THE IMPACT OF THE NUMBER OF VISITS AND THE LEVEL OF SATISFACTION ON THE INTENTION TO RECOMMEND A TOURIST DESTINATION. THE EXAMPLE OF GDAŃSK

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Abstract
The article focuses on examining the intention to recommend Gdańsk as a tourist destination to family and friends. The study was based on the results of a survey (Bęben et al., 2018) conducted among 2,508 respondents visiting Gdańsk in 2017. The method of cluster analysis was applied, thanks to which it was possible to divide the respondents into three clusters. Then, logistic regression was used to analyze the variables influencing the intention to recommend a destination. The study shows that for the entire sample the level of satisfaction from a visit to Gdańsk remains the factor supporting the decision to recommend a destination. Importantly, the total number of visits to Gdańsk is negatively correlated with the intention to recommend the destination, which proves only partial loyalty.

Key words
Gdańsk, satisfaction, tourism, cluster analysis, logistic regression.

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1. Introduction

The cognitive aim of the work is to present the relationship between satisfaction associated with visiting a tourist destination and the intention to recommend this destination to friends and family. The study can also be applied to the identification of the factors determining satisfaction with a tourist trip and its role in facilitating the tourism policy. The analysis clearly suggests that introduction of hospitality management and understanding of visitors’ preferences becomes necessary in order to increase the level of satisfaction and to build a brand.

The analysis was based on information from the 2017 annual report on tourism in Gdańsk. That year was chosen due to the availability of the report as a publicly available document presenting the latest results of the conducted survey. At the same time, the choice of Gdańsk as the analyzed space was dictated by its role as a tourist destination in Pomerania. Apart from the values of recreational tourism typical of the Polish coast, there are numerous examples of cultural tourism values in Gdańsk, whose perception
does not depend on the tourist season. On the one hand, this results in an obvious dispersion of the volume of tourist traffic throughout the year; on the other hand, the diversity of values contributes to an increase in the volume of tourist traffic on an annual basis.

The socio-demographic nature of the surveyed respondents is not without significance for the segmentation of tourist values. On the basis of such elements as, for example, gender or education, differences in the perception of the tourism space become discernible. This knowledge allows adopting certain criteria in the management of space for tourism purposes.

2. Literature review

In many countries, tourism is considered to be a tool in attracting investments and raising the standard of living of the inhabitants. These benefits are largely noticeable in areas with large tourist centers (McKercher et al., 2015).

The main goal of the tourism industry is to profit from the services offered to tourists. These include, among others, services related to transport to a tourist destination (Khadaroo, Seetanah, 2008) and in the destination (Albalate, Bel, 2010), accommodation and information (Chen, Soo, 2007), catering (Galvez et al., 2017), culture and entertainment (De Lucia et al., 2019) and commerce (Janke, Taraszkiewicz, 2018).

Also in the case of large cities, where the tourism function does not play a leading role and is only complementary to administrative, cultural, scientific and economic functions, it has a significant impact on shaping the management policy of recreational space (Matoga, Pawłowska, 2018).

Different opportunities for the implementation of the tourist function are available in the areas located in the coastal zone (Andriotis, 2006). Taking into account the geographical conditions of the Polish coast, in particular the climatic conditions, it should be stated that tourism in the coastal area is of a seasonal character (Radlińska, 2017).

Due to its functions as a cultural, scientific and economic center as well as a transport hub, being an important center of maritime economy and fulfilling an administrative function, Gdańsk is less susceptible to the seasonality of the tourist traffic. It is difficult to distinguish in the statistics typical tourist arrivals, related to leisure tourism, from arrivals of a learning, exploratory character which depend to a large extent on cyclical mass events (e.g. St. Dominik’s Fair) or incidental ones (e.g. sports competitions and music concerts) or non-tourist arrivals (Michalski, 2020). Another problem is the distinction between typical tourist arrivals, for which the place of the survey is the ultimate tourist destination, and those for whom it is only a certain stage in greater tourism activity (Wendt, Wiskulski, 2018).

The lack of seasonality characteristic of typical tourist destinations only slightly eliminates the negative effects of tourism on the supply side, and in some cases causes their intensification. Higher costs of running a business which are caused by a need to maintain a certain level of reserves (Baumann et al., 2017; Guidetti et al., 2020), a number of employee (Wei et al., 2013) and the inability to fully use tourist attractions off the main season (Figini, Vici, 2012) are offset only to a small extent by mass events occurring out of season. The historical character of the city and the elements of development that attract tourists outside the main tourist season also have an influence (Figini, Vici, 2012). By contrast, the negative effects of seasonality intensify in the case of too many tourists during periods of increased traffic, which may lead to overloading the area many times a year and creating cyclical threats to the local ecosystem (Bazzanella et al., 2019).

In order to optimize the level of satisfaction with the provided services, Sh.-H. Tsaur and Ch.-Ch. Huang’s study (2018) suggested that hospitality management and the creation of marketing strategies for businesses and local authorities should become necessary. It is essential to find out tourists’ preferences, with particular emphasis on the assessment of the possibility of traveling around the city by car (Van Exel, Rietveld, 2009) and public transport (Le-Klahn et al., 2015), the level of safety (Bianchi, 2016), the general atmosphere of the city (Isa et al., 2020), friendliness of the inhabitants (Moal-Ulvoas, 2017), the cultural offer (De Frantz, 2018), the entertainment offer (Petrick et al., 2001), the sports and leisure offer (Ratkowski, Rakowska, 2018), cleanliness of the city (Baloglu, McCleary, 1999), accommodation facilities (An et al., 2019), catering facilities (Adam et al., 2015), shops and shopping malls (Janke, Taraszkiewicz, 2018), signage in the city (Varieiro et al., 2019) and guide services (Mak et al., 2011).

Learning about the assessment of individual elements will enable the construction of a model aimed at determining the level of satisfaction and correlating it with the intention to recommend a tourist destination (Chen, Chen, 2010; Patrick, Backman, 2002). Features describing a destination create a certain image of the place. These include beliefs, ideas and impressions of getting to know your destination. On the other hand, the degree of complexity of the described place depends on the elements that make
up the tourist product and its elements (Carvalho et al., 2015).

After taking into account the literature on the subject, the following hypotheses were adopted for testing:

- **H1**: Tourists with different socio-demographic profiles perceive the attributes of a place differently;
- **H2**: Satisfaction with the visit has a positive influence on the number of returns to the destination.

### 3. Study methods

The research method used in the article was based on the analysis of a survey conducted by a team of the Pomeranian Scientific Institute (Bęben et al., 2018). The survey involved 2,508 respondents who visited Gdańsk in 2017. In order to examine the probability of recommending a tourist destination to family and friends, the respondents’ contentment with the elements shaping the level of satisfaction with the destination and the total number of visits to Gdańsk were taken into account.

In order to analyze the data, the SPSS ver. 26 statistical software was used. The following methodology was applied in the study:

1. A non-hierarchical cluster analysis with the use of the k-means clustering algorithm based on Euclidean distance (cf. Chandan, Vinzamuri, 2014) was run for 14 items measuring the attributes of Gdańsk.
2. The respondents’ socio-demographic characteristics were compared with the groups obtained in the cluster analysis from the first step.
3. A logistic regression analysis was applied (cf. Hosmer et al., 2013) in order to analyze the variables influencing the intention to recommend Gdańsk to family and friends.

### 4. Results and discussion

#### 4.1. Tourists’ socio-demographic profile

The main characteristics of the respondents’ socio-demographic profile are as follows. The majority of the respondents were male (51.36%). The main group of respondents were people aged 25–34 (28.55%), 33.41% of the respondents had secondary education, and 46.21% higher education. The least numerous group were people with lower secondary education or less (4.51%). In terms of occupation, the most numerous group were persons in employment (68.14%), while the least numerous group were unemployed persons (0.4%). In terms of the financial situation, the greatest number of people declared that they were doing rather well (54.59%). In turn, only 0.2% of respondents believed that they were doing very badly.

#### 4.2. Cluster differences

It is known that the level of satisfaction with a destination is influenced by the respondents’ socio-demographic characteristics. Bearing in mind the above, the method of cluster analysis was applied.

In order to minimize the variability of the feature within individual clusters and to maximize the inter-cluster variability, a non-hierarchical approach to grouping was used (k-means). This approach was applied with the assumption of three numbers of clusters (n = 3, 4, 5). The obtained results were compared with one another, and a solution based on the three clusters was selected for further analysis. It was a consequence of the biggest differences between the clusters. The comparison of intra-group variability was based on the average distance of each respondent from the cluster center of gravity (Table 1).

| Cluster | 1   | 2   | 3   |
|---------|-----|-----|-----|
| 1       | 3.235| 1.677| |
| 2       | 3.235|      | 1.965|
| 3       | 1.677| 1.965|   |

Source: Own calculations based on: Bęben et al., 2018.

The analysis between individual clusters was conducted on the basis of the average result for 14 items measuring the tourist attributes of Gdańsk (Table 2). The obtained results indicate that the share of all the included components was statistically significant for the definition of clusters (p value < 0.01). The elements that differentiated the clusters to the greatest extent were: “shopping malls and shops” and “signage in the city”. On the other hand, such elements as “safety”, “cultural offer” and “entertainment offer” had the least influence on variability.

The estimated clusters can be characterized as follows:

Cluster 1 – in this group, the lowest rated elements include “driving a car around the city” (3.89) and “cleanliness of the city” (3.94). The “general atmosphere of the city” (4.39), “friendliness of the inhabitants” (4.31) and “cultural offer” (4.31) were rated the highest. In terms of socio-demographic characteristics, it has the highest percentage of men. In this
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The highest share of people with secondary education was also recorded.

Cluster 2 – in this group, the lowest rated elements include "driving a car around the city" (3.41) and "cleanliness of the city" (4.01). The highest rated elements include the "general atmosphere of the city" (4.79) and "cultural offer" (4.54). The demographic profile of the respondents is characterized by the highest percentage of people with higher education and a breakdown by gender similar to the entire sample population.

Cluster 3 – in this group the lowest scores were given for "driving a car around the city" (3.32), "public transport" (3.76) and "shops and shopping malls" (3.76). On the other hand, the "general atmosphere of the city" (4.48) and "friendliness of the inhabitants" (4.18) were among the highest rated. This group is characterized by the highest percentage of women and the lowest percentage of people with lower secondary education or less.

Taking into account the adopted H1, which refers to the different perception of the attributes of a place depending on the socio-demographic profile, it should be stated that H1 has been positively verified.

4.3. Intention to recommend

Logistic regression analysis was used in the analysis of variables affecting the intention to recommend a visit to Gdańsk to family and friends. Following the literature review (Antón et al., 2014; Chen, Chen, 2010), the following variables were selected: the level of satisfaction and the total number of visits to Gdańsk. The average level of satisfaction with the fourteen attributes of a place was taken as the level of satisfaction. In order to determine the intention to recommend Gdańsk to family and friends, a 10-point scale was used (Table 3.).

| Tab. 3. Satisfaction, the number of visits to Gdańsk and the intention to recommend visits to Gdańsk to family and friends |
| --- |
| Total sample |
| Average scores |
| Satisfaction | 4.09 |
| Number of visits to Gdańsk | 3.30 |
| Intention to recommend to family and friends | 9.13 |

Source: Own calculations based on: Bęben et al., 2018.
likelihood method. Cox and Snell and Nagelkerke’s pseudo $R^2$ statistics and the -2 log likelihood were applied to measure the model fit. The results for the entire research sample are presented in Table 4.

Tab. 4. Correctness of the model fit to the data of the entire sample

|                | Total sample |
|----------------|--------------|
| Cox and Snell $R^2$ | 0.255        |
| Nagelkerke $R^2$  | 0.380        |
| -2 times log likehood | 763.566     |

Source: Own calculations based on Bęben et al., 2018.

Cox and Snell and Nagelkerke’s pseudo $R^2$ statistics are reasonable values amounting to 0.255 and 0.380. However, one must remember to interpret them with caution, as none of the statistics explains the variance in the same way as the $R^2$ coefficient in a linear regression model does.

The results of the analysis for the entire population of respondents are presented in Table 5. The parameter values indicate that satisfaction is an important element in motivating visitors to recommend Gdańsk to their family and friends. This variable has a significant impact on the intention to recommend at the confidence level of 95%.

Tab. 5. The relationship between the explanatory variables and the intention to recommend Gdańsk to family and friends

|                | Estimated parameters |
|----------------|----------------------|
| Constant       | -10.33*              |
| Satisfaction   | 2.603*               |
| Number of visits to Gdańsk | -0.15                |

*p <0.05.

Source: Own calculations based on Bęben et al., 2018.

Based on the conducted study, H2 can be accepted. This means that the intention to recommend Gdańsk to friends and family is positively correlated with the tourists’ satisfaction.

5. Conclusions

The main purpose of the article was to analyze the elements influencing the intention to recommend Gdańsk as a tourist destination to family and friends. Elements such as satisfaction with the visit and the total number of visits to Gdańsk were taken into account. Differences between socio-demographic groups in perceiving the elements shaping the level of satisfaction with the visit were also examined.

The method of cluster analysis was used in the study. On its basis, three clusters were estimated. In the first one, 1,166 respondents were classified. These were people who assessed the level of satisfaction with the visit to Gdańsk as average. In the second cluster there were people (494 respondents) who rated the attributes of Gdańsk the highest. On the other hand, in the third cluster (848 respondents), Gdańsk’s attributes were assessed the lowest. Despite the lack of homogeneity of ratings between individual clusters, it should be concluded that the level of satisfaction with the visit to Gdańsk was assessed as high (4.09).

In order to capture the variables that affect the probability of recommending Gdańsk to family and friends, a logistic regression analysis was carried out. The conducted analysis allows concluding that not all of the elements included in the study play a decisive role in the intention to recommend Gdańsk. It turned out that the level of satisfaction with the visit is the factor that determines selecting the destination again, but the total number of visits to Gdańsk is not.

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