THE IMPACT OF THE LOCATION ON THE PRICE OFFERED BY ACCOMMODATION ESTABLISHMENTS IN URBAN AREAS

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Abstract


The aim of this paper is to assess the relationship between the price of accommodation and the urban space and character of the place. The price and spatial connections (together with the quality of the provided services) become an important motive for clients when choosing a concrete accommodation establishment. As the competition is very difficult in the field of accommodation establishments and the supply multiply surpasses the demand, there is an intensive search for miscellaneous strategies of engaging in the competition. The built-up territory of the town České Budějovice was chosen as a model territory. The prices of the summer season 2012 have been entered into the analysis. The impact of the location was assessed on the level of the type of land-use. The distribution of the accommodation establishments in the studied is highly uneven, without any more significant tendency to the creation of the spatial clusters. It is fundamentally influenced especially by the distance of the historical center. A price map was formed identifying the zones with the above-average prices, as well as the zones with the highly below-average prices.

Keywords: accommodation establishment, pricing, location, distribution of accommodation

INTRODUCTION

In the relation to the accommodation, tourism serves as a source of demand for accommodation and catering services and other services related to those two mentioned (Gúčik and Patúš, 2005). It is also possible to find in some postulates such the characteristics that the sector of accommodation belongs to the sphere of the ensuring of tourism (Kašpar, 2011). Then, there are many relationships existing between tourism and accommodation (Palatková, 2006). However, those relationships are surveyed by a variety of different models that have some weaknesses, with regard to their complexity.

The accommodation establishments are buildings, premises or sites where accommodation is provided to the public (Stárek and Vaculka, 2008). Many authors (specifically Rothenberger, 2006; Stárek and Vaculka, 2008; Salerno, 2010) consider the accommodation establishments to be the basis of tourism infrastructure. An accommodation establishment could be classified into categories according to the type and classes. Those types and classes correspond with their equipment and the level of the services that are provided. This definition serves as a basis of many other authors, who are dealing with those problems (Indrová, 2004; Černý and Krupička, 2007; Smetana and Krátká, 2009; Křížek and Neufus,
the CzechTourism agency and other bodies such as the Regional Development of the Czech Republic, the Czech Statistical Office, the Ministry for Regional Development, and the accommodation services, such as the operation and survey of tourism and the accommodation services, such as the accommodation management of hotels and motels. Another important element of localization is the benefit from accumulation of economic activities (e.g. Head, Ries and Swenson, 1995; Johansson and Quigley, 2004). That accumulation predestines the accommodation establishments to create spatial clusters, among others (Porter, 2000). It is particularly a matter of hotels and hotel chains, to which the highest attention was paid to in the past. Thanks to that, several models of location of the hotels in the urban areas were identified (Bučková, 2001). However, even the studies of the location of accommodation establishments in the rural area bring interesting results (Navrátil et al., 2012).

The overwhelming majority of these models is focused on studies of spatial distribution of the accommodation establishments in the urban environment (e.g. Bégin, 2000; Bučková, 2001; Bučková, 2007; Aliagaoglu and Ugur, 2008; Chung and Kalnins, 2001; Kalnins and Chung, 2004; Shoval, 2006; Shoval and Cohen-Hattab, 2001; Shoval, McKercher and Birenboim, 2011; Urtsun and Gutiérrez, 2006). The accommodation establishments are then one of many activities creating the environment of a town. From the theoretical point of view, there is a large number of existing approaches to the study of the spatial layout of activities in urban areas (Pacione, 2001). These approaches could be classified into four basic groups – social-economical approach being based on the human ecology theories; neoclassical approach working on the assumption of the neoclassical economics theory; institutional approach coming from the Weberian Sociological Theory; and politico-economic approach issuing from the historical materialism (Sýkora, 1993). The first two above cited approaches are based on the fundamental assumption of an existing equilibrium among the biological, cultural and economic structure of the society. On the other hand, the naturalness of inexistence of the equilibrium is taken as basics of the other two above-mentioned approaches. The essence of the social-ecological approach consists in the idea of natural areas as a result of the segregation and concentration powers that are influenced by the processes of invasion and succession in a space. As for the development of a town, the determining element is the central business district (CBD), simply the place of an optimal accessibility and the highest spatial competition (Pacione, 2001). The CBD represents the basic element even in the neoclassical land-use theory, issuing from the mathematical modelling of potential prices of estate. These models are based on a different ability of particular activities to pay for a locational rent and simultaneously cover the losses caused by other activities.
The Impact of the Location on the Price Offered by Accommodation Establishments in Urban Areas

by location elsewhere then in CBD (Šýkora, 1993; Haggett, 2001). Next to these elements, the other basic element that should be taken in consideration in competition is the area of the land necessary for the respective activity. Thus, this element is kind of analogy of the yield per hectare, which influenced the agricultural location in the von Thünen’s model (Ivančík, 1987; McCann, 2007). The competing power of activities is then given by the amount of the locational rent for an area unit, the activities in the given distance from the CBD are able to expend for (= value of the bid-rent function in the given distance). The institutional approach represents a substantial theoretical extension of the social-ecological approach by the fact that neither households nor the firms make autonomous decisions, but their decision is making is affected by activity of a wide spectrum of both private and public institutions. Then the initial position of individual players is not equal but predestined by their position in society (Šýkora, 1993). The politico-economical approach is then developed side by side the institutional approach. Unlike the letter approach, the politico-economical approach puts emphasis on the structuralism and the economic aspect – capital, its circulation and accumulation – issuing from the Marxist analyses. The analysis of the land rent is considered to be the basis of the land-use in urban structures. The land rent is in this case understood as an expression of the social relation = payment of money to somebody for an opportunity to use a land or estate. The approaches to study of problems of location of the accommodation establishments in towns and cities are considerably eclectic and from the theoretical-methodological point of view, the conditions of the location could be classified into two groups: the location given by the socio-economical gravitation and the location given by the accessibility by transportation (Bégín, 2000; Aliagaoglu and Ugur, 2008). The first group comprises locations in the proximity of the historical center of the town (usually between the historical center and a shopping zone) or of the attractive sites. The second group includes locations in the proximity of the intersections, such as train stations, main streets in the towns, roads interconnecting towns or connecting towns with airports, bus stations and bus stops etc. (simplified according Aliagaoglu and Ugur, 2008). Besides this, Bučeková (2001) defines a specific group of hotels for Central Europe being located in large housing estates; it reflects the specific evolution of socialist and post-socialist towns (Krejčí, Martiniáň and Klusáček, 2011). The spatial interrelations of the location of the accommodation establishments could be studied based on their geographical distance, supply price, size and provided services (Urtasun and Gutiérrez, 2006). Bučeková (2007) deals with the process of the territorial de-concentration in the location of these hotel establishments. That process has also been studied by Shoval and Cohen-Hattab (2001). They state that this process could be related to the shift of the accommodation establishments towards the periphery of the towns, which is allowed due the improvement of their accessibility, thanks to the development of the sub-urbanization processed in big towns and cities. Shoval (2006) confirmed the connection between the distance of a hotel from the town center and the demand structure of its visitors. The degree of the spatial concentration of locating the accommodation establishments is reflected in the creation of the spatial clusters of these same establishments. The character of those clusters is generally given by the building strategies of particular hotel chains and by the size of the respective accommodation establishment (Chung and Kalnins, 2001).

Given the fact that those models are hard to generalise and the published results of such types of analyses are often in contradiction (Kalnins and Chung, 2004; Urtasun and Gutiérrez, 2006), the aim of this presented paper was chosen as to assess the relationship between the price of accommodation and the urban space and character of the place. The price and spatial connections (together with the quality of the provided services) become an important motive for clients when choosing a concrete accommodation establishment. The built-up territory of the town České Budějovice was chosen as a model territory.

MATERIAL AND METHODS

The Study Area
České Budějovice is the capital of the region, as well as the center of the South Bohemia tourist region (Tichá, 2005; Cetkovský et al., 2007; Navrátil, Picha and Martináň, 2012; Navrátil, Picha and Navrátilová, 2012) and with approx. 94,000 inhabitants, it is ranked at the ninth place in the Czech Republic. The dimension of its cadastral area is approx. 5,560 ha, where the built-up area represents 601 ha. The lowest altitude is 379 m.a.s.l. and the highest altitude is 528 m.a.s.l. (ČSÚ, 2012). České Budějovice was founded in 1265 and became a commercial and handicraft center of the entire region (e-budejovice.cz, 2011). The historical center of the town was declared a monument reservation in 1980 and includes nowadays approx. 250 cultural monuments. The contiguous zone of protection comprises more recent suburbs with an additional more 50 monuments. The existing building monuments cover all style periods (i-cestování.cz, 2012. The current offer of tourism in town could be based on five main pillars: historical monuments, culture, gastronomic tourism, exhibitions and interesting sites in the surrounding area (In Puncto, 2008).
As for the tourism supply, the studied area disposed with the important historical objects, but in comparison with the monuments in proximity of the town, those in the town are not as well known. According to the statements of experts, the town has a lack of significant attractions that are important for tourism. On the contrary, there is a good structure of accommodation capacities. Thanks to the rich offer of cultural programs, the studied area has become a base for visitors' travel destinations not only in the area of České Budějovice, but also within the entire South Bohemian Region. Another important role is also played in České Budějovice in gastrotourism, particularly related to the Budvar Brewery, as well as the tradition of exhibitions (shortened according to In Puncto, 2008). The accommodation sector and the catering industry employs 2,424 people in the area (ČSÚ, 2012), which is cca. 5.1% of the total economically active population (47,185) in this area (ČSU, 2013b). The accommodation sector and the catering industry employs 2,424 people in the area (ČSÚ, 2012), which is cca. 5.1% of the total economically active population (47,185) in this area (ČSU, 2013b).

### Data Collection

All of the data that have been processed (in order to fulfil the set objectives) have been collected by means of a field survey that was done in 2012. An identification of the location of all of the accommodation establishments was done, including the figure of the number of beds and rooms, in the built-up area of České Budějovice (Navrátil et al., 2012). Those figures were completed with the information about the price of a double room. The prices of the accommodation services are differentiated according to the occupancy rate, seasonality and the way of buying the service (Novacká, 2010). However, it is possible to use only one type for the further assessment for all studied establishments if it is available; (it is the matter of the comparable data). The prices stated on the internet for the summer season have been shown to be the most available and comparable, namely the prices of a double room per night; (the price of a bed could not be used as many accommodation establishments do not give their price this way). The prices of the summer season 2012 have been entered into the analysis.

The impact of the location was assessed on the level of the type of land-use. The field mapping was done within the simplified categories based on Vaishar (Vaishar, 2002). Those categories are as follows:

- historical (storeyed) urban buildings,
- hospitals,
- commercial centers (including the parking at the centers),
- industrial spaces (factories, storehouses),
- family houses,
- housing estates (block of flats and garages),
- sport grounds,
- sub-urbanization (new construction),
- public green space (parks),
- exhibition areas,
- garden colonies,
- agricultural lands.

### Data Analysis

All of the collected information was digitized and geo-referenced using the aerial photos in the Quantum GIS Environment (Athan et al., 2011). First of all, the character of distribution of the establishments was assessed, and this was done on the level of two categories: hotels and guest houses (including the category of private accommodation). The basic methods were used as a basis to evaluate the even distribution, such as the Lorenz Curve and Gini Coefficient (Robinson, 1998). The tendency to the clustering or, on the contrary, to the even distribution was studied by means of the Nearest Neighbour Analysis (Aplin, 1983). As for the urban areas, the impact of the town center was particularly proved, as it is a determinative factor in the location of an accommodation establishment (Bučeková, 2001; Bučeková, 2007). That is why this factor became the key element of the analysis in the case of the location of the accommodation establishments in České Budějovice. The center of the main square (Přemysl Otakar II. Square) became the mentioned element for cartographic reasons.

The two-way interconnection of the price offered for the services provided by an accommodation establishment and the location of that establishment was studied through the location analysis and the identification of the potential differences in the price among particular types of environment where the accommodation establishment is situated. The location analysis was done through the interpolation in the ArcView 3.1 Spatial Analyst Environment, by means of the Inverse Distance Weighting Method. The square of the distance and 25 nearest neighbours was entered into the calculation. The resulting surface was cartographically visualized. The potential differences in the price among the particular types of the environment where the respective accommodation establishment is situated were identified by means of the One-Factor Analysis of Variance (Czarski, 2009). With regard to the fact that different numbers of the accommodation establishments were located in each of types of land-use, it was necessary to apply the post-hoc test on the results (Meloun and Militký, 2006). The Tukey’s HSD Post Hoc Test for unequal sample sizes was chosen; it identifies the homogenous groups on the level of significance 0.05 (Zvára, 2006).

### RESULTS AND DISCUSSION

So 30 hotels and 52 establishments (called guest houses, including the individual ways of accommodation) were identified in the territory of the studied town. The localization curve lies significantly lower than the diagonal and also
the high values of the Gini Coefficient point out
the unevenness in the distribution, especially
in case of the hotels and also in the guest houses
in the territory of the town (Fig. 1).

The hotels do not show the tendency to create
spatial clusters and the guest houses show this
factor very weakly (Tab. I).

The previously published studies have identified
the impact of the distance from the town
center to be the basic factor of the distribution
of the accommodation establishments. The center
of the town corresponds in this case with the center
of the main town square. The results of the presented
survey show a high concentration of hotels
in the distance up to 1,000 meters from the town
center. One the other hand, there are almost
no hotels located in the distance beyond 1,500
meters. The territorial coverage by guest houses is
twofold. The guest houses are most often situated
in the distance up to 2,000 meters from the town
center, but unlike the hotels, they are also in more
distance locations and even on the periphery
of the continuously built-up territory of the town.

The results of this analysis clearly prove the bigger
impact by the accessibility of the town center
in the case of the hotel category than the guest house
category (Fig. 2).

What is interesting is to study the impact
of the distance, not only on the number
of the accommodation establishments (the already
mentioned in Fig. 2) but also on their size (studied
on the level of the bed capacity, as seen in Fig. 3).

This model confirms the location of the hotel
category in the proximity of the town center and it
is completed with the bed capacity of the respective
accommodation establishments. The hotels with
the biggest bed capacity are situated in the area
1,000–1,500 meters from the town center. The zone
beyond 1,500 meters comprises the establishment
with the lower capacity at maximum of 100 beds
in most cases (Fig. 3).

The interpolation of the data on the prices
of the double rooms per night in the accommodation
establishment in České Budějovice allowed us
to form a “price map” of the accommodation services
in the town (Fig. 5). A problem of the employed
method of the price surface interpolation is its

<table>
<thead>
<tr>
<th>HOTEL</th>
<th>GUEST HOUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearest Neighbour Index</td>
<td>0.83936696361</td>
</tr>
<tr>
<td>Number of establishments</td>
<td>30</td>
</tr>
<tr>
<td>Z-Score</td>
<td>-1.68348093753</td>
</tr>
</tbody>
</table>

1: The Localization Curve and Gini Coefficients for the Distribution Hotels and Guest Houses in České
Budějovice, in spring 2012

1: Degrees of Clustering in the Distribution of the Hotels and Guest Houses
sensitivity to the outlying values; yet the result of the analysis does not lack the logic of the rules of locating the accommodation establishment that was confirmed in both the previous studies and literature (e.g., Bučeková, 2007; Urtasun a Gutiérrez, 2006). What is highly above-average as for the price are the areas in the immediate neighbourhood of the main town square (Přemysl Otakar II. Square). According to the model, the required prices decrease with the growing distance from that square. However, there is still a higher price level alongside the main roads of the town, which means the higher prices could be potentially required alongside the road towards Český Krumlov and the Austrian borders with Austria and Germany, as well as the roads towards Písek or Tábor and then towards Prague. The lowest price could be potentially required in the zones in the west, nord-east and east of the town.
4: The Relationship between the Distance of a Guest House from the Center of the Town of České Budějovice, the Number of the Guest Houses and their Bed Capacity

5: The Price Surface of the Double Rooms per Night in České Budějovice
Likewise, the price is influenced by the location of an accommodation establishment in the respective land use within the town. With regard to the fact that a higher number of accommodation establishments are situated only in four types of land use within the town, the impact of the land use on the price was tested only in the case of industrial spaces, housing estates, historical urban buildings, and family houses (Fig. 6). The lowest price for a double room per night was required in the type of industrial spaces. However, the variance of the required prices is not as big; that is why it was impossible to prove the difference of those prices from the prices required by the accommodation establishments in the other types of land use. The only slightly higher price is required within the type of the family houses. The variance of the prices is markedly lower in this case and we have succeeded to prove the difference between those prices and the prices required by the accommodation establishments in the four evaluated types of land use. The latter prices are the highest within the four evaluated types of land use. The average price required in the accommodation establishments in the housing estates is the second highest. However, with regards to the variance of the prices required in this type of land use, we could not say that there is a statistical difference between those prices and the prices required in the previous three types of land use.

CONCLUSIONS

The distribution of the accommodation establishments in České Budějovice is highly uneven, without any more significant tendency to the creation of the spatial clusters. It is fundamentally influenced especially by the distance of the historical center. Based on the offering prices of one night stay in a double room, we have succeeded in further identifying the consequences of the location process of the accommodation establishment. A price map was formed identifying the zones with the above-average prices, as well as the zones with the highly below-average prices. The highly above-average zone is particularly located in the ring around the historical center of the town, where the price is above 2,000 Czech Crowns. Then the average area comprises an important part of the old town together with the main roads towards Pilsen, Prague and Český Krumlov. As for the price, the below-average zones are in the north-east and south-east (largely industrial areas), then in the east (predominant family houses or rural buildings), and in the west. This is confirmed also by the analysis of the average prices of accommodation in particular types of land-use of the town. A significant difference was registered between the type of the historical urban buildings and the type of family houses. The fact that the price is higher in the respective zones of a town, regardless to the category and classification of an accommodation establishment should be then an important factor for changing or establishing the pricing strategy.
SUMMARY

The aim of this paper is to assess the relationship between the price of accommodation and the urban space and character of the place. All of the data that have been processed have been collected by means of a field survey that was done in 2012. An identification of the location of all of the accommodation establishments was done, including the figure of the number of beds and rooms in the studied area. Those figures were completed with the information about the price of a double room. The character of distribution of the accommodation establishments was assessed on the level of two categories: hotels and guest houses (including the category of private accommodation). The basic methods were used as a basis to evaluate the even distribution, such as the Lorenz Curve and Gini Coefficient. The tendency to the clustering or, on the contrary, to the even distribution was studied by means of the Nearest Neighbour Analysis. The two-way interconnection of the price offered for the services provided by an accommodation establishment and the location of that establishment was studied through the location analysis and the identification of the potential differences in the price among particular types of environment where the accommodation establishment is situated. The potential differences in the price among the particular types of the environment where the respective accommodation establishment is situated were identified by means of the One-Factor Analysis of Variance. The Tukey’s HSD Post Hoc Test for unequal sample sizes was then applied in order to identify the homogenous groups on the level of significance 0.05. The distribution of the accommodation establishments in the studied area is fundamentally influenced especially by the distance of the historical center. The results of this analysis clearly prove the bigger impact by the accessibility of the town center in the case of the hotel category than the guest house category. Based on the offering prices of one night stay in a double room, we have succeeded in further identifying the consequences of the location process of the accommodation establishment. A price map was formed identifying the zones with the above-average prices, as well as the zones with the highly below-average prices.

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