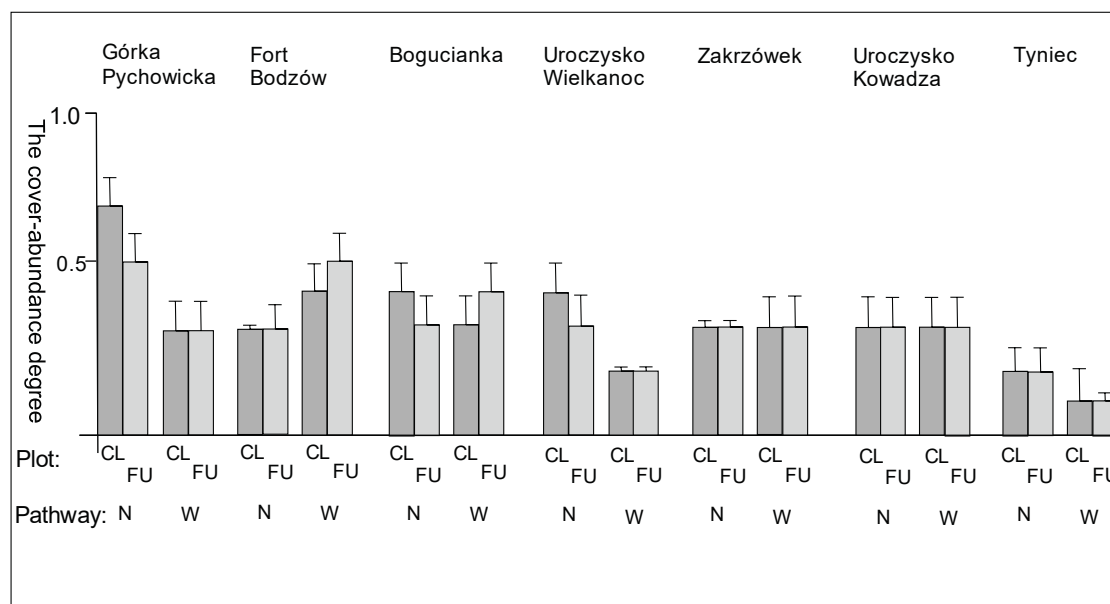


Figure A3. The mean cover-abundance degree of a particular species according to the Braun-Blanquet scale (\pm SD) in the closer (CL) and further (FU) plots located along the narrow-N (width \leq 50 cm) and wide-W (width \geq 115 cm) pathways situated within the investigated study sites.

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Article

Tourism Investment Gaps in Poland

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Abstract: Against a rapid and frequently unsustainable development of tourism in Poland, this article aims to recognize the investment attractiveness for tourism in Poland and its spatial diversity in the context of relieving the effects of overtourism. In the first stage, a multi-dimensional indicator model was developed, and then it was used to assess the attractiveness level of cities and rural, urban and urban-rural municipalities in Poland. The results of the study were the basis of the analysis of the attractiveness of cities in relation to their size, location in the tourist region and various forms of tourism. From a theoretical standpoint, the study shows that there is a clear-cut need to redirect tourism investments from the centres to more distinct locations in order to achieve more sustainable development of tourism. Furthermore, it was found, that the main factors that determine the tourism attractiveness of cities are market potential, cultural values, social infrastructure, and in some cases, natural values. The tourist potential of cities and rural areas allows for spatial dispersion of investments and counteracting the concentration of phenomena related to overtourism. The analysis was carried out for 2478 municipalities in Poland. The sums of zero unitarization method was used to assess the level of investment attractiveness.

Keywords: investment gaps; Poland; overtourism; investment attractiveness

1. Introduction

Tourism boosts local development in many locations. Beautiful tourist centres of cities and their districts attract tourists, which is why they are responsible for new investments, development of entrepreneurship, creation of new jobs and generation of income. The increase in interest in investments in tourism is the result of socio-economic changes that have contributed, inter alia, to the increase in tourist traffic around the world [1]. Traveling has become cheaper, and thus, more accessible to members of a greater number of households. New carriers with cheaper airfares have significantly increased the flow of tourists around the world [2]. At the same time, there can be observed a rising income of households, which in turn increases their possibilities of purchasing products and services, and thus, causes more interest in tourism products [3]. The World Tourism Organization predicts that by 2030, the number of tourist trips in the world will increase to 1.8 billion [1]. With such a large increase in demand, at the same time, a significant increase in investment is forecast in order to provide accommodation, transport and other services related to tourism and infrastructure necessary to meet expected demand, simultaneously increasing economic, social and environmental results [4]. Excessive tourist traffic and forecasts for its further increase affect tourism income growth in many countries around the world. Investors encouraged by good financial results of the tourism industry are looking for new investment opportunities and optimal locations for new investments. Despite

optimistic forecasts, the development of tourism and especially the progressive concentration of tourist traffic causes a number of negative effects. The literature lists two mechanisms of arising conflicts, which are caused by cultural differences, especially the mass tourist traffic and negative behavior of tourists [5,6]. This is related, among others, to the feeling of excessive overpopulation and discomfort among the local population and tourists. This phenomenon occurs in many cities where the critical point of the capacity of the tourist system has been exceeded. Observation of the dynamically developing tourist market raises the question of whether mature or fast-growing destinations should continue to implement strategies for increasing attraction and the number of tourists [7,8]. Research to date confirms that in the event of overtourism, places struggling with this problem should try to better understand the situation on the local market in order to determine its profitability, including tourists' behaviour, length of stay, expenses, as well as preferences and leisure activities [9]. Therefore, the development of tourism should be more balanced, well-thought-out and corrected in order to obtain the effects of balance of the natural and economic environment and care for the quality of life of local residents.

The development of tourism is a consequence of complex natural factors, forms of spatial organization, and the effects of human activities. One of the development directions is the use of tourism attractiveness to build competitive advantage and attract tourists. In many regions, tourism has become the sole or key determinant of income, as well as economic and social changes. The conducted research confirms the relations between the income generated by the inhabitants and the competitiveness of tourist destinations [10–15]. Tourism competitiveness of cities and villages should be understood as the ability of the area to provide goods and services to tourists better than others. Cities and rural municipalities compete with each other in building attractive tourism spaces, which are a multidimensional structure of tourist attractions, accommodation, catering, transport and other technical and social aspects that are important elements of a tourism product.

Competitiveness can be linked to tourism attractiveness of the destination, which is often determined based on the opinion of visitors on the perceived ability of the destination spot to meet their needs related to their stay. As far as the competitiveness of a given place is concerned, the overriding value of a tourist destination's attractiveness is its ability to interest and encourage tourists to visit it [16].

Research on tourism attractiveness is necessary to understand the elements that encourage people to travel. However, there is a thin line, beyond which attractive tourist destinations begin to struggle with the problem of overtourism and gentrification [17,18]. The intensity of ill-considered investments together with mass visits of tourists cause a number of negative phenomena among local communities, the economic environment and tourists. One of the directions of actions proposed in the context of mitigating the effects of overtourism is the deliberate dispersion of visitors inside and outside the city [19]. This can be achieved, among others, by increasing the number of events organized in less-visited parts of the city and its surroundings (e.g., sports events that do not always require sports infrastructure, e.g., marathons) and developing and promoting tourist attractions and facilities in less-visited cities. In the context of sustainable development of regions and cities, the promotion and development of investments in places with high potential investment attractiveness, which have not used their potential yet, may turn out to be crucial.

Although there are many published studies regarding the investment attractiveness and factors determining it [20–23], a research gap regarding the relations between potential investment attractiveness and actual investment in tourism can be distinguished.

The study aims to show how investment attractiveness and its components can affect the development of tourism in various types of areas: Rural, urban and urban-rural. The proposed investment attractiveness model identifies five investment microclimates: Social and technical infrastructures, administrative climate, natural values and tourist attractions, thus, increasing the conceptual understanding of the impact of a wide spectrum of factors on tourism development.

The model identifies the relationship between the potential investment attractiveness of tourism and its individual components (microclimates) and actual investments on the example of accommodation facilities. The main assumption of the model is that the potential investment attractiveness of tourism affects real investment. The difference between potential investment opportunities and implemented investments creates an investment gap, i.e., unused tourism development opportunities. The following hypotheses were adopted:

Hypothesis 1. *There is an investment gap in the regions, i.e., a lack of fit between the level of actual investment and the level of potential investment attractiveness.*

Additionally, hypotheses regarding the changing role of model components depending on the type of analyzed municipalities were assumed.

Hypothesis 2. *The main factors in the development of accommodation facilities in cities are anthropogenic factors such as social infrastructure, administrative microclimate and the microclimate of tourist attractions.*

Hypothesis 3. *The main factors in the development of accommodation facilities in urban-rural municipalities are tourist attractions and natural values.*

Hypothesis 4. *The main factors in the development of accommodation facilities in rural municipalities are less often anthropogenic factors, and more frequently natural values.*

The practical objective of the model is the ability to use it in order to show investment gaps and propose new investment locations. Theoretically, new locations can take over part of the growing tourist traffic in the context of phenomena, such as crowding and overtourism in cities with high tourist attractiveness.

2. Tourism and Investment Attractiveness

The literature on the subject provides a number of examples of location factors relevant to hotel industry investors. These factors can be divided into four main groups: The level of economic growth, the level of economic, political, legal and cultural stability, the degree of internationalization of the economy, and specific factors related to the hotel industry market [23]. Among the mentioned factors, various authors most often emphasize the importance of the level of economic development [24–27]. This factor is the key determinant of many elements of the redeployment and development of technical, social and transport infrastructures, communications technology, as well as the quality of human capital and tourist attractions. The literature often emphasizes that the main determinants of the volume of tourism demand are high natural and anthropogenic values. Tourist values play an important role in accommodation facilities located in places with developed tourist functions and facilities located in cities that have significant cultural and historical values, monuments and cultural objects [28–30]. Other equally important factors that are highlighted in the literature are: Sports, cultural and commercial events [31], as well as tourist attractions in the region [28,29].

The concept of tourism attractiveness cannot be considered equivalent to the concept of investment attractiveness for tourism—the main difference results from the subject of observation. In the first case, the focus is put on the demand side, i.e., all elements related to the tourist and their behavior on the market, including the perception of the ability to meet the needs. In the case of investment attractiveness for tourism, the main subject of observation is the investor, i.e., the supply side. This applies especially to their decisions taken as part of managing investment capital and business location.

Investment attractiveness is a complex phenomenon that comprises many separate factors. Attractiveness is increased by attributes of the area or those components that make up the final destination [32]. The concept of the attractiveness of a destination can be referred to individual benefits and perceived capacity of the final destination to provide individual benefits [33]. The investment

attractiveness model should take into account those features that refer to the specifics of demand and supply. In the case of tourism, these are tourist values, which are the main component of most tourism products.

Tourist values are specific features and elements of the natural environment, as well as manifestations of human activity that are of interest to tourists [34]. Tourist values can have a recreational, sightseeing and specialist character. The first create specific conditions for rest and regeneration based on elements of the natural environment, such as water (sea, rivers, lakes), clean air, forests, terrain, etc. On the other hand, sightseeing values are of explorative interest to tourists. Among them, there can be distinguished natural values created without human interference or with their little impact (e.g., national and landscape parks), and cultural values or objects of material and non-material culture created by man. All of this is complemented by specialized values, which give the opportunity to practice various specialized forms of tourism, e.g., sailing, mountain climbing, horse riding, etc.

The investment attractiveness model should also take into account elements important for investors that are related to service infrastructure, technical infrastructure, population relations and municipalities' finances [35]. These are elements that refer to both spatial development, as well as market and administrative conditions in a given area, including business environment, government policy and organization of major events [36]. Some of these conditions, e.g., regarding transport accessibility, are a prerequisite for using tourist values, as well as are an important element of the development of tourist regions.

When planning investments, the investor must take into account the needs of tourists. The literature mentions a number of examples of tourist attractions relevant to tourists, namely:

- Attributes of the final destination's attractiveness: Facilities, accommodation prices and transport networks [37];
- Historic and cultural sites, nightlife, outdoor activities, natural environment and openness, hospitality of people [38];
- Landscape [39];
- Clean and peaceful environment, quality of accommodation facilities, facilities for families, security, availability, reputation, entertainment and recreational opportunities [40];
- Festivals as an element embedded in the local ecosystems of sport, culture and business [41];
- Events related to the sport heritage of the region and other smaller sports events, including mass sporting and recreational events [42].

The above examples show the complexity of issues related to investment attractiveness. Based on the literature review and previous research, it was assumed that the potential investment attractiveness should be defined as a set of regional location values that have an impact on achieving the objectives by an investor who undertakes activities related to tourist services (e.g., in the form of business costs, sales revenues, net return and the competitiveness of the investment). The above definition was the basis for the development of a multidimensional statistical model of potential investment attractiveness.

3. Potential Investment Attractiveness Model for Tourism

Potential investment attractiveness is a complex phenomenon, and its measurement requires the involvement of many indicators describing different location values [21]. The difficulty of measuring investment attractiveness lies in translating the theoretical term into a system of empirical indicators. The components (investment microclimates) useful for the research were determined using the algorithm of sums of zero unitarization [43], for which the appropriate empirical indicators were selected. The selection of indicators for the model was based on similar studies on the assessment of investment attractiveness [21,22]. In the next step, the indicators were standardized and then aggregated into individual microclimates. Finally, the microclimates were combined, and thus, synthetic indicators of the level of investment attractiveness were obtained. Due to the aim of the study, i.e., determining the relations between model components and actual investments, uniform

weights for model indicators were used [44]. The aggregation process included the implementation of further activities:

- Determining the main components of investment attractiveness;
- Selecting empirical features;
- Standardizing variables;
- Calculating sums of zero unitarization;
- Grouping units of the surveyed population (Jenks Natural Breaks Classification);
- Defining the development level.

For easier interpretation, the indicators were grouped into five main investment microclimates (Figure 1) that are components of the model (Table 1).

Table 1. Components of the potential investment attractiveness indicator for tourism.

Technical Infrastructure
X1 Share of the population served by the waterworks
X2 Share of flats with connection to the gas pipeline
X3 Share of the population served by the sewage system
Social infrastructure
X4 Number of viewers in permanent cinemas per 100 inhabitants
X5 Sports halls with dimensions from 36 × 19 to 44 × 22 m and 44 × 22 m and larger per 1000 inhabitants
X6 Tennis courts open and covered for 1000 inhabitants
X7 Swimming open and covered for 1000 inhabitants
X8 Aquaparks for 1000 inhabitants
X9 Skate parks for 1000 inhabitants
X10 Length of bicycle paths per 1000 inhabitants
X11 Parks, walking and recreation [ha]/1000 inhabitants X12 Number of residents
Administrative climate
X13 Share of own revenues in total revenues
X14 Expenditure on culture and protection of national heritage per inhabitant
X15 Expenditure on physical culture and sport per inhabitant
X16 Expenditure on tourism per inhabitant
X17 Expenditure on public safety and fire protection per inhabitant
Tourist attractions
X18 Number of mass events per 1000 inhabitants
X19 Number of participants of mass events per 1000 inhabitants
X20 Number of seats in conference rooms per 1000 inhabitants
X21 Museum/branch visitors per 1000 inhabitants
X22 Audience drama theater per 1000 inhabitants
Natural values
X23 Access to the sea
X24 Lake district
X25 Landmark indicator
X26 Accommodation in health resorts
Real investments
X27 Number of beds in 2017
X28 Change in the number of beds in years 2012–2017

Source: Author's own elaboration.

The technical infrastructure is the first microclimate that allows assessing the preparation of an investment area for basic transmission networks, e.g., water, gas and electricity. An appropriate level of infrastructure is a basic condition for the location of accommodation, catering and entertainment

facilities. Social infrastructure is assessed through the prism of equipping a given place with buildings, as well as entertainment, recreation and sports facilities. In addition to the basic tourist values, it is a complementary element that allows the development of various forms of active leisure. The next market microclimate informs about the market responsiveness, the number of potential consumers, as well as the level of investment to date and competition in a given place, e.g., the number of available accommodation sites or the scale of ongoing investments. Moreover, the model takes into account the administrative microclimate that assesses the level of public spending on tourism. These expenses allow financing of both tourist infrastructure and local events, e.g., festivals or concerts. Natural conditions are a key element of the discussed investment attractiveness model. This mainly applies to the landscape and various forms of terrain, such as mountains, lowlands, lakes and coast. These are the basic factors that determine the development of leisure and sightseeing tours. The last element of the model is tourist attractions related to historical and cultural achievements of the place, which include: Museums, monuments and cultural events, etc.

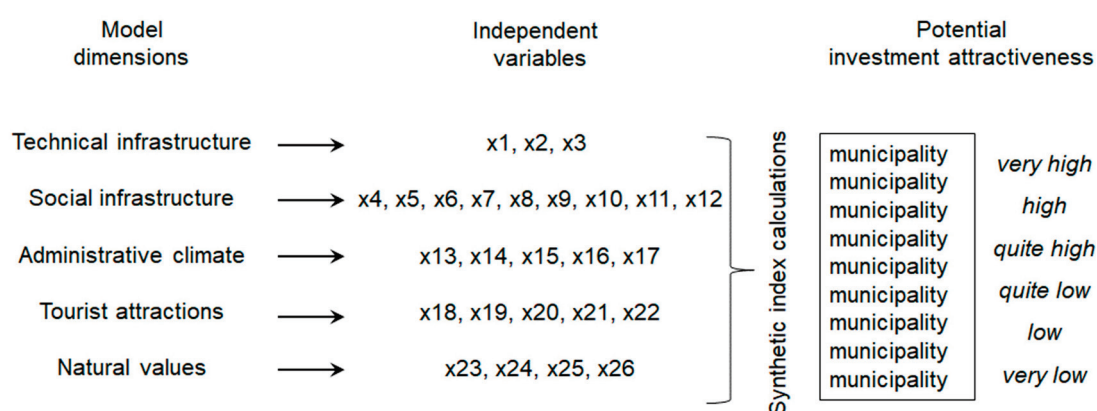


Figure 1. Potential investment attractiveness model for tourism. Source: Author’s own elaboration.

The standardized sums method was used to assess the level of investment attractiveness. It is a method of the linear ordering of standardized data, which assumes that all variables are stimulant. The procedure begins with standardization by normalizing one-dimensional variables that simulate based on the following formula.

$$x_{ij}' = \frac{x_{ij} - x_{minj}}{x_{maxj} - x_{minj}} 100,$$

where:

- j* next feature number,
- i* next spatial unit number,
- x_{ij}'* normalized feature *j* in the spatial unit *i*,
- x_{ij}* value of the feature *j* in the spatial unit *i*.

If the nature of the variable is different, e.g., destimulants or nominants, the procedure for the replacement for a stimulant should be applied:

$$x_{ij}' = \frac{x_{maxj} - x_{ij}}{x_{maxj} - x_{minj}} 100.$$

Based on standardized variables, a vector of standardized sums *q_i* for individual investment microclimate is then determined. These are the arithmetic mean values of the standardized features

x_{ij}' which correspond to individual facilities, where n is the number of investment microclimate and m is the number of variables in a given microclimate, according to the formula:

$$q_i = \frac{1}{m} \sum_{j=1}^m x_{ij}'$$

Pseudo-one-dimensional variables describing microclimate were the basis for calculating investment attractiveness indicators Q_i ,

$$Q_i = \frac{1}{n} \sum_{i=1}^n q_i.$$

The attractiveness indicators assigned to individual municipalities were divided into classes from 1 to 6 in accordance with the Jenks Natural Breaks Classification method. This method is used to present heterogeneous data, as it aggregates groups with similar values. The ordering of values in different classes is carried out by striving to minimize the average deviation of each class from the average class, while maximizing the deviation of each class from the average of other groups [45].

In the last stage, investment gaps were calculated as class differences (1–6) created as a result of typing of variables of potential investment attractiveness and actual tourism investments, which were measured by the number of accommodation facilities using the Jenks Natural Breaks Classification method (Figure 2).

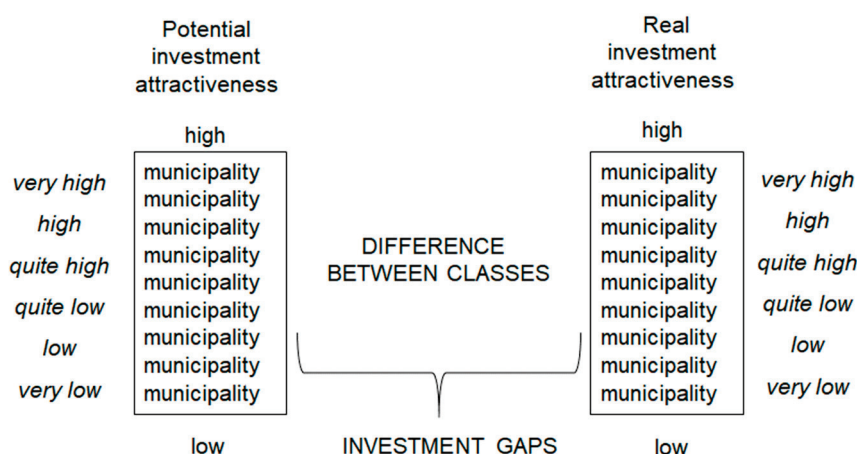


Figure 2. Investment gaps model for tourism. Source: Author’s own elaboration.

The analysis was carried out for the entire research sample, i.e., 2478 municipalities in Poland in accordance with the administrative division into rural, urban and urban-rural municipalities. Due to the amount of data needed to construct a multidimensional model for 2478 administrative units, it was decided to use reliable information resources of official statistics in Poland presented by Statistics Poland [46]. The data obtained to build the model concerned the year of 2016, whereas, the data on the number of accommodation facilities regarded the years 2012 and 2017. The data used to construct indicators of the natural microclimate constituted an exception. To calculate the index of the municipality’s access to the sea, digital maps and a computer program supporting GIS (geographical information system) were used, while in the case of the terrain indicator, research on the agricultural production space valuation carried out by the Institute of Soil Science and Plant Cultivation [47] was applied.

4. Results

The research results were presented by assuming the following structure. First, the level of investment attractiveness and its profile according to previously defined administrative areas were discussed. Next, the obtained results were compared with actual investments in the field of accommodation facilities. At the same time, the degree of tourism investment and overtourism in municipalities of the spatial scale was described. The combination of two indicators of investment attractiveness and the level of real tourism investments was the basis for determining investment gaps. Potential areas for investment development and mitigation of the effects of overinvestment and overtourism were identified.

4.1. The Attractiveness of Municipalities and Real Tourism Investments

The attractiveness indicators assigned to individual municipalities were divided into classes from 1 to 6 using Jenks Natural Breaks Classification optimization method (Table 2).

Table 2. Jenks natural breaks classification a synthetic indicator of investment attractiveness.

Class	Lower	Upper	Count
1 very low	0.021019	0.094264	410
2 low	0.094313	0.108285	414
3 quite low	0.108374	0.121113	411
4 quite high	0.121118	0.136356	420
5 high	0.136395	0.159968	455
6 very high	0.160125	0.359515	368
Goodness of variance fit	d * = 0.469689	d ** = 3.270889	GVF *** = 0.856403

* Minimum total squared deviation, ** squared deviation, *** goodness of variance fit. Source: Author's own elaboration.

Table 3 presents the potential for the development of tourism in Poland in structural terms for the three groups of municipalities covered by the research. The total number of administrative units examined is 2478, including 302 urban municipalities, 628 urban-rural municipalities and 1548 rural municipalities. The conducted research shows that about 14% of municipalities have a very high level of investment attractiveness. This group is dominated by cities (59%) and urban-rural municipalities (24%), while rural municipalities constitute only 17%. In the lower rating category, i.e., high and quite high, rural municipalities already achieve a significantly higher share, 44% and 52% respectively.

Table 3. Assessment of potential investment attractiveness by municipalities.

Municipalities	Very Low	Low	Quite Low	Quite High	High	Very High	Total
Urban	1		9	41	47	204	302
Urban-Rural	8	73	151	190	124	82	628
Rural	258	443	406	248	134	59	1548
Total	267	516	566	479	305	345	2478

Source: Author's own elaboration.

The high investment attractiveness of urban municipalities in relation to rural municipalities is the result of very good technical, social infrastructure and administrative climate (Table 4). An undoubted attribute of rural municipalities is their natural values, which were rated quite high.

Table 4. Assessment of potential investment microclimate by municipalities.

Municipalities /Rating *	Technical Infrastructure	Social Infrastructure	Administrative Climate	Natural Values	Tourist Attractions	Potential Investment Attractiveness
Urban	0.575	0.026	0.162	0.080	0.032	0.175
Urban-Rural	0.462	0.013	0.118	0.070	0.011	0.135
Rural	0.381	0.006	0.094	0.072	0.006	0.112
Total	0.425	0.010	0.109	0.072	0.010	0.125

* Average value of potential investment indicators. Source: Author's own elaboration.

The geographical area does not maintain continuity with respect to values and tourist attractions. Diverse terrain and the intensity of the scale of socio-economic phenomena caused a lack of territorial cohesion and the formation of different development conditions for tourism. This is particularly evident in the case of the spatial distribution of the results of measuring investment attractiveness (Figure 3).

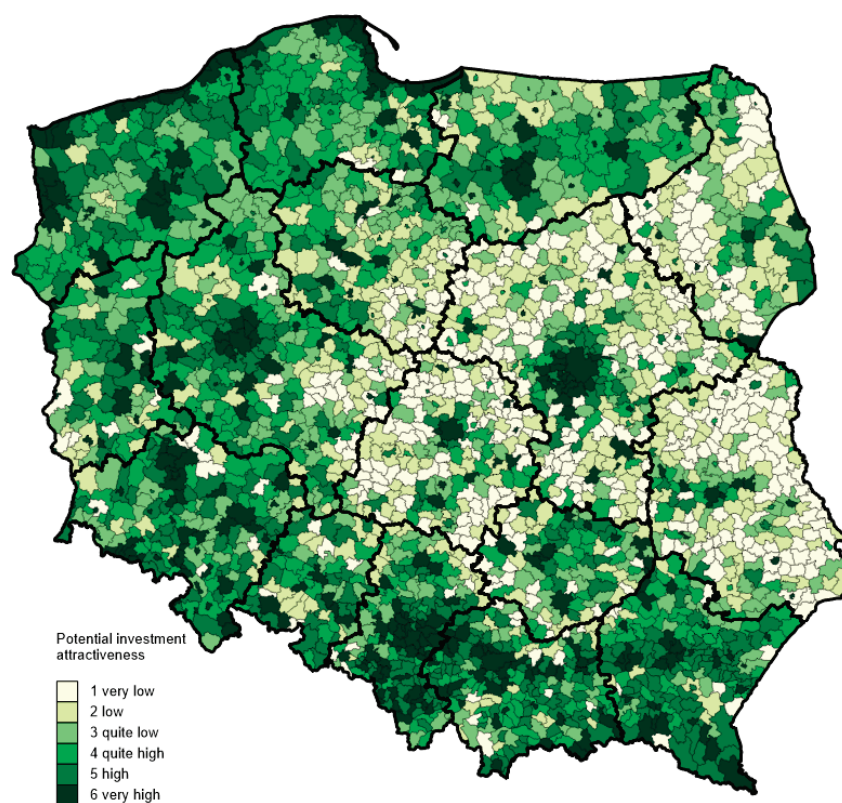


Figure 3. Potential investment attractiveness of Polish municipalities. Source: Author's own elaboration.

The obtained results of the spatial distribution of potential investment attractiveness can be related to the characteristic tourist regions of Poland. The first group are municipalities located in the coastal region, which is a narrow strip of land adjacent to the Baltic Sea. These municipalities have valuable assets in the form of beaches with access to the sea. Specific natural conditions mean that recreational tourism in these municipalities takes place mainly during summer. The exceptions are seaside resorts, which operate throughout the entire calendar year. Investments in the coastal belt are concentrated in close proximity to the beaches. This causes a high concentration of tourist traffic and opens opportunities for investing in semi-touristic types of economic activity. In the coastal belt, in addition to the typical accommodation base, other services, like gastronomy, entertainment and

transport, are developed. That is why coastal municipalities with a high tourist function indicator are often considered some of the most economically developed rural municipalities in Poland [48]. Local taxes and fees supplying the budgets of local government units provide great investment opportunities, which significantly increase the quality of infrastructure and at the same time, the level of investment attractiveness.

Another group of municipalities with above-average conditions for tourism investments are the municipalities of the Pomeranian, Masurian and Greater Poland Lakelands. In this case, the main factor increasing the investment value of these municipalities is the post-glacial landscape, whose main forms are lakes, moraine hills and forest complexes. The municipalities located within the discussed Lakelands do not have such advanced tourist infrastructure as it is the case with coastal municipalities. In their area, mainly seasonal tourism is developed in summer with the main forms being leisure and adventure tourism (sailing, diving, canoeing, etc.).

The most attractive municipalities in the southern part of Poland are located in three main regions: Małopolska Upland with the Świętokrzyskie Mountains and the Kraków-Częstochowa Upland, the Sudetes Region, including the oldest mountain ranges in Poland and the Carpathian Mountains. An important investment asset of these municipalities is the quite long season of tourist traffic, which covers most days of the year. In summer, they have good conditions for adventure tourism (hiking, trekking, extreme tourism, cycling, speleology), leisure and cognitive tourism. Whereas, in winter, the terrain and heavy snowfall create good conditions for winter sports, mainly skiing.

Due to their specificity, cities have different location values referring to historical, cultural, natural and economic conditions. These conditions determine the development of various forms of tourism. Depending on the scale and variety of conditions, there can be distinguished cities with individual tourist specializations, as well as cities with a bundle of tourist attractions and development opportunities for many forms of tourism. An appropriate investment climate does not yet condition real tourism investments in cities. A set of specific conditions and location factors determines the potential investment attractiveness and provides incentives for real investments of the tourism industry. However, the real investment attractiveness of cities shows an important aspect related to the level of investment and allows assessing to what extent investors are interested in a given location and the capital employed is able to generate added value.

The investment level indicator and the way it had changed in the years 2012–2017 were used to assess the level of investment. The spatial distribution of this indicator shows that the location of tourist companies is characterized by strong spatial concentration. Almost half of the accommodation sites in Poland (49%) are located in cities. Since 2012, 56% of all new accommodation sites in Poland have been created in cities (Table 5).

Table 5. Accommodation infrastructure by municipalities.

Municipalities	Share of Beds Number	Change in the Number of Beds 2012–2017	Share of Residents
Urban	49%	56%	48%
Urban-Rural	21%	8%	23%
Rural	30%	36%	29%
Total	100%	100%	100%

Source: Author's own elaboration.

When compared to rural areas, cities are much better equipped with basic technical and social infrastructure. They also have numerous historical, cultural, and sports facilities, as well as gastronomic establishments and entertainment venues. Furthermore, they generate the greatest number of cultural events, festivals and large concerts that enrich the tourist offer. In the group of municipalities with the highest level of attractiveness, there were large cities performing the functions of economic, social and cultural centers, as well as having a rich past. In addition, they are also cities that combine many urban

functions with the function of leisure tourism. Examples are cities located by the sea: Świnoujście, Kołobrzeg, Darłowo, Ustka, Gdynia, Sopot, Gdańsk, and cities located in the mountains, such as: Szklarska Poręba, Polanica-Zdrój, Karpacz, Szczyrk, Świeradów-Zdrój. Economic functions cause these cities to often be the destination of business trips and the area of development of the Meetings Industry. Due to the high population density, they also experience a large number of trips related to visiting relatives and friends.

In the next step, the relations between components of investment attractiveness and actual investments in general, as well as for individual groups of municipalities were examined (Table 6) using the linear correlation coefficient. It was observed that the analyzed factors are characterized by a changing role and weak or moderate impact (correlation) on real investment. It should be noted that in no case were the correlation coefficients determined high. In accordance with the adopted model, the main factors for the development of accommodation facilities in cities are social infrastructure ($r = 0.41$, $p = 0.00$), administrative microclimate ($r = 0.40$, $p = 0.00$) and microclimate of tourist attractions ($r = 0.42$, $p = 0.00$). These are elements of anthropogenic origin created by man and strongly associated with the development and economic potential of cities. The situation looks different in the case of rural municipalities, where natural values ($r = 0.28$, $p = 0.00$) were recognized as the main factor in the development of the accommodation facilities. The main factor in the development of accommodation facilities in urban-rural municipalities are tourist attractions ($r = 0.31$, $p = 0.00$) and natural values ($r = 0.26$, $p = 0.00$). In general, the regions presented a low correlation between the number of newly created accommodation facilities (investments) and the level of potential investment attractiveness ($r = 0.31$, $p = 0.00$).

Table 6. Relations between potential investment attractiveness and real investments measured by correlation coefficient (descriptive statistics and correlation analysis).

Municipalities	Technical Infrastructure	Social Infrastructure	Administrative Climate	Natural Values	Tourism Attractions	Potential Investment Attractiveness
Urban						
r	0.18	0.41	0.40	0.25	0.42	0.47
Mean	0.58	0.03	0.16	0.08	0.03	0.18
SD	0.07	0.02	0.05	0.07	0.04	0.03
p	0.00	0.00	0.00	0.00	0.00	0.00
N	302	302	302	302	302	302
Urban-Rural						
r	0.08	0.07	0.18	0.26	0.31	0.26
Mean	0.46	0.01	0.12	0.07	0.01	0.13
SD	0.08	0.02	0.05	0.05	0.02	0.03
p	0.05	0.06	0.00	0.00	0.00	0.00
N	628	628	628	628	628	628
Rural						
r	0.07	0.19	0.19	0.28	0.14	0.25
Mean	0.38	0.01	0.09	0.07	0.01	0.11
SD	0.10	0.02	0.05	0.06	0.02	0.03
p	0.01	0.00	0.00	0.00	0.00	0.00
N	1548	1548	1548	1548	1548	1548
Total						
r	0.14	0.25	0.25	0.23	0.35	0.31
Mean	0.43	0.01	0.11	0.07	0.01	0.13
SD	0.12	0.02	0.05	0.06	0.02	0.04
p	0.00	0.00	0.00	0.00	0.00	0.00
N	2478	2478	2478	2478	2478	2478

Source: Author's own elaboration.

Multiple linear regression was calculated to predict real investments based on their technical infrastructure, social infrastructure, administrative climate, natural values and tourism attractions. A significant regression equation was found ($F(5, 2472) = 105.417, p < 0.00$), with an R^2 of 0.176 (Table 7). Participants' predicted real investments is equal to $0.220 - 0.005$ (technical infrastructure) + 0.214 (social infrastructure) + 0.081 (administrative climate) + 0.109 (natural values) + 0.414 (tourism attractions), where all are measured in synthetic index (Table 8). The significant predictors of real investments were social infrastructure, administrative climate, natural values and tourism attractions. The results of the multiple linear regression indicated that the model explained 17.6% of the variance in real investments (Table 9).

Table 7. ANOVA.

Model	Sum of Squares	df	Men Squares	F	<i>p</i>
Regression	0.665	5	0.133	105.417	0.000
Residual	3.118	2472	0.001		
Total	3.782				

Table 8. Coefficients.

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	St. Error	Beta		
(Constant)	0.220	0.003		74.083	0.000
Technical infrastructure	-0.005	0.007	-0.015	-0.703	0.482
Social infrastructure	0.214	0.045	0.098	4.712	0.000
Administrative climate	0.081	0.016	0.113	4.960	0.000
Natural values	0.109	0.013	0.162	8.666	0.000
Tourism attractions	0.414	0.034	0.249	12.150	0.000

Source: Author's own elaboration.

Table 9. Model summary multiple linear regression.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.419	0.176	0.174	0.036

4.2. Investment Gaps in Tourism

The above results of a moderate correlation between real and potential possibilities of investing in tourism led to finding the causes of this phenomenon. It was assumed that there is an investment gap in the regions, which arises as a result of unused investment opportunities. Municipalities with favorable investment conditions have not yet developed tourism investments. This situation applies to all types of municipalities, both cities and rural areas. The analysis of individual administrative types indicated that as many as 53% of cities have investment gaps, whereas, in the case of urban-rural municipalities this percentage amounted to 42%, and 24% (Table 10) in the group of rural municipalities. The municipalities with the largest investment gap are mainly medium and small cities, as well as rural municipalities, whose spatial distribution on a map shows that they are located in areas with attractive natural terrain, such as lakelands, sea coast, and mountainous areas (Figure 4). Large investment gaps also occur in municipalities located around the largest cities in Poland, such as Warszawa, Kraków and Poznań.

Table 10. Investment gaps—difference between potential investment attractiveness class and real investments class by municipalities.

Municipalities	Difference between Classes (Number of Municipalities)										
	−4	−3	−2	−1	0	1	2	3	4	5	
Urban					37	54	52	60	66	33	302
Urban-Rural			8	21	71	128	138	156	84	22	628
Rural	1	8	18	59	428	378	288	211	136	21	1548
Total	1	8	26	80	536	560	478	427	286	76	2478

Source: Author’s own elaboration.

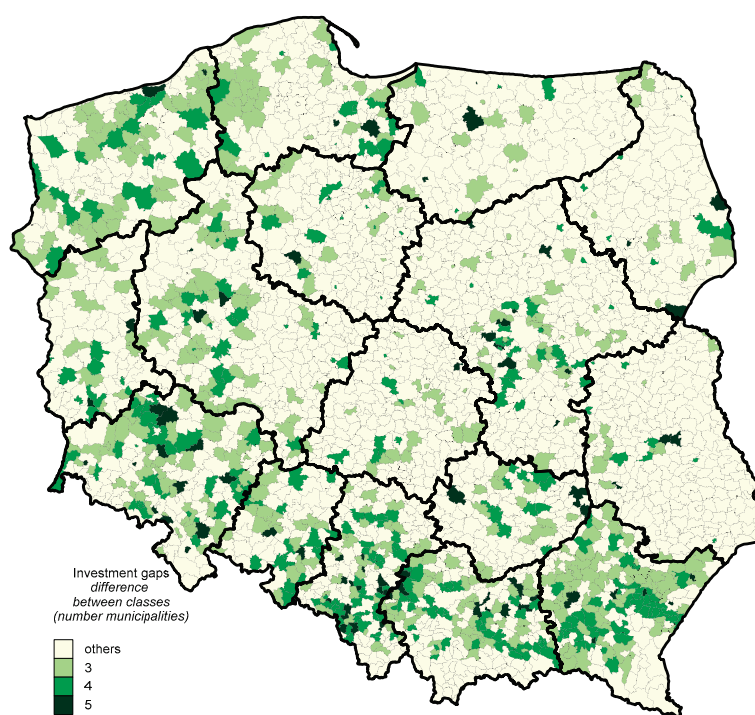


Figure 4. Investment gaps in tourism. Source: Author’s own elaboration.

4.3. The Concentration of Investments in Cities and Overtourism

The year-on-year increase in tourist traffic causes that many cities in the world face the problem of excessive numbers of tourists. Pressure on urban centers resulting from tourism has led to the popularization of the term “overtourism.” Despite its popularity, the term is still not clearly defined and even interpreted differently. This is due to the fact that it describes a multidimensional and complex problem that concerns not only stakeholders from the tourism and non-tourism industry, but also requires a broader view of it in the context of social and urban development [49]. The World Tourism Organization (UNWTO) defines overtourism as the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitor experiences in a negative way [19]. The rapid development of tourism is now an important problem concerning mainly urban population. An example is southern Europe, where the number of protests and social movements against the wave of tourists who flood attractive tourist cities is growing. The dissatisfaction of city residents has led to the emergence of organizations, such as the Assembly of Neighborhoods for Sustainable Tourism (ABTS) and the Network of Southern European Cities against tourism (SET). Tourist organizations have published a number of reports in which they describe ways of dealing with overtourism [50,51], which now constitutes an important problem for tourism development. In this respect, this part of the article will focus on the investment attractiveness of cities

and investment gaps in the context of excessive investment and the threat of overtourism. For this purpose, 30 cities with the greatest potential investment attractiveness and the highest increase in the number of accommodation sites were selected for detailed analysis and case study. 31% of all accommodation sites in Poland are located in these cities (Table 11). They also comprised 51% of newly created accommodation sites in the years 2012–2017. However, these cities differ in many features, including the number of citizens, economic functions, natural and anthropogenic values. The analysed group included 15 cities that perform mainly economic and social functions in the regions. They are characterized by an above-average number of inhabitants, as well as numerous cultural values and historic sites. Another 15 cities are distinguished primarily by natural values related to the seaside or mountain location. The specificity of these values above all determined the formation of various forms of leisure tourism.

Table 11. Accommodation infrastructure by types of municipalities.

Types of Municipalities	Number of Cities	Number of Residents	Number of Beds 2017	Changes in the Number of Beds in Years 2012–2017
Cities	15	5,921,526	120,245	24,343
Seaside cities	9	627,947	91,308	21,607
Mountain cities	5	27,681	24,140	3593
Lowland spa cities	1	10,586	5811	1045
Total types of cities	30	6,587,740	241,504	50,588
In relation to Poland	1%	14%	31%	51%

Source: Author's own elaboration.

Cities with the largest investments differ from each other, due to their natural and anthropogenic values. Investors choose both large voivodship cities, such as Warszawa, Kraków, Gdańsk, Poznań, Toruń, Rzeszów, Legnica, as well as smaller cities located in the coastal zone: Władysławowo, Kołobrzeg, Krynica Morska, Świnoujście, and in the mountainous areas: Szklarska Poręba, Polanica-Zdrój, Karpacz (Table 12).

The comparison of the results of potential investment attractiveness with actual investments indicates that investors are not always interested in areas with high potential investment attractiveness. This is confirmed by the relatively low value of the correlation coefficient at the level of $r = 0.47$ (Table 6) between the number of newly created accommodation sites and the investment attractiveness indicator. It is also worth emphasizing the seasonality of demand in tourism and its impact on investment. Cities retain their tourism attractiveness for most of the year, while coastal and lakeside towns attract tourists mainly in summer during the holiday season. This has an impact on the nature of tourism development and tourism income. The high concentration of demand in the summer months means that investors in cities and large coastal cities are increasing their accommodation base, hoping for an increase in income. This can also be explained by the intense development in the coastal belt and the increasingly frequent phenomenon of overinvestment and overtourism. The intensive development of the accommodation base may lead to a situation in which a given location begins to lose its original tourist attractiveness.

Crowded promenades, museums, restaurants, and swimming pools, traffic jams, noise, littering streets, intense nightlife, and in some cases increased crime, make attractive cities a holiday horror for both residents and tourists. Monitoring this phenomenon is currently an important aspect of managing tourism development and assessing the real investment attractiveness of cities.

Table 12. Real investment attractiveness in cities—list of the most attractive.

City Name	Number of Residents	Synthetic Indicator	Number of Beds 2017	Number of Beds 2012	Changes in the Number of Beds in Years 2012–2017	Resident to Number of Beds Ratios
Władysławowo	15,482	0.24	17,232	11,362	5870	1:1.11
Warszawa	1,764,615	0.26	31,021	25,382	5639	1:0.02
Kraków	767,348	0.24	31,022	26,513	4509	1:0.04
Gdańsk	464,254	0.26	17,315	13,417	3898	1:0.04
Kołobrzeg	46,568	0.27	17,323	13,852	3471	1:0.37
Legnica	100,324	0.20	12,553	9904	2649	1:0.13
Sopot	36,533	0.36	5964	3426	2538	1:0.16
Rzeszów	189,662	0.19	4136	1879	2257	1:0.02
Krynica Morska	1302	0.29	5829	4008	1821	1:4.48
Poznań	538,633	0.20	9379	8065	1314	1:0.02
Toruń	202,562	0.23	4305	2997	1308	1:0.02
Świnoujście	41,032	0.25	10,949	9703	1246	1:0.27
Lublin	339,850	0.21	3553	2320	1233	1:0.01
Kielce	196,804	0.21	3209	1983	1226	1:0.02
Hel	3373	0.26	1657	560	1097	1:0.49
Ciechocinek	10,586	0.23	5811	4766	1045	1:0.55
Łeb	3694	0.25	9788	8842	946	1:2.65
Szklarska Poreba	6681	0.22	5412	4497	915	1:0.81
Polanica-Zdrój	6381	0.21	2553	1676	877	1:0.4
Bydgoszcz	352,313	0.19	3403	2578	825	1:0.01
Karpacz	4711	0.33	10,360	9555	805	1:2.2
Ustka	15,709	0.25	5251	4531	720	1:0.33
Katowice	296,262	0.20	4224	3536	688	1:0.01
Siedlce	77,653	0.19	1484	840	644	1:0.02
Łódź	690,422	0.21	7113	6544	569	1:0.01
Gliwice	181,309	0.20	2107	1588	519	1:0.01
Opole	128,140	0.21	1367	849	518	1:0.01
Szczyrk	5699	0.21	2855	2339	516	1:0.5
Świeradów-Zdrój	4209	0.24	2960	2480	480	1:0.7
Grudziądz	95,629	0.18	1369	924	445	1:0.01

Source: Author's own elaboration based on statistical data of Central Statistical Office in Poland.

5. Discussion and Final Conclusions

The obtained research results on the factors of development of real tourism investments correspond to the results obtained by other researchers [23,25,27,31]; however, only in relation to cities. It turned out that the key factors determining tourism investments in cities are the degree of urbanization and the level of economic development. In particular, this concerns the examined microclimate of technical and social infrastructure, as well as tourist attractions. At the same time, it was observed that in the case of rural municipalities, this regularity was not confirmed. In this case, the determinants of real tourism investments were mainly natural values. This applies especially to rural municipalities located in the coastal belt and in mountainous areas.

Tourism is a complex system, which means that the aim of planning in this field must be the integrated development of all elements of this system, both in the area of demand and supply, as well as in relation to physical and institutional elements [52].

Despite the fact that the phenomenon of overtourism results from an excessive number of tourists, i.e., too high demand, in the case of many types of tourism this phenomenon can also be analyzed from the supply side. This is especially true for seaside holiday tourism. Massive investments related to the creation of new accommodation sites, restaurants, shops and entertainment facilities are largely responsible for tourist traffic in coastal towns. A vicious uncontrolled circle of tourism development is created, in which new investments stimulate the increase in tourist demand (Figure 5).

The development of supply increases the tourism attractiveness of the place and encourages tourists to an increased number of trips. Exceeding the tourist capacity creates the aforementioned discomfort in both residents and tourists, as well as the local economic environment.

As previously emphasized, one of the directions of mitigating the effects of overtourism is the use of investment gaps, which arise as a result of not using the potential attractiveness of a given location by investors. Investment attractiveness indicators can be used to assess the investment possibilities of a location.

Tourism investments are characterized by strong concentration. Investors often make decisions based on market observation and supply, hoping to obtain similar location benefits as the competition. Unfortunately, this often leads to overinvestment and the process of withdrawing the investment from the given location. Overinvestment in tourism is one of the reasons for overtourism. An example of this can be coastal resorts that are under siege of tourists during the summer. During the holiday season, tourist traffic is concentrated in time and space. This situation applies not only to large coastal cities, but also to smaller towns, where the ratio of tourists to residents is very high and has exceeded the critical point.

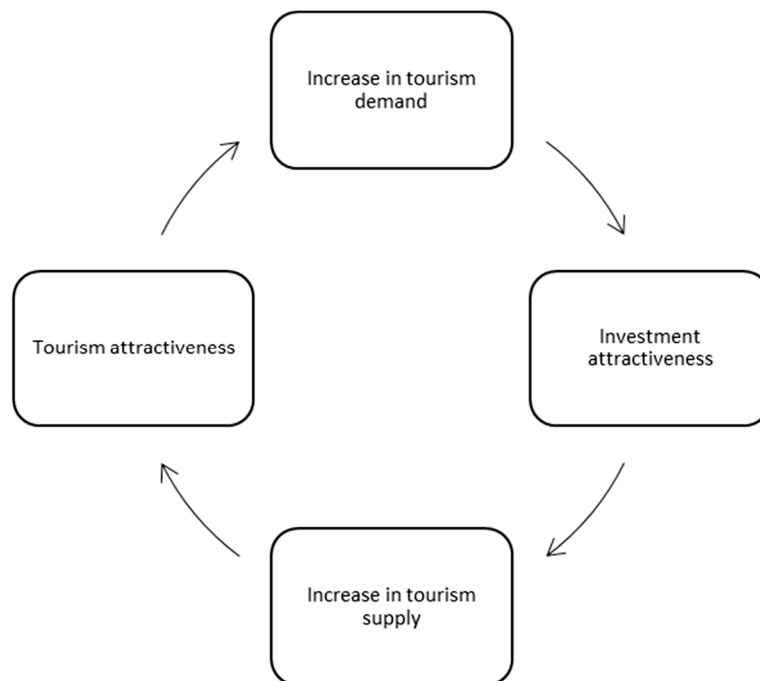


Figure 5. Uncontrolled circle of tourism development. Source: Author’s own elaboration.

Cities, due to their specificity, have different values that determine the location of economic activity, which relate to historical conditions, cultural and natural values, as well as the business environment. These conditions determine the development of various forms of tourism, which in some cities occur as individual tourist specialties, or in others as a bundle of tourist attractions and opportunities for the development of various forms of tourism. A set of specific conditions and location factors determines the potential investment attractiveness and provides incentives for investors from the tourism industry.

The presented research results allow for the formulation of several conclusions relating to the current state and future situation on the map of Poland’s investment attractiveness for the tourism industry. There is a large spatial diversity of investment attractiveness in Poland. The east-west divide is particularly visible. This is due to the course of existing socio-economic processes, a higher concentration of population density and entrepreneurship in western Poland. In spatial distribution, the high investment attractiveness of cities that act as the centers of regions or subregions can be observed. This phenomenon occurs in regions with different levels of investment attractiveness.

The location of tourist companies is characterized by strong spatial concentration. Almost half of the accommodation sites in Poland are located in large and medium-sized cities. At the same time, the largest number of new accommodation sites were created in cities in the period under review. The observed disproportions between the potential and actual investment attractiveness are worrying. High concentration of investments in cities can lead to overinvestment and the phenomenon of overtourism. One of the directions of actions that can be taken to mitigate its effects is the use of investment gaps and the spatial dispersion of tourist attractions and accommodation sites.

Limitations regarding the smaller study included mainly the availability of data used to present the complex phenomenon of investment attractiveness for tourism. Despite the availability of some indicators in official statistics, there is still a lack of information at the local level regarding many elements of tourism development, transport and natural components. This data could enrich the model and improve its interpretation capabilities.

This paper provides new evidence on investment attractiveness in tourism, as well as the investment gap. Moreover, it responds to the current debate on overtourism, as it indicates investment gaps that can be used in tourism policy and tourism development planning. Finally, it opens a series of new avenues for potential research, for example, searching for a mechanism and conditions for structural changes in tourism, especially the role of diffusion of innovations, innovation gaps in rural tourism [53], cooperation networks and entrepreneurial ecosystems that are conducive to investment.

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Article

A Business Model in Spa Tourism Enterprises: Case Study from Poland

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Abstract: This article expands on knowledge about modeling tourism business. The basic scientific problem of the conducted research was the need to modernize the way of doing business in spa tourism enterprises by popularizing the business model and to provide an indication of the elements of the business model that should be grounded in the principles of sustainable spa development. The aim of the article is to present the results of our own research carried out in Polish spa enterprises in 2018. The key scientific issue was to examine the range of use of the business model templates in the management of tourism-treatment activities carried out in spas. Discussing the research results was preceded by a review of the literature on business models and the characteristics of activities carried out by spa tourism enterprises. The conducted research used qualitative methods, especially in-depth interviews, conducted with managers of the largest enterprises of spa tourism in Poland. Quantitative research was also conducted to examine the needs of tourists and patients. Our own scientific research has shown that spa enterprises in Poland very rarely and only within the scope limited to some elements of their activity, use the business model, and are not always aware of the wide range of its applications. As a result of the applications received, a business model dedicated to spa enterprises was developed. The article refers to the overtourism phenomenon in spas and indicates the need to put in business models, which are activities that protect spa areas against excessive pressure on tourism and the exploitation of natural resources.

Keywords: health resorts; management; Poland

1. Introduction

In Poland, there are 45 health resorts, meaning areas of confirmed therapeutic properties of the climate that may be a remedy to limit the negative influence of harmful phenomena on society. It seems that health tourism and especially spa tourism can limit both the negative effects of pollution by engaging in tourism in natural areas and at the same time meet the demanding needs of the aging society to maintain good health for as long as possible [1].

The hitherto social role of spas, which perform mainly social functions in the field of health care and health prevention, is undergoing significant changes, caused by several significant events. Although the changes in the market of spa treatment services are usually evolutionary in nature, as they have been occurring since the beginning of the 1990s, there is still a clear discrepancy between the potential of Polish health resort enterprises and its use, as well as between the needs reported by the market and the offers of most tourist and healing establishments. An additional feature of the noticeable changes is the ambiguous perspective of conducting the spa facility, because while some facilities continue to operate almost exclusively in pursuit of social objectives, others seem to direct the purposefulness of their operations almost exclusively towards economic effects, and far later towards social effects, for which health resort activities have been included in the health care system [2].

The progressing transformation of tourist and healing activities in the scope of broadly understood organizational and market processes reveals at the same time that the tools for operating this activity are outdated. The functioning of an enterprise deprived of reliable strategic tools in a turbulent environment is becoming more and more difficult, and the lack of response to the reported market needs may even lead to a crisis. It is necessary to offer managers modern management tools, covering the broadest possible scope of integration of elements of the conducted business activities, and at the same time, adjusting to the specificity of the market in which the enterprises managed by them operate [3,4]. The proposal formulated in the light of the presented needs is to use the concept of business models to develop a business model of a spa enterprise adapted to the existing conditions of tourist and healing activities.

The basic research problem discussed in this paper results from difficulties in developing a business model dedicated to health resort enterprises, as it requires both theoretical knowledge of the activities of health resort enterprises and available business modeling concepts, as well as empirical research on business practice concerning the elements of tourism and health resort activity and market expectations of the customers. The area of issues includes issues related to business models and the activities of spa enterprises. However, the latter issue requires the identification of two other areas of knowledge directly related to the tourist and healing activities. The first one is health tourism carried out in spas, while the second area of scientific knowledge which is closely related to health tourism, is therapeutic activity within the scope of spa treatment (conducted on the basis of medical specialization concerning balneology and physical medicine).

It is also worth noting the phenomenon of overtourism [5], which also applies to the spa areas. As literature shows, most often tourism concentrates on economic and social viability at the expense of environmental sustainable development. Some scientists are trying to develop environmental policy integration [6], but it is generally difficult to implement. The problem of overtourism in tourism destinations and spas was noticed in the 1980s in the concept of TALC (Tourism Area Life Cycle) put forward by R.W. Butler [7] and its modifications or development hypotheses [8]. The arduous impact of excessive tourist traffic in a health resort may deprive the area of its features that distinguish it among other tourist areas. However, the literature proves that other important factors affecting the load on the area are also the behavior of visitors, duration of stay, concentration of tourists, and the type of tourism [9,10]. Therefore, all business activities in this area should take into account not only the profits, but also the social role of spa enterprises and their sustainable development [11]. However, in order to find a balance between the expansion of business activities and its permissible interference in the spa area, activities aimed at sustainable development should be included in contemporary business models.

The existing research achievements in the field of business models in tourist and healing enterprises proves that this area is still unexplored, and few studies in this area concern only a fragmentary approach to the subject [12]. There are some works that address the characteristics of particular elements of the business model, rather than its complete form, as well as those that include business models developed for tourism activities in other areas, e.g., related to post-industrial cultural heritage tourism [13]. Researchers in the field of tourism economics generally focus their attention on individual elements of spa activity, e.g., on a health resort product, as a value proposition or on selected segments of customers, forgetting about the importance of other elements of the activities and about the mutual relations between these elements. Such a possibility is offered by business models, especially the model dedicated to spa enterprises.

In relation to the research problem identified above and the current state of knowledge in the subject under discussion, it is possible to identify a clear cognitive gap, which should be defined as a lack of knowledge on the applicability of business models and their elements in modern spa enterprises, as well as the possibility of a model approach to tourist and health resort activities conducted in health resorts using a business model dedicated to health resort enterprises.

The cognitive purpose of the paper is to recognize the scope of applicability of the business model in spa enterprises, using Polish spa enterprises as an example. The implementation of the goal of the article will allow us to answer two questions—what is the range of applicability of business models in spa enterprises and what are the characteristics of elements of business models of spa enterprises? The identification of the research problem made it possible to define research questions and at the same time allowed us to organize the research process and direct its further preliminary stages towards determining its purpose. Knowing and understanding the mechanisms of conducting spa business, establishing what constitutes the components of the business model of spa enterprises, and consequently proposing a business model dedicated to health resort enterprises was a key vision for the implementation of the research works presented in the article.

2. Literature Review

Business models in the economic sense have been known in the literature only since the 1970s [14], when E. Konczal [15] added to business models a managerial value, clearly suggesting that they should not be perceived only as scientific or natural science tools. Since then, the models started to be associated with business, but their usage was not widespread. When looking at modern definitions of business models, one can notice that they are perceived through the discipline of a particular researcher. They can be perceived as a synthetic description of the business nature [16] or as a tool [17] describing the relations between the components that lead to the development and capturing of value by the organization [18].

The perspective of perceiving business models through description is confirmed by J. Magretta [16]. She considers the business models to be a story explaining how the enterprise works. More detailed definitions can be found in the perspective related to the tool character of the business model. D. Teece [17] perceives them as a tool describing the design or architecture of creation, supply or value-capturing mechanisms. He also notes that the core of a business model is defining the way in which the enterprise captures the value for the customers, entices them to pay for this value, and converts payables into profits. S. Prendeville and N. Bocken [19] perceive the business model similarly. They describe it as a conceptual tool describing the activities that refer to business transactions between customers, partners and suppliers and the organization and their participation in the development and capturing of value.

When paying attention to the tool character of the business models, it was emphasized that they are not only used to describe the business reality, but also—when effectively used—to shape this reality. For that purpose, it is important to indicate elements of that model and relations that occur between them. It was emphasized by M. Geissdoerfer et al. [20], who defined the business model as a simplified representation of organization elements, together with the interaction between these elements, to analyze, plan and communicate in the intricate organizational structure. A similar approach is presented by M. Johnson et al. [21], describing it as interrelated elements, that is, the proposal of value, profit formula, key processes, and resources that create and deliver the value.

T. Falencikowski [22] believes that a business model is a multi-component unit, developed and separated to present, in a simplified way, the manner of running a business, by describing the logic of value creation for the consumer and capturing its part by the enterprise. B. Rusu [23] also maintains the above assumption and understands the business model as a correlation system that enables the creation of value for customers based on enhanced planning of architecture of the designed system and correlated activities. A. Wiśniewski [24] presents a specific way of perceiving the revenue. He defines the business model by referring to the basic concepts and presents it as a description of construction, activity and correlations in a venture that generates profits.

C. Batistella et al. [18] have an interesting approach to this subject. They pay attention to the relations with other manager tools. They assume that the business model presents how the strategy is implemented by description of creation, supply and recording of economic, social or other values. The description of relations with other manager tools and manners of value creation and capturing can

occur in two ways: with the use of description or graphics. It is emphasized by M. Al.-Debei et al. [25], who perceive business models as an abstract textual or graphic representation of interrelated structures of model architecture prepared by the organization and of all the products and services, that the organization has in offer and that are essential to achieve its aim.

B. Iwasieczko [26] defines a business model as a configuration of business elements established to create value for the customers and to be an element of effective competition. B. Nogalski [4] has similar views, while also paying attention to the resources being a key aspect of an organization. He described a business model as a characteristic of value for the customer, a set of basic resources, activities and relations with partners, the aim of which is to create this value and competitive advantage.

The issue of business models in tourism is rarely discussed in literature. In general, it is analyzed in a context of another major subject, such as knowledge and technology or in the scope of innovations. An example can be the work of J. Souto [27], who focuses on the research on the innovation in the scope of business modeling and implementation of innovations. It can also be noticed that much thought is devoted to knowledge as a strategic resource of innovative enterprises. The proper usage of knowledge enables one to design more attractive tourism experiences and more innovative marketing channels through which new recipients can be reached [28].

Some enterprises gain knowledge on their customers and their preferences by building relations with them. F. Mantaguti and E. Mingotto [29] when researching tourism enterprises in the small and medium enterprises sector, noticed that an important success factor is the common identification between the entrepreneur, staff and customers, especially with the use of electronic media.

Many tourism enterprises in their business models often assume new technologies to be indispensable elements to maintain competitiveness and profitability [30]. In that publication, the subject of creating value for the consumer of tourism services with the use of augmented reality was discussed. When researching the technology potential as a value proposal, the researchers noticed that there is significant support from the side of visitors and stakeholders. Among the advantages to which the researches paid attention was the increase of tourism attractiveness, revenues and competitiveness. Augmented reality is definitely an interesting proposal when diversifying the product of tourism enterprises. However, it is an additional element, supporting the basic product, just like other modern technologies.

An example of diversifying the offer is the use of a multimedia application to present tourist attractions. In their publication on innovative museums, C. Ciurea and F. G. Filip [31] indicate the advantages of such a solution. According to them, it can be a possibility to present the collections to which access is difficult (for example, delicate museum pieces). Moreover, they describe the possibility of using the tool by many entities, when in case a number of museums belong to a common network, virtual exhibitions can be opened, expanding the displayed heritage by adding pieces or collections belonging to other facilities.

Publications concerning the establishment or co-establishment of value for the customer, both in terms of sustainable tourism [28,32] and in creating value [33], are a valuable inspiration when creating innovative business models. An interesting discussion on business models in the tourism sector concerns the accommodation and catering services. M. Diaconu and A. Dutu [34] paid attention to the evolution of the hotel industry towards innovative business models. They emphasized that this results from the belief that the development of new technologies became a way to achieve success, as it offers the possibility to expand the distribution channels, reduces the time of reservation bookings, and creates a network of organizations engaged in maintaining the value chain.

Similar views are expressed by L. Knop and J. Brzóška [35], who in their characterization of a business model focus on the customers and what the enterprise can offer them. They describe the business model as configuration system of resources and activities (intercorrelated), covering among others the creation of values that on the one hand need to satisfy the needs of the customer and on the other hand need to be a source of revenue for the enterprise. J. Gordijn and H. Akkermans [36], when describing the enterprises of the energy sector, developed a sequence called “BusMod”, being a

gradual general methodological process of modeling and analyzing business activity. They identified six construction stages. In the proposed sequence, the authors underlined the value of the idea as a crucial stage being the beginning of business designing. It is the first step of business model creation in which a central axis is formulated with which the remaining components will be aligned. The value of the idea is to be a source of knowledge on the reasons why the customer will be likely to use the end product; therefore, next, it is proposed to create a list of business goals and their priorities. It makes it possible to adjust and select the technologies necessary to implement these goals. By implementing particular stages of the presented designing sequence, one can obtain a values model based on the available resources, key activities and business partners. Next, the prepared values model needs to be analyzed in terms of profitability. The procedure ends with preparing scenarios of business model development. It is an example of business modeling taking into account the linear character of the designing process.

H. Chesbrough [37] argues that innovation in business models has vital importance but at the same time, it is hard to achieve. The reason is, that even with help of tools like business maps, charts, or CANVAS are helpful to bring a change into a business model. However, the realization of that change is challenging, because when the model changes, the organizational processes has to change as well, and those are not mapped by such tools. Therefore, the curtailed tasks of introducing innovations into business models lays on internal leaders who can manage the change a deliver relay functioning innovative models.

Innovation in a business model should concentrate on the value proposition it includes, adopting it to the ever-changing market conditions and customer demands. One can say that the main purpose of a business model is to respond to the needs of clients, building all other elements around it. This finds reflection in the very definition of a business model used by D. Teece [38], who defines a business model as a description of a design of architecture of value creation, delivery and capture mechanisms. So, the main function of such a model is to recognize customers' needs and their ability to pay for fulfilling this need. It also defines the manner of how an enterprise responds to those needs by delivering value to the customers. In other words, a business model tells the company what the client wants, how they want it, what they are willing to pay for it, and how the enterprise should be organized to meet those needs as best as it can, getting paid well for doing so.

The same applies to business models in tourism; therefore, the key aspect to understanding their role in a tourist enterprise, it is crucial to examine the receiving side first: who are the clients, what is it that they want, and what makes the value of the delivered product for them.

In business models for tourism enterprises, the offer has to respond to the needs and preferences of tourists, so their perspective on the value proposition is highly important. This is especially significant in the case of spa facilities that mainly service domestic visitors. As S. Page [39] notices, domestic tourism is the dominant form of tourist activity in terms of traffic volume. So studying the local preferences and needs serves to improve the part of the tourist sector that has the biggest impact on all of the tourist traffic in the country. Findings from Central Europe confirm, that in the case of countries like Poland or Czech Republic, tourists prefer domestic products [40] and value them more over abroad alternatives. Therefore, it is much more suited to continuously update the state of knowledge about detailed tourist perceptions of a product, rather than using generalized data and observations about global trends; even if they are accurate, they may lack specific details. Moreover, while knowledge about international tourism is relatively broad and in center of researchers interest [41], domestic tourism gets oftentimes marginalized, staying unknown and rarely researched [42]. This is because international tourism is oftentimes perceived as having more economic importance in comparison to domestic tourism [43].

Even if the concept of business models has previously not been approached in spa tourism, or even other forms of tourism, i.e., heritage tourism (before the authors first researched on this matter [13]), value proposition has been studied in various forms of tourism, it was not examined from the business model's perspective most of the time. The vast majority of the research that unintentionally

did that were the studies on tourist perception of a destination, or those where tourist satisfaction was measured and examined. One can name multiple examples of such an activity, like, for instance, the research on international tourists' perception of Kuala Lumpur by N.A. Ragavan, H. Subramonian and S.P. Sharif [44], where the authors conducted a survey in order to determine the impact on tourist perception such attributes like accommodation and food, attractions, climate, culture etc. have. A similar approach was taken by M. Kozak [45] when he studied tourist satisfaction among British and German visitors in Mallorca and Turkey. Again, the factors taken into consideration among others included: accommodation service, hospitality and customer care, facilities and activities, transport services, and pricing. J.S. Akama [46] tackled the issue of tourist satisfaction in Kenya's safaris by comparing visitors' perception grades with expectation grades that concerned various aspects of this kind of tourism (i.e., natural attractions, facilities—the looks and functionality of them, staff's attitude, and pricing). One can find similar approaches in recent works as well [47,48].

While results obtained using such methods can be compared within studies that approach similar forms of tourism (i.e., vacation tourism to marine locations, holidays in tourist resorts etc.), cross form comparisons might give false results. It is the very core of a touristic product that makes up the value for customers. Heritage tourists expect authentic culture to be in the center; spa clients seek health improvement in the first place; families taking a 2 week vacation in a beach resort are there for the sun, beach, entertainment and hotel living comfort etc. Therefore, this study being the first one that focuses on the issue of value proposal in spas not only fills a recognized research gap, but also might be used to perform such comparisons for other studies in this field.

3. Method

Research carried out in the field of a business model and its applicability in spa enterprises requires a step-by-step procedure. In the first stage of empirical research, qualitative research was carried out based on in-depth interviews conducted among managers of the largest spa enterprises in Poland. The research carried out at this stage made it possible to identify the scope of applicability of business models in spa enterprises.

The second stage of research concerns the task of getting to know and analyzing the preferences and expectations of tourists visiting Polish spas, as well as potential tourists in order to formulate the value proposition for the client. This stage of empirical research is aimed at getting to know the necessary activities aimed at identifying a potential additional segment of Polish spa clients and extending the scope of existing activities in the light of observed cultural and demographic changes.

In the research stage of spa enterprises, the study was attended to by managers of 17 entities which together provide 33% of all health resort treatment services in Poland, operating in 95 facilities (sanatoriums and spa hospitals), which constitute 36% of all facilities in Poland. The research was carried out in 2018.

The companies analyzed were selected from the list of spa treatment establishments developed and made available by the Ministry of Health of the Republic of Poland. The choice was made based on the potential of the services provided—these were the largest spa enterprises in Poland in terms of annual visitor count and accommodation capacity. Some of those enterprises are spread across multiple health resorts in various towns. Such a choice of research subjects provided a good insight into the discussed industry and allowed to draw conclusions of enough significance to picture the current state of spas in Poland. The research questionnaire consisted of two parts. The first one included 18 questions characterizing the structure of the business model, enabling a description of each of the model's components. In the second part of the questionnaire, the subject of general information on the conducted activity and sources of its financing was taken (eight questions). Some of the questions concerned not only the indication of selected variants of the answer, but also their weighing. The responses helped to formulate a universal model of a spa enterprise business.

The methodological objective was also possible through empirical research and its subsequent use in the conceptual phase. The basis for the research and analysis was the most popular business

model scheme CANVAS by A. Osterwalder and Y. Pigneur [49] because of its dual prominence; it is a tool, but also a concept that describes what a business model is, by breaking it down into nine key elements. Among them, we can distinguish: (1) customers' segment, being the axis of each business model; (2) proposals of values for selected customers' segments; (3) communication channels between the defined elements; (4) relations with customers; (5) revenue streams; (6) key resources, (7) key activities; (8) key partners; and (9) cost structure, meaning all the costs related to the execution of the defined business model. Nine of the mentioned elements are defined as the business model template. They compare the tool to a canvas which can be used to paint a picture of the existing or new business model. The utilitarian character of CANVAS makes it also a suited research tool, thanks to this clear division of a business model into elementary pieces. By studying each of them separately, it is possible to gather data that describes the whole picture of the business model in full detail, focusing on all nine aspects, oftentimes using different sources for fully understanding each of them. While asking the managers directly to describe their business model, the outcomes might be incomparable if even provided, given the low rate of familiarity with the business model concept among spa managers, and considering the vast selection of definitions describing business models.

According to the adopted research methodology, the implementation of the objectives of this work assumed the application of a step-by-step approach, in which the current state of the situation is first identified, concerning both the activities of spa enterprises, the scope of application of business models in health resort enterprises, and the characteristics of individual components (elements) of the business model. Due to the diversity of factors influencing health resort operations, it was also necessary to learn about the nature of organizational and social changes that affect the situation of the spa enterprises (Figure 1).

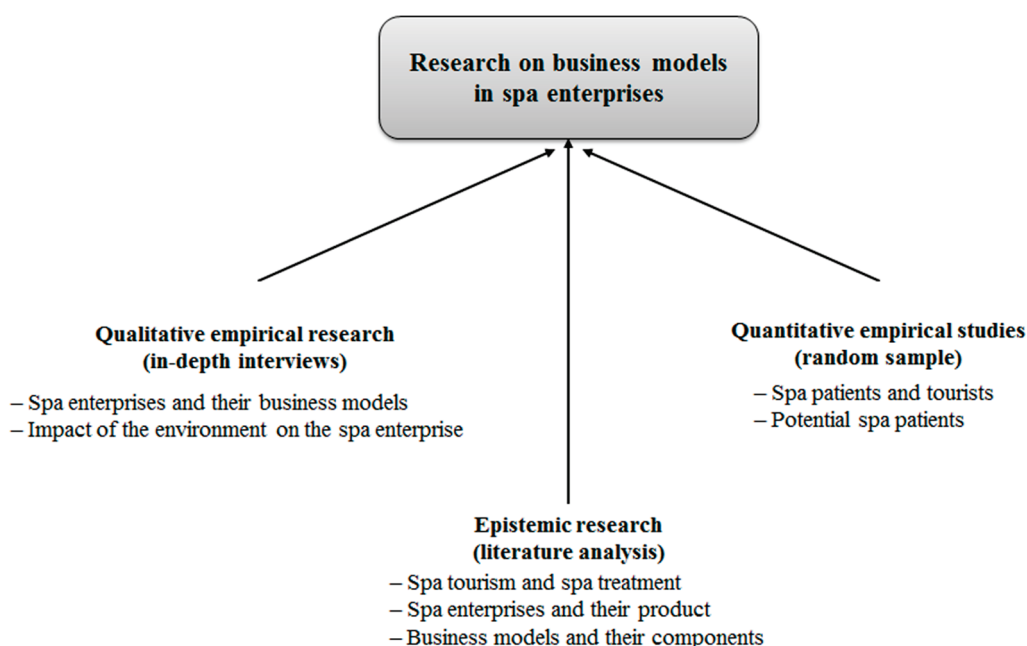


Figure 1. Research areas discussed in empirical and theoretical research. Source: Own study.

In terms of tasks, the first stage of the research consisted of in-depth interviews on the applicability of business models of selected spa enterprises, considering their forms, as well as the characterization of particular elements of the applied business strategy (in the absence of business models). In the second stage, the preferences of patients concerning the spa treatment services and the needs of potential patients were analyzed, which constituted the basis for a conclusion concerning the proposal of value for the spa customer, for it is a key element of each business model that shapes all its other elements.

In the research of tourist expectations, a research survey was made available to determine their expectations regarding the offer of Polish health resorts, and at the same time, to develop a proposal of value for visitors. The study mainly concerned people who had already completed a spa treatment, but potential clients were excluded, and the research required reaching those people in their everyday life environment. The questionnaire contained 34 questions and was divided into three major parts. The first and last one included questions for all participants, while the second one contained two sets of questions—one for spa visitors and one for potential visitors. Answers that were given by the respondents in the first part decided what set of questions they should receive in the second part. This way, the conducted research allowed us to gather opinions of spa visitors, as well as get to know the expectations of potential clients. Clients who visited a spa in the last 10 years were asked about their experiences and needs, while the potential clients explained why they have not visited a spa so far and what their expectations are. The questionnaire was made available and disseminated on the Internet on social networks related to health resorts, and people interested in the subject were made available in the Internet community. Eight-hundred-and-ten people participated in the study. After the selection of the collected questionnaires for further research, 753 respondents were qualified, of which 63.5% (478 people) were patients of Polish health resorts (TS), i.e., people who had been in one of the Polish spas in the last 10 years. The second group of respondents (275 respondents) are people who have never been to Polish health resorts, and who at the same time express such a desire, having specific expectations (PT).

In the tourist group, 478 responses were obtained, which exceeded the minimum sample size estimated at 474 surveys (for the accepted level of maximum statistical error of the sample of $\pm 4.5\%$ and the confidence level $p = 0.95$). In the case of potential patients, the maximum statistical error of the sample is $\pm 6\%$, with the assumed significance level of $\alpha = 0.05$ (then the minimum size of the research sample is 267 respondents).

Statistical analysis of the collected data required the use of descriptive methods (arithmetic average supplemented by standard deviation) and intergroup comparisons (attribute significance index based on the structure index). In the case of normal distribution variables, the Student's *t*-test was used to compare two mean values in the independent groups tested, first determining the uniformity of variance (Fisher-Snedecor test) [50,51]. For a comparison of the two groups with non-normal distribution, the U (Mann-Whitney) test was used [52]. As a result, this stage of research allowed us to learn about the needs of both spa patients and potential patients, which at the same time made it possible to focus on developing a proposal of value consistent with the needs of the market. Then, it was also possible to integrate the structure of the obtained spa product into the business model.

In accordance with the adopted approach to research, the preliminary identification of the research problem led to a conclusion on the classification of the undertaken research. Therefore, it should be stressed that they were applied research in both descriptive and practical terms. However, using the physical criterion, the undertaken research was primarily of a qualitative nature, although quantitative research was also carried out in the dimension of creating a value proposition for the patient.

4. Results

The presented results are divided into two parts that correspond to the two different groups of research subjects. In the first subsection, findings from the literature review regarding business models are presented. Those are supplemented by the findings from in-depth interviews of spas' managers, giving an overall insight into all key elements of a business model used in a current spa enterprise. Because value proposition is the key component of every business model, and because it can be perceived from two perspectives, the company's and the customers point of view, the second subsection is dedicated to the standpoint of spa visitors. It contains findings obtained through the previously described questionnaire, regarding expectations and value for spa customers and potential customers. The results of both findings are used in the discussion section in order to get a comprehensive model of

a spa enterprise business that meets both the issues of running a spa business from the enterprises stand point, as well as meeting the needs of clients in the form of expectations towards value proposition.

4.1. The Structure and Characteristics of a Business Model in Modern Spas

The exploration of the literature on the subject was conducted in the direction of the characteristics of the activities of spa enterprises. It includes social and economic factors (both historical and contemporary) that influence the current situation of the sector. The analysis of literature has also made it possible to identify historical changes in Polish spas and to cite selected concepts for the development of health resort areas.

The literature research undertaken allowed us to point out the key economic and social transformations (including cultural) affecting the current situation of the spa enterprises. It is possible to see three factors of influence. The transformation of health resort enterprises is conditioned by the market, product and ownership changes. They take:

- market character (through the marketization of spa services and the change of the existing therapeutic form of activity into tourist and healing activity, methods of financing, and scope of services for spa guests),
- product character (e.g., due to the fashion for a healthy lifestyle and the transformation of a traditional spa product, which allowed us to offer a mixed form of a spa product and openness to tourists), and
- ownership character (e.g., through privatization of state-owned spa enterprises, which changed the social perspective of conducting spa business into a perspective focused primarily on the economic result).

The in-depth interviews revealed that the actual knowledge of business models among managers of the studied companies is negligible and fragmentary, as it usually refers to their abstract understanding, but without text or graphic representation of the related architecture structures of the model or the proposed services. Only 5 managers among 17 surveyed spa establishments declared knowledge and use of the business model in running a spa activity. In every third establishment (29.4%), there were studies concerning particular elements of the business activity, i.e., key activities, market segments, communication channels, and customer relations. None of the studied enterprises showed a compact characterization of the components of the company's business model or a formalized attempt to integrate all components of the business model based on the business model concepts known in the literature. The acquired information on the knowledge and applicability of business models in spa enterprises allowed us to confirm that the spa enterprises in Poland use the business model very rarely and only to the extent limited to certain elements of their activity, and not always with the awareness of the wide range of possibilities of its application. The use of the business model in the largest Polish spa companies is incidental and limited by the scope of selected elements of the business. In the vast majority of the studied enterprises, the issue of applying the business model in enterprise management was completely unknown.

The conducted empirical (qualitative) studies revealed that the activity of modern spa enterprises is focused primarily on achieving economic effects by increasing profit, the source of which is an increase of commercial stays in the total number of spa stays, and only then it is focused on the implementation of health functions within the health care system. This also allowed us to identify three key values determining the essence of the spa business. These were: the value for the spa patient, the value intercepted by the enterprise, and the social value, showing the importance of a health resort activity in the fulfillment of the health function of society.

The results of the research on the components of the business model are presented in Table 1, while below each of the elements of the business model obtained are discussed separately.

Table 1. The structure of the business model of a health resort enterprise.

THE MODERN STRUCTURE OF THE BUSINESS MODEL OF A HEALTH RESORT ENTERPRISE	
Key partners	Key activities
<ul style="list-style-type: none"> - national insurers - travel agencies - spa commune - suppliers of raw materials - outsourcing of gastronomy, treatments (swimming pool), entertainment (advertisement) - cooperation between competitors - intrasectoral cooperation (mobile treatments) - development of a network model for cooperation with direct and indirect competitors 	<ul style="list-style-type: none"> - health resort treatment (diagnostics, programme, treatment, education, health effect) - spa&wellness and sport services - accommodation and catering services - tourist services (trips, tourist information) - optimization of activities and programming of treatments - additional services (cosmetic, sports, special) - transport services
	Value proposition
	<p>The core of the spa product:</p> <ul style="list-style-type: none"> - maintenance/improvement of health with natural therapeutic raw materials - recreation in a place with a healing climate - achieving the effect of the treatment (relaxation, beauty, improved beauty, weight loss, improvement of fitness and sports results) - cognitive, cultural and religious impressions obtained through various forms of tourism
	Channels
	<ul style="list-style-type: none"> - Spa patients - communication to maintain the relationship - outpatient clinics and special clinics - media (TV, RTV, local press) - leaflets, brochures - Internet, websites, social media - promotional programmes illustrating the effects of the treatment - travel agencies, tour operators
	Customer segments
	<p>Consumers:</p> <ul style="list-style-type: none"> - referred, without a referral (old division) - decisive, not decisive - returning, not returning - wealthy, poor - commercial/contractual - treatment, prevention, beauty, sport, relaxation - Internet, traditional channels - spa patients, tourists, mixed - Institutions: - establishments requiring frequent regeneration of employees - sports clubs and associations - therapeutic and support groups - nursing homes for the elderly
Cost structure	Revenue streams
<ul style="list-style-type: none"> - hotel and catering costs - costs of treatments and clinics - costs of maintenance of natural medicine infrastructure - costs of natural resources - costs of media consumption - costs of animation, entertainment, education - costs of medical care - transport costs - administration costs 	<p>Sources: contracts with insurers, individual and group patients, entrepreneurs, sports organizations.</p> <p>Values:</p> <ul style="list-style-type: none"> - spa treatment and its programme (treatments, diagnostics and medical care) and separation from harmful influence of civilization - satisfaction with accommodation, food and information - quality of the spa and wellness offer as well as sport and recreation - availability of tourist attractions <p>Price mechanisms:</p> <ul style="list-style-type: none"> - for individual and group customers (catalog price, price depending on product characteristics, price depending on market segment, price depending on transaction volume) - for contractual customers (negotiations, management of resources, price depending on the volume of transactions)

Source: Own study.

According to the results of the research, **the key partners** of spa enterprises are entities with which cooperation provides the facility with offers of values to be intercepted, i.e., state health and social insurance companies, as they enable the spa enterprises to achieve the revenues from the execution of contracts. The second category is travel agencies, which allow patients who finance their own stay to get to know the offers of the facility. Other partners are the health resort communes, represented by the local government administrating the commune, as well as suppliers of natural resources, competitors with whom the facilities cooperate on a cooperation basis, and outsourcing companies.

An interesting feature of this element of the model is the noticeable need for cooperation with competitors from the same region, e.g., in order to reduce the costs of promoting the spa features of the region. Joint therapeutic programs based on intrasectoral cooperation are also important. It is, at the same time, an innovation that meets the needs of the spa patients who prefer to change the place of treatment within the same stimulus effect. An important element of this component is also the possibility of building cooperation networks between the spa competitors (both direct and indirect) within the scope of complementary and substitutable products.

Key activities directly related to the spa activity include accommodation services, health resort treatment services (natural therapies), as well as catering services and treatment programming, i.e., the establishment of a treatment plan. An important role is also played by such activities as assistance of a dietitian or psychologist, health resort clinic services, and health education classes.

The key activities should be complemented by services extending the spa treatment, such as tourist services and animation of leisure time. It is necessary to introduce methods to optimize accommodation (reducing hotel costs) and the implementation of therapeutic treatments (which should improve the consumer satisfaction). It is also necessary to extend the spa offer with spa & wellness services, which so far have been provided by local entrepreneurs on a rather small scale.

An important activity should also be monitoring the load of the spa (spa park) with the intensity of tourist traffic and responding to exceeding the established limits. The city authorities may limit the possibility of increasing the number of beds in sanatoria and spa hotels. It is also necessary to monitor the drainage of the spa water deposits.

In the scope of **key resources**, the necessity for continuous education of the treatment personnel and creation of databases of existing and potential customers, which are worth reaching with the offer or recall the emotions that accompanied them during their previous stay, was noticed. According to the conducted research, the most valuable resources at the disposal of the spa facilities are the medical infrastructure and employees, as well as intellectual resources (conducted therapies). Elements of accommodation and catering facilities are also important resources. In the facilities where the activity was based on obtaining medicinal raw materials (mineral waters, salt water, salt, thermal waters, and therapeutic mud), raw materials were also a significant resource.

The spa managers declare that building positive **relations with customers** is based on activities focused on new and existing customers and on running loyalty programs. Currently, the development of relations with new customers is mainly performed through Internet tools, i.e., social networking sites and the so-called "open door", medical conferences, and direct offers addressed to organizations that may be interested in the facility's offer. Similarly, in the case of existing patients visiting the facility, the encouragement to develop a lasting relationship is usually an offer of cheaper stay (loyalty card, price discounts).

The method of establishing and developing customer relations depends on the segment of concerned customers. The segments of individual and business customers are the target groups in terms of building positive relations, because the actions taken towards them are intended to result in the return of the patient to the facility or to promote good reputation for the services provided there through word-of-mouth marketing. Contract patients do not choose the place of treatment themselves, which means that the relationship with them is not built or can be described as very limited. This is due to the lack of decision making by the patient about the place of treatment, because even if they chose a specific health resort, they cannot choose a spa enterprise in which they would like to stay. This seems

to be a mistake, because the patient's willingness to return is not taken into account, even for a shorter period of time within the guest's own resources.

Building a lasting relationship with patients requires a change in the attitude of the spa's employees towards the persons undergoing the treatment. So far, the spa patients have been treated as kinds of medical patients, which raises a lot of controversies, especially when they come to the spa not only for health purposes. The attitude of the personnel should be oriented towards hospitality, and thus towards treating patients as guests (welcome and expected) and offering them a friendly atmosphere. It is also a solution, the effect of which may have an impact on the profitability of a spa facility.

An advantage of building relations can be the introduction of transport convenience "from door to door", i.e., offering the possibility of comfortable transport of the patient from the house door to the sanatorium door and return transport, or at least transport from and to the places of access to the means of transport. The necessity of this innovation is seen in the reduction of stress factors among spa patients, and at the same time, it increases the satisfaction of the whole treatment at low costs to themselves.

Significant changes also occur in the case of the served **customers' segment**. The managers of health resorts usually point to the segment of institutional (contractual) customers, the segment of individual (commercial) customers, and the segment of business customers. Some segments of customers already served will require additional benefits in order to bring the spa offer closer to a wider audience. These will be, for example, care services for underage children, so that their mothers can participate in the spa treatment without interruption.

It is possible to separate other sectors of spa customers. These may be tourists for whom the spa's activity has only cognitive and recreational, but not health significance. There is also growing importance of customers using SPA services as well as organized, employee and special groups with different service profiles. Re-segmentation of the market of spa service recipients requires rethinking a number of criteria that may have an important role in identifying key segments in the individual approach of spa facilities. An important issue is not only the method of financing the patient's stay, but also the awareness of the choice of place and time of stay in the spa, as well as the duration of the treatment. An important factor will also be the purpose of arrival, as well as the practice of returning to the same place or experience in spa treatments. The need for segmentation will also result from changes in the types of relationship between the spa enterprise and the spa patient. A modern health resort businesses model should be targeted towards the market dependency of B2C (Business-to-Customer) type, creating especially value for the customer, instead of the currently used approach of B2B (Business-to-Business) or B2A (Business-to-Administration) type relating to direct payers (insurers).

Nowadays, **communication channels** with a potential patient are mainly based on websites, advertising banners and leaflets, as well as having a presence on social media. Another channel used by managers is cooperation with travel agencies, which allows for communication especially with individuals and business patients. Channels of communication with the customer should give special consideration to the progress of electronic communication, regardless of the age group of the recipients. Nowadays, people over 60 very often skillfully use both social media and electronic communication tools. An important structural change is the increasingly common acquisition of treatments by travel agencies. However, it is important to standardize this type of channel in order to make the medical side of the treatment more precise. In many cases, it is also necessary to re-educate general practitioners to offer spa treatments in direct contact with the patient after the diagnosis.

Revenue streams and cost structure contain similar items, although they do not always have the same significance in terms of their impact on the health resort enterprise. The managers emphasize that the most expensive activities are related to accommodation in a sanatorium and a health resort hospital, implementation of a health resort treatment, and also to catering. The same result is observed in the case of revenue hierarchy. A different significance is attached to the activity of a health resort clinic, which generates higher costs than revenues. The key revenues of health resorts are primarily

generated by the performance of contracts concluded with insurers (which includes: National Health Fund, The Social Insurance Institution, The Agricultural Social Insurance Fund, and the National Disabled Persons' Rehabilitation Fund), but also from commercial activities targeted at individual and group patients, entrepreneurs, and sports organizations.

The component of the model that has undergone the greatest changes is the **proposal of values** that the spa enterprise offers to its customers. From the spas perspective, the value position consists of the core element, which is health treatment that uses local natural healing raw materials, fulfilled by the healing properties of the local microclimate, accommodation and medical infrastructure. Nevertheless, to fully understand the value proposed to patients, their perspective has to be included in the business model. To determine this component of the business model, the results of quantitative research were used, which are presented in the next subsection.

The in-depth interviews also revealed the most frequently used business strategy in spa enterprises. The possibility of servicing tourists in the spa treatment facilities allowed us to adopt double standards for the guests. This result has two reasons:

- the profitability of commercial guests' stays (individual and business), which is much higher than that of contractual guests;
- the marginal impact of the contractual guest on the conditions of stay and its settlement (the direct payer is the insurer and not the direct beneficiary of the treatment).

As a result, the offer addressed to individual and business customers has not only a higher standard with higher prices of services, but also higher profitability for the facility. Therefore, managers try to optimize the structure of the stays. They reduce the contractual possibilities with the insurer to the level of the expected filling of the remaining sanatorium places with individual guests, who provide them with higher profits from the activity. These proportions may vary over the year depending on the seasonal fluctuation of commercial stays.

The observations allowed us to notice an increase in the popularity of treatment combined with recreation and an increase in the number of elderly people with a simultaneous downward trend in the level of financing of health resort treatment from the National Health Fund sources. These phenomena make it more and more often necessary to turn to self-financing spa patients or to companies sending their employees to regenerate their mental and physical strength. From this perspective, this will have an impact on the new price mechanisms that the spa enterprises will have to develop in order to increase their effectiveness. The pricing mechanisms applied in health resorts already provide for a different approach to individual and group customers, for whom the catalog price is adopted or dependent on the features of the offer (depending on the product properties, market segment, transaction volume). For contract customers, the price mechanism depends on the terms of the negotiations and, usually, the size of the transaction is also relevant.

4.2. The Needs and Expectations Towards Value Proposition of Spa Visitors and Potential Clients

As mentioned before, the perspective of spa clients and potential spa clients shapes the value proposal made by an enterprise. They verify if what is presented as a value really serves this purpose, or if they discern it in some other elements of the offer. In order to properly meet the expectations and needs of spa visitors, it is needed to identify and include them into the value proposition of a model; therefore, the second part of the study was designed to reach this purpose.

In the sample of 753 subjects, 73.4% were women and 26.6% were men; this reflects the structure of patients observed in many other studies carried out in spas [53]. A similar structure is observed in individual subgroups of the examined tourists TS (77.3% women and 22.7% men) and potential tourists PT (67.5% women and 32.5% men). Among those surveyed, only 1.4% of them visited foreign spas, and at the same time, 1.6% of respondents lived outside of Poland.

People visiting the spas were mostly under the care of a spa doctor (79%). Only every fifth respondent stayed in the spa without medical care (21%); 61.2% of spa guests came there with the

insurer's referral, which means that these people had no direct influence on the choice of spa in which they will take the treatment. Every third respondent had an influence on such a choice (34.8%), and 4.0% of respondents admitted that the choice was made by someone else (usually a family member).

Visitors to spas usually came from large cities with populations (33.7%) over 100,000, or medium-sized cities with 20–100 thousand residents (31.9%). Only every sixth respondent (18.9%) came from the village. The presented general structure of origin of respondents is not significantly different in groups ($p_{ST \text{ vs. } PT} > 0.05$). Almost the same number (2.4%) came to spas only for 1 day.

At the beginning of the research, the respondents were asked about attributes of a spa stay that make it a successful visit. Multiple options were available, as well as the possibility to add own remarks. The results are shown in Table 2.

Table 2. Attributes that make for a successful spa stay.

Attributes That Make for a Successful a Spa Stay	Point Out Percentage
The quality of medical care and treatment	65.5%
The quality of accommodation	63.3%
A wide range of treatment	40.8%
The quality of gastronomy	26.8%
Beautiful views	24.1%
Peace and quiet	17.3%
A wide range of tourist attractions available	12.9%
Cleanness of the park and its charm	7.1%
The costs of treatments	6.8%
The possibility to socialize with other visitors	6.6%
A wide range of local culture attractions	4.4%
Transportation (accessibility, parking lot)	4.1%
The accommodation cost	3.3%
Cleanness of the streets	2.7%
Entertainment (cinema, dancing)	2.5%
Safety of the location (low crime rate)	1.1%
Mass events, concerts, carnivals	0.0%
Other	0.8%

Source: own research.

One can notice that the quality of medical care and treatment (65.5%) and the quality of accommodation (63.3) have been the most frequently selected answers, being the only ones pointed out by more than 60% of participants. The diversity in treatments offered was the third (40.8%) most popular answer, outclassing attributes such as entertainment options (2.5%) or access to cultural tourism attractions (4.4%). It is interesting in juxtaposition with answers that regarded value propositions that would enrich a spa stay. Those answers are presented in Table 3, showing overall scores, as well as percentages in groups of spa visitors (TS) and potential clients (PT).

The expectations towards value proposition vary significantly between spa patients and potential tourists in most cases. Both groups are consistent in expecting improvements of accommodation standards, making it the most frequently named improvement overall (51%). However, awaiting better quality of medical care occurs in the potential visitors group more frequently (9% difference) than in the actual patients group. Another major difference can be found in expectations towards visitor treatment. People who have not been to a spa before expect the facilities to improve in that aspect (41.9%) significantly ($p < 0.05$) more frequently than actual patients (27.8%). This might indicate that a large portion of respondents who have never been to a spa perceive those places as uncomfortable, with insufficient quality in service, not offering enough entertainment and not being addressed to younger people. Those two last observations come from relatively big differences in answers given in those two groups to the questions regarding the development of cultural activities (over 20% difference) and offering child care for the time of treatment (over 16% difference).

Quantitative research has also shown what the most important values for spa patients are. The results are shown in Table 4.

Table 3. Value propositions that would enrich spa stays.

Value Proposition That Enriches a Spa Stay	All Research Participants	Participants Who Attend to Spas (TS)	Participants Who Do Not Attend to Spas (PT)
Increasing the standards of accommodation and sustenance	51.0%	51.2%	50.5%
Increasing the standard of medical care (better medical, nurturing and rehabilitation care)	42.9%	40.0%	49.0% *
Increasing the standard of spa treatment (other treatments)	42.8%	42.9%	42.4%
Treating the visitor like a special “guest” and not like a “patient”	32.4%	27.8%	41.9% *
Introducing only single and marital rooms into the offer	25.3%	22.4%	31.3% *
Developing cultural activities (cinema, library, concerts)	24.7%	18.0%	38.4% **
Abolishing extra fees for premature treatment cancelation caused by feeling unwell	18.1%	13.4%	27.8%
Introducing a transport service for the spa visitors from home to spa and back (door to door)	15.0%	14.1%	16.7%
Introducing psychological care and free time animators’ service in spas	12.2%	9.0%	18.7%
Organising child care for small children so that a mother can take part in a treatment	12.0%	6.6%	23.2%
Introducing classes and lectures for spa visitors (senior universities or meetings with interesting personalities)	9.7%	6.8%	15.7%
Introducing spiritual care during spa stay (retreats, pilgrimage)	2.8%	1.2%	6.1%

Source: Own study. Explanations: level of significance of differences *: $p < 0.05$, **: $p < 0.01$.

Table 4. The most important values for a visitor during a spa stay.

The Most Important Values for Visitor During a Spa Stay	Answer Percentage
Sustaining or improving health conditions by applying natural healing resources (raw materials)	66.0%
Resting in a place where the climate has therapeutic properties	38.7%
Achieving relaxing effects of treatment (better state of being, rest, beauty, weight loss, condition and sport’s performance improvement)	29.8%
Health, physical and emotional (mental/spiritual) safety provided by medical care.	17.0%
The opportunity to socialise and get entertained (chats, games, trips)	15.9%
The opportunity to participate in various forms of tourism	8.6%
Cultural and spiritual experiences, gained through attending concerts and religious ceremonies	2.8%
Other	0.0%

Source: own research.

It is worth noticing that the main value for health resort customers is the effects of healing and recreation treatment. Those are the values that are obtained from natural resources, available only at the sight of a spa. Moreover, those values allow to diversify the spa enterprises’ product from other wellness offers. The beneficial effects of relaxation services such as stress relief, sense of beauty, beauty improvement, weight loss, fitness, and sports performance are also important, but not unique for spas. A significant value is also the tourist’s integration with other tourists (co-patients) with similar health, life, and social situations, or showing similar interests and ways of spending free time. An important value is the ability to break away from the everyday life.

5. Discussion

Activities in the conducted research related to the process of creating a business model dedicated to spa enterprises involved the analysis of business models, both in terms of reviewing definitions and typology, as well as the concept of creating and transforming business models. The structures of business models proposed in literature and their implementation in descriptive and analytical dimensions were also examined. Empirical research consisted of conducting in-depth interviews among managers of the largest spa enterprises in Poland. The actual knowledge of business models among managers of the studied companies is negligible and fragmentary, as it usually refers to their

abstract understanding, but without text or graphic representation of the related architecture structures of the model or the proposed services. Only 5 managers among 17 surveyed spa establishments declared knowledge and use of the business model in running a spa activity. The spa enterprises in Poland use the business model very rarely and only to the extent limited to certain elements of their activity, and not always with the awareness of the wide range of possibilities of its application.

In the case of one of the elements in the business model—the proposal of value for the customer—it was necessary to perform additional research of a quantitative nature. Their aim was to learn about the expectations of spa patients and potential patients and to create a value proposition that would be attractive to customers and enable the identification of additional customer segments.

Quantitative research conducted on a representative sample of the respondents also revealed the needs of spa patients and potential patients towards the spa facilities. It is worth mentioning that the key values for the customer of a spa enterprise are the provided healing, leisure and recreational services. In this respect, health services, which are at the same time consistent with the objectives of the majority of spa stays undertaken by the patients, are the leading ones. Moreover, based on the quantitative data gained, one can assume that there is a gap in expectations of current spa visitors and potential clients. In order to attract them, newly proposed values in a spa business model could address those needs, offering not only health improvements, but entertainment and activities that can be enjoyed by age group. This, however, does not come without risks. Those highly expected by potential clients values diverge from the needs of current customers, and when implemented, could discourage them from further use. The only common thread for both groups was the core of spa stays, that is, using natural resources (raw materials and climate) to improve health conditions.

In the course of literature and empirical research, revealing significant differences between managers in the approach to the objectives of conducting spa business, as well as the way of formulating the health resort offer and strategy of conducting business in the financial sphere, it was noted that an individual approach to business modeling in health resort enterprises is necessary. Therefore, the presented initial model, concerning the presentation of the spa enterprise in its generalized form, requires additional presentation in the form of several key variants (Figure 2).

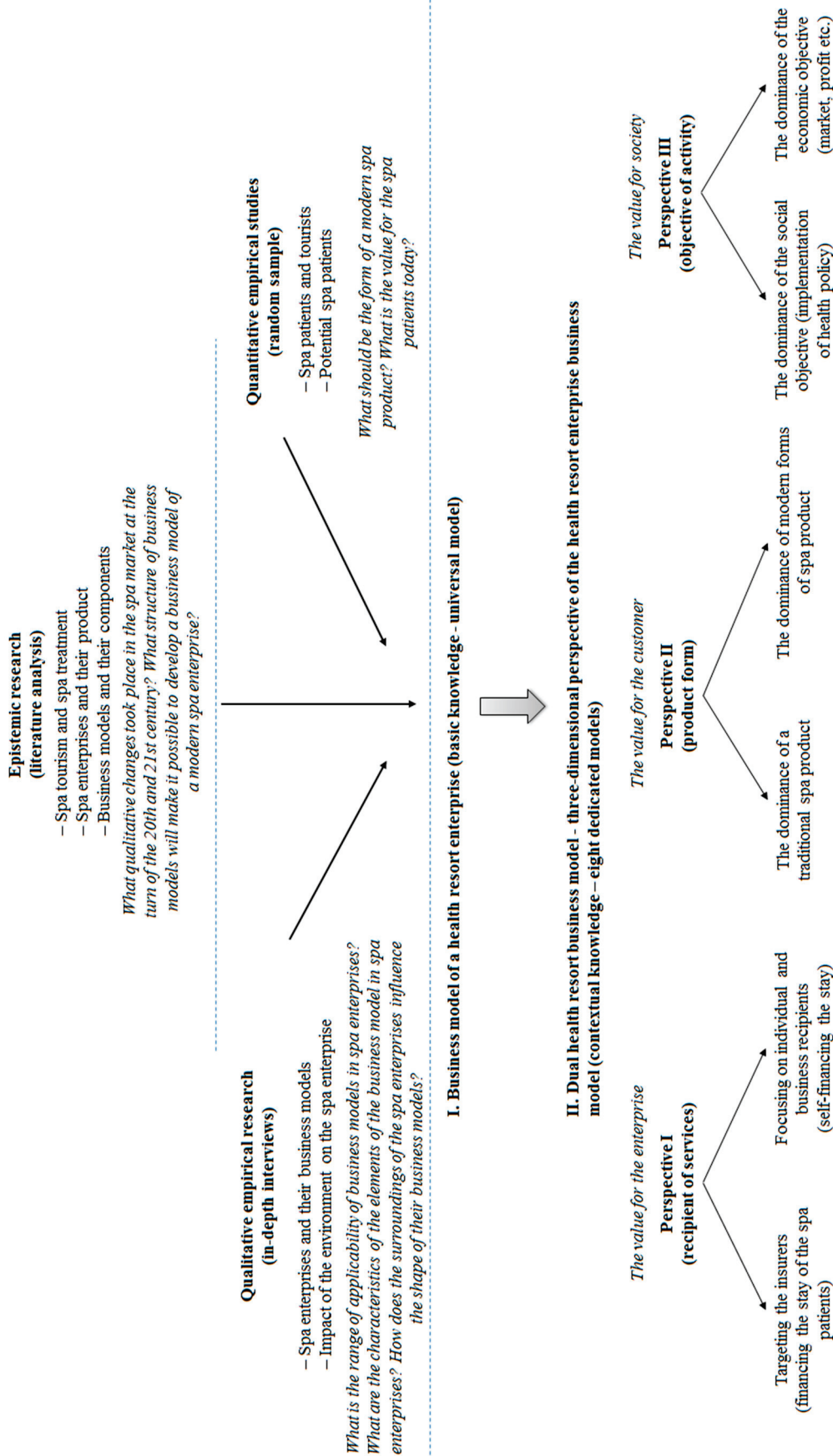


Figure 2. Implementation of the research process towards the development of a business model dedicated to health resort enterprises. Source: Own study.

In the case of modern health resort activities, it seems justified to use two main criteria of division of the business strategy and business model, and thus two perspectives of conducting activities, i.e.:

- (a) Perspective I is oriented towards the creation of value for the enterprise, which uses the criterion of model division based on the type of recipient of services, with the two dominating groups of recipients:
 - insurers (financing the stay of spa patients from insurance funds),
 - individual and business recipients (self-financing the stay).
- (b) Perspective II focuses on customer value creation, which uses the criterion of model division based on the type of health resort product in which dominates:
 - traditional form of a spa product (spa treatment),
 - a modern form of a spa product (mixed).

The dichotomous division of directions of activities in each of the criteria mentioned above indicates the dual nature of the business model. From the first perspective, the dual model assumes the adoption of a different cost structure in relation to the presented key customer groups.

In the case of contracts with insurers, it is assumed that costs will be minimized; the value will be built for the customer with low prices and mass availability of offered products and services (cost-driven). Whereas for other customers (individual and business), it suggests using a highly personalized offer of the spa, at the same time deriving from it a high income (value-driven).

From the second perspective, business models should clearly define a proposal of value for the customer, depending on whether they want to implement a traditional healing offer or a spa product is to be a mixed product, covering both traditional natural healing services and non-healing services (relaxation, recreation, cosmetic, sports).

However, it should be noted that the presented structure of the division of options for the necessary scenarios is still incomplete, as it lacks the purpose of tourist and healing activities. Health resorts, although they generally pursue both economic and social objectives, differ from one another in terms of the predominant objective of their business activity. Some focus their activities almost exclusively on achieving profit or acquiring new customers, while others try to achieve mainly social objectives, being satisfied with the income from the execution of contracts with the insurers. Therefore, it is proposed to modify the approach based on two criteria of division, introducing a third dimension of spa activities involving the domination of a specific objective.

Perspective III is therefore aimed at creating value for society, which uses the criterion of model division based on the dominant purpose of tourist and healing activity in the health resort, which may be first of all:

- implementation of the social objective (implementation of the health policy while limiting the load of the area with tourist traffic and eliminating overtourism),
- achieving primarily an economic objective (market, profit or other).

Perspective III is not exclusive, as is the case for perspectives I and II, as it can be applied simultaneously with the other two. Therefore, it is possible to integrate two perspectives at the same time (III and I and III and II). The existence of perspective III introduces changes in business models of the two previously discussed perspectives, because in some cases, e.g., domination of social objectives will require finding additional revenue streams, especially when the activity will be directed to the mixed form of a health resort product.

In the context of these three perspectives, the characteristics of the eight business model options have been summarized, depending on the used combination of perspectives and their variants. Their general perception is facilitated by the three-dimensional perspective of business models dedicated to health resort enterprises (Figure 3).

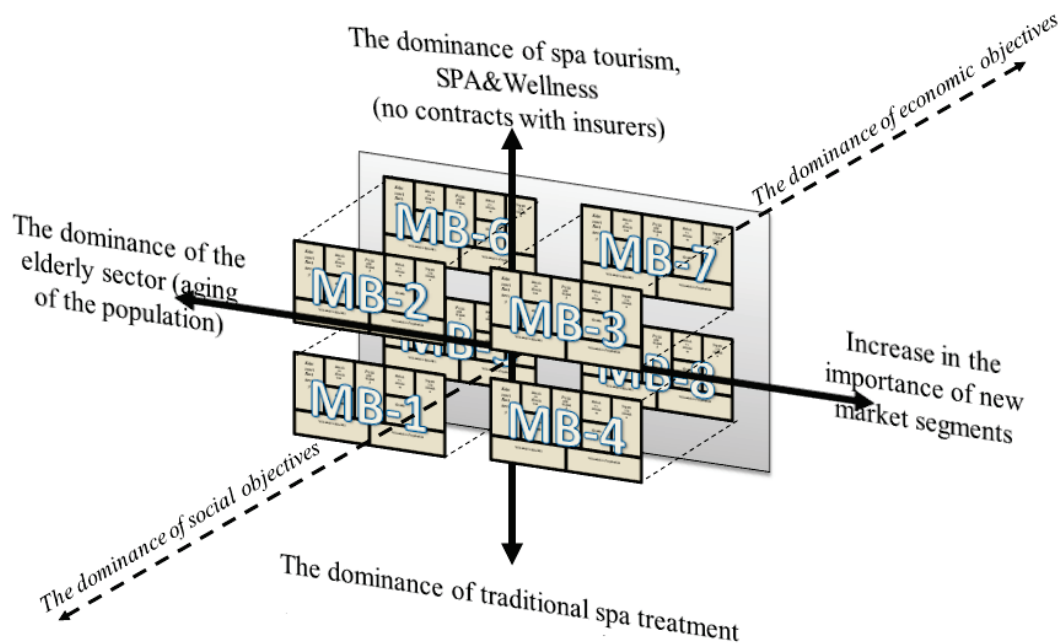


Figure 3. Three-dimensional scheme of a dual business model dedicated to health resort enterprises.
Source: Own study.

6. Conclusion

In the summary of variants of the model dedicated to health resort enterprises presented in the paper, the possibility of using not only one variant at the same time, but at least two variants, was noticed. The criteria for their selection have also been defined. The observation of the studied spa facilities indicates that in general it will be determined by the desire to serve both extreme market segments or to achieve both objectives of tourist and healing activities. An important premise may also be a specific feature of a particular establishment, emphasizing its uniqueness, e.g., in terms of the uniqueness of the presence of raw materials at the disposal of the establishment (underground salt pits, thermal springs).

It should be noted that there are two limitations to the research. The first concerns the fact that research concerns the area of Polish health resorts and may not be representative of all health resorts in the world. It is therefore worth comparing research in other countries. The second limitation is the method of reaching respondents (spa tourists). It was assumed that in this group there is access to Internet communication, but not every spa tourist uses the Internet.

In the face of the phenomenon of overtourism, it is particularly important to choose the form of a model aimed at achieving both financial and social goals. Implementation of financial goals can only lead to a spa for excessive exploitation [11,54]. However, focusing solely on the implementation of social objectives is burdened with the risk of excessive tourist traffic. The business model of a spa company should take into account the sustainable development of business in the field of choosing the objectives of a spa activity. In the conducted research, the need to include in business models activities that protect spa areas against excessive pressure on tourism and the exploitation of natural resources was noticed. Unfortunately, it is currently only a voluntary gesture of only those managers who understand that excessive tourist load may cause a decline in the spa function.

Because this was the first attempt to specify business models and value proposals in spa tours, further research is needed and it could build upon findings from this paper. The presented case of Polish spas could be compared to business models used in other European countries or even on the global scale, on one hand in order to pick out the differences, but on the other hand to attempt modeling a generic business model of spa enterprises. It might also be beneficial to classify values proposed by other spas. Future studies could also be helpful to determine if introducing features that

are perceived as expected value by potential customers are also welcome, neutral or unacceptable for current spa patients. Furthermore, the developed methodology and tools used during research can be used to study business models in other kinds of touristic activities, such as heritage tourism, hospitality industry, or even partially in other businesses based on supplying services.

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