Tourism locating procedures through the examples of Jász-Nagykun-Szolnok county subregions

Dudás, Péter – Kóródi, Márta – László, Éva

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Summary findings, conclusions, recommendations

The secondary research on rural sub-regional tourism is investigating the determining factors and the relationships between them. The analysis concentrates on the tourism potential of rural sub-regions and the performance of tourism. We used the method of discriminant analysis for classifying observations into two or more groups based on the specified predictors. Output includes the classification matrix, the squared distance between group centers, the linear discriminant function, means standard deviations, covariance matrices, and a summary of how each observation was classified. After that, we have classified rural sub-regions according to their strategies of tourism development. The strategy of development for sub-regions belonging to the same group should be the same. This classification can be a useful basis for the conceptions of rural development and development of tourism.

Introduction

Tourism development is one of the opportunities for the better utilization of the subregion resources and of the development of the subregions. Economic and social benefits are definite, environmental disadvantages can be treated with proper attention. The balance of the affects is positive for everyone who is affected, especially from the viewpoint of the expansion of the population's alternative income opportunities. As a result of the occurrence of the upswing of tourism a synergistic development and beat, which can be experienced are in a multifactorial contact with both side of tourism market, but primary reconditioned by the attractiveness and having vacancies, the given subregion, with demand manifested for the destination. The achieved and available position is influenced by the environmental factors defining the given market, but particularly the competitor destinations, they get into counting as a substituent product in the tourist's decision. To the completion of the subregion tourism developing concepts the calibrating of the areas are necessary, the definition of the situation has statical and dynamic relation on the microenvironment (county), the fieldenvironment (region) and the macroenvironment (country). The examination of the wider environment (continent) is justified in the case of areas at which has absolute attractiveness; Jász-Nagykun-Szolnok county subregions do not have attractions like these.

The calibrating in the above triple relation should be supported, apart from the descriptor applied universal methods,

with expedient quantitative procedures. Beside the static examinations the changes happening as a result of developments in the recent past manage information content, they show signs of the direction of the position change. According to the initial hypothesis of the research, beyond the unique peculiarities, similar features of the subregions exist, according to which common, typical development strategies can be defined. On the basis of these the aim of the analysis is to define the subregions county, regional position, moreover to identify that changes what kind of direction happened in the subregions economic- and touristic potential statement, or in the change of the tourism performance. In the knowledge of all these and the typical development methods an occasion offers itself to deduce for the county's subregions onto the optimal development direction.

Materialand methods

The informational base of the analysis is formed by the subregion data of the Central Statistical Office regional statistics chapters concerning tourism of the years 2003-2005. The regional dimension of the examination are seven subregions of Jász-Nagykun Szolnok county, the Jászberény, Karcag, Kunszentmárton, Mezőtúr, Szolnok, of Tiszafüred and Törökszentmiklós subregions. During the calibrating on the one hand inside a county, the tourism position of the subregions gets to a statement compared to each other, on the other hand the other subregions county of may provide comparative basis to the deduction of the inferences. The choice of the relatively short period is attributable to the change of the subregion classification, the stability of the number of the subregions is a condition for the analysis.

The calibrating is based on a comparison with the competitors. The initial method of the research is the comparing to the county and to the national average and the classification on this basis, so opens an opportunity of manifold comparing. The method was used by *Faluvégi* (2) as technique of a comparison. According to the logic of the process from the single indicators from the measure of differing from the average (static), or from the „striped" value of the beat of the (dynamic) change it is possible to deduce the type of the subregion.

The peculiarity of the domestic tourism is the focusing on the capital. It is meaningless to compare any subregion to Budapest's conditions and vacancy capacity, so the capital does not show up independent in analyses, neither in the aggregated data.

To examinate the efficiency of the tourism developments which came true in the latter years among the multiple variable methods the head component analysis and discriminance analysis got selected. The principal component analysis is based on the similarity, the subregion groups with same improvability features take form by the background variables defined by multiple variables. To applying for analyzing time series means the novelty of the method of discriminance analysis. The method selects the variables, which separate certain groups from each other in the best possible way, from the given variable set. The indicators, which directly and indirectly influence the tourism, got selected from the subregion indicators during the analysis. The group of variables consisting the following indicators: the Personal Income Tax payments per capita, the proportion of the employees working in the service sector according to the percentage of the active earners, the apartments connected to the public utility water channel in the percentage of the flat substance, the households which are consuming cable gas in the percentage of the flat substance, the

number of the entrepreneurships per 1000 of the residents, the number of the retailer stores per 1000 resident, the number of catering places per 1000 resident, the number of the commercial accommodation rooms, became narrower during the different the examinations according to the character of the analysis. The basis of the research is formed by the detailed examination of three of these indicators. The development of the tourism are associated to the richness of the area, the more provided areas can offer a bigger comfort for the tourists. The population's incomes indicate the area's economic development, therefore the indicator involved in the analysis is the income tax payment per capita, like economic potential. One of the major elements of the condition system of tourism is to having vacancies, which one is characterized by the number of the commercial accommodation rooms per 1000 constant residents, like tourism potential. (The indicator does not include the number of the rooms of the private accommodations, which may be considerable in the case of a few subregions). The third datum, which creates the complex of the analysis, is the number of the tourism nights spent by the tourists per 1000 constant resident, points the performance of the tourism (4). In the analysis of how indicators change together according to the time the two extreme years give the two groups. To the quantitative analyses the MINITAB statistical program (5), which was research methodology wise recommended, and the SPSS program got to an application.

Based on the separations, it is possible to distinguish subregion categories, for that, based on the similar conditions, common tourism development direction and strategy can be suggested. As a result of some analyses the county's subregions belong to different groups, but based on the performances, a tourism hierarchy can be set up by aggregating them. Tourism development can be influenced also by that the belonging to the tourism regions does not mean statistical regions, which is the county's feature, since the parts of the Northern Great-Plain tourism region and the Tisza-lake tourism region are separate subregions too.

Results

Considering about the absolute data (the number of tourism nights spent on commercial accommodation per 1000 residents) the Tiszafüred region is the county's leading touristic subregion, the Kunszentmárton and for Karcag subregion has a strong position. Szolnok subregion, including the county seat and the other three has considerable disadvantages compared to the leaders.

The first examination revealed the economic development, the contexts of the tourism inn capacity and the tourism performance in the county. According to the initial hypothesis the development of the tourism exceeds the average beat in the dynamically developing subregions just as economically and also by considering about the tourism infrastructure. Probable, the guests visit with more pleasure and spend more time in the richer areas, especially, if the infrastructural provision surpasses the average. As the hypothesis is true, using the resources to develop the infrastructure and to the increase of the mechanical-technical state of supply becomes unambiguous. At the same time the positive economic effects of the tourism are sensible by the tourists on the areas where they attend more frequently, that appears in the development of the economy and the tourism potential. Besides, these changes cannot be considered as the single effect of tourism. The rural averages of the distinct categories got defined by weighting with the population of the subregions.

The economic potential, according to the indicator of personal income tax per single constant resident can be demarcated those subregions, where the development of the economy was above-average in the particular years, with the dynamic examination those subregions, where the development was at a beat exceeding an average. These came true only in the Szolnok one, which can be called a dynamic subregion according to the position and the development of the economy. The economic development of the Jászberény subregion does not attain the average, but the beat of the development exceeds it highly, therefore it can be listed among the subregions, which are falling into line with the others. The economic development of the other five subregions is under an average and their developmental beat does not attain the average too. In these subregions the danger of the economic breaking down is threatening.

The accomodation capacity is the main determining factor in the case of the tourism potential. The examination method collects the subregions with above-average state of supply, though dynamically the subregions, which are exceeding the average developmental beat, got to highlighting. From the static examination is verifiable, that the Kunszentmárton, the Karcag and Tiszafüred subregion have bigger commercial inn capacity as average. With the application of the dynamic methods the accommodation development intention can be concretized, national accommodation extension with an above-average beat cannot be experienced. To bring into use a new guesthouse or a hotel reports a jerky change in the room development, in the next year, if the extension of the accommodations is not continuous, the subregions may be found in a category with under-average developmental beat. The conscious development, the efforts put onto the creation of the tourism infrastructure increase the average state of supply and they contribute to the forming of the condition system of the tourism of subregions.

The performance of the tourism in the three subregions mentioned already is above-average measuring with the indicator of the tourism night per 1000 residents. The tourist spending, that means incomes to the settlements, certainly joins to the spending of the tourism night, at the same time the incomes of the settlement come from the guests not spending the tourism night. Examining the dynamic data interesting phenomenon can be experienced in the Tiszafüred subregion, where the above-average performance came true beside a moderate, under-average developmental beat. The Tisza-lake lost from his popularity in the examined period (the weather also is not a negligible factor in the given subregion, it influences the performance more, than in the case of the rest of the subregions), or the change of the importance of the private accommodations may have played a role. The Törökszentmiklós subregion can be considered for one falling into line, its performance is under an average, but it may make up for a lag with an above-average developmental beat. The establishment of the number of the tourism nights can be influenced not only by the development of the economy and to having vacancies several exterior factors can manipulate it too. If the performance is under an average and a developmental beat not attaining an average, the foundations of the development ideas can be laid only with an attractiveness development. Szolnok subregion is like this.

From the previous groups, different subregions showing the changes with a different direction of the economy became separate, and having vacancies and tourism nights, in that manner believing, that there is a context between the dynamics which can be interpreted well, and which

may explain the changes of tourism. Verifiable, that tourism performance does not depend on the economic potential directly, from the two factors the state of supply is more important for the guest than the settlement's and the population's richness. It was worthless that the economy improved in an above-average beat in the Szolnok and the Jászberény subregion, the guests visit and residential inclination lagged behind the average. At the same time the Kunszentmárton, the Karcag and the Törökszentmiklós subregions despite the economy development under the average in tourism development exceeding an average was ensued.

The next regional dimension of the locating narrowed, so as next the position of subregions of Jász-Nagykun-Szolnok County were defined compared to each other with discriminance analysis. With the method an answer can be given to the question, that how the particular influencing factors manipulated the change of tourism of the subregion at the given period of time. The examined indicators for each subregion are again those previously and variables that me representing the economic potential, the tourism potential and the tourism performance. The result of the examination indicates that the groups marked in the hypothesis exist (Table 1).

According to the calculations, 9 elements were classified correctly into a group, the wrong classification is altogether 5 elements. From these, two elements belong to the 2.group, instead of the 1., and 3 elements belong to the 1. group instead of the 2. group. In this way the correctness of rating into the 1. group is 71.4%, the appropriateness of getting into the second group is 57.1 %, which means jointly a 64.3% correct categorization. From the strategy making point of view the 2 or 3 elements, which are not belonging to the groups, create a separate category, in this manner we can distinguish four fundamental developed-developing directions. The generalized Mahalanobis distance between the hubs of the groups refers to the suitability of the classification (0.9954).

Table 1

The Summing Up of the Categorization (Minitab)

	Elements of the Original Groups (pcs)	
	1	2
Elements Classified in the 1. Group (pcs)	5	3
Elements Classified in the 2. Group (pcs)	2	4
All Elements (pcs)	7	7
Elements Classified Proreply (pcs)	5	4
Accuraticy of the Classification	0.714	0.571

Source: own calculation based Central Statistical Office data

In the next step the coefficients of the linear discrimination function were distinguished, and as the difference of them the contracted function can be indicated (Table 2).

Table 2

The Coefficients of the Linear Discrimination Function (Minitab)

	1	2
Constant	-6.9295	-8.4861
C2	0.0001	0.0002
C3	-0.0126	-0.0307
C4	0.0034	0.0047

Source: own calculation based on Hungarian Central Statistical Office data

The elements of the genuine 2003 (1) and 2004 (2) groups were taken under deep examination, and the elements of the groups according to the analysis (Table 3).

The deviations according to the analysis are shown by the grey squares. As you can see from the table, two subregions, Jászberény and Szolnok were rearranged, and in this way, the survey shows that they belong to another group. These start from the higher level of the background variable determined by these figures, and in this way they are closer to the average of the year 2005, than to 2003. We can regard these as the developing subregions in tourism. These can be developed not because of their fascination, but the infrastructure, the provision and the capacity. Tiszafüred, Törökszentmiklós and Mezőtúr subregions belong to another group, because they did not achieve the average of the background variable, rather they are closer to the 2003 average. This shows a craning development, but with product development in tourism, and more active destination marketing the evolution would be more effective. There could be a separate group of subregions, which are under average, but shows development. However, at present a category like this does not exist in the county. Both of the guiding subregions in tourism differentiate again with similar development features, these are the subregions of Kunszentmárton and Karcag. Their differentiation proves the real connection of the background variable – figured in the analysis –, with the tourism.

Table 3

The Classification of Subregions

Small areas	2003.			2005.		
	Genuine group	Deviation	The probability of belonging to the 2. group	Genuine group	Deviation	The probability of belonging to the 1. group
Jászberény	1	2	0.66	2		
Karcag	1			2		
Kunszentmárton	1			2		
Szolnok	1	2	0.72	2		
Tiszafüred	1			2	1	0.67
Törökszentmiklós	1			2	1	0.72
Mezőtúr	1			2	1	0.63

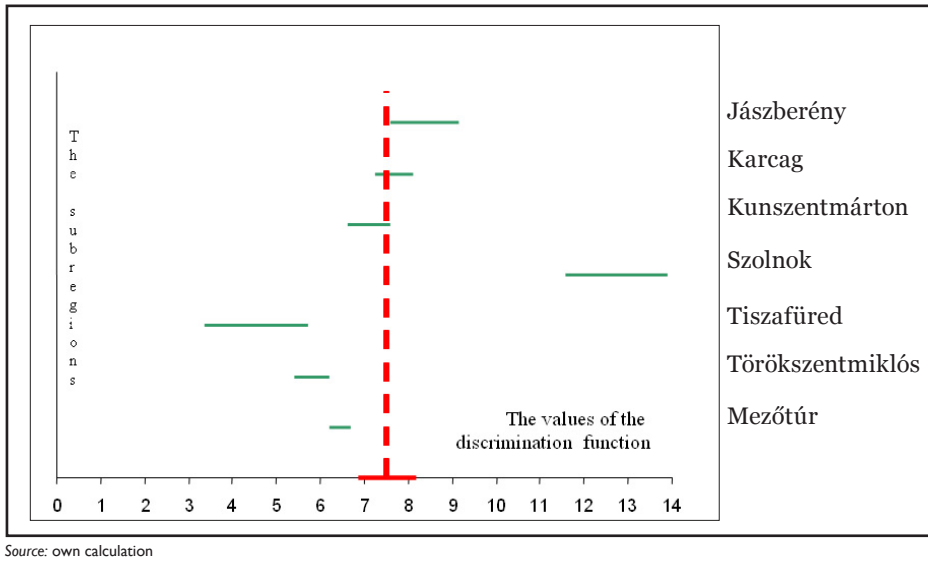
Source: own calculation based on Hungarian Central Statistical Office data

The difference denoted by the discrimination analysis in the cases of every subregion has a positive sign, because of this the parts showing the development are signed without arrows (Figure 1).

On the graph, the vectors made according to the combined indexes of the two periods show the absolute change of the extent of the development between 2003 and 2005. The certain vectors' start and end position can be correlated to the common average of the development standard of the seven subregions, which is shown by the broken straight line. The relation of the length of the vectors shows the differences in development of the seven subregions in point of the tourism, and gives opportunity to the comparison of each other.

Figure 1

The Extent of Development in the Subregions of Jász-Nagykun Szolnok County 2003-2005



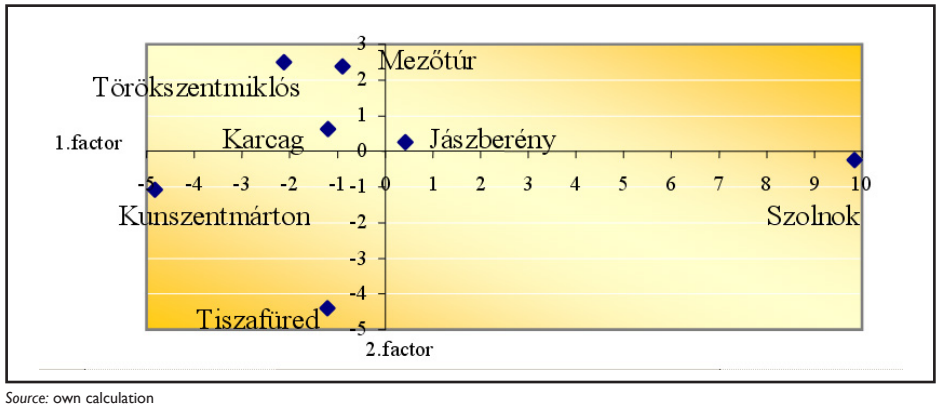
Source: own calculation

On the grounds of the study, we can determine that such a use of discrimination analysis is appropriate for reaching a general picture about the changes in tourism, the role of the certain factors in the change, and to know all of these in the individual subregions, as well. However, to specify the case it is worth involving more variables into the survey.

Henceforward the survey was widened by the other indexes connected to tourism. The correspondence of the factors analyzed by the main component analysis showed that which are those subregions, which have enough bases for welcoming tourism, and which are those subregions, what reached incredible achievement without the significant role of any factors, namely how the position in tourism of the subregions is according to the examined features. Estimating the results, we can define two major factors, which characterize the tourism condition system of the subregions.

Figure 2

Tourism Developing-Position of the Subregions in Jász-Nagykun Szolnok County (2005)



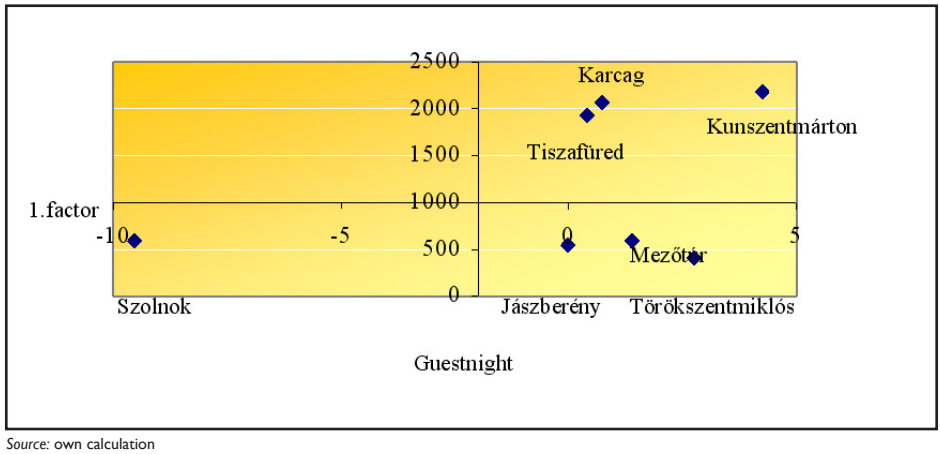
Source: own calculation

In the first factor, we can see the criteria closely connecting to the tourism with almost the same importance. The accommodation, the number of rooms, the number of tourism nights and the two infrastructure indexes are not significant components in the factor, these will occur in the second factor. Depicting the subregions according to the values of component weights and the basis of coordinates of the factors, in the certain sections subregions with other and other parameters will be outlined. In accordance with the statement, subregion of Kunszentmárton and Tiszafüred possess the same flavors in tourism. Actually, these areas are really the leader regions of the county. The dissimilar position of the Szolnok subregion refers to the development of the tourism cannot even suggested with the traditional methods here. Results could be achieved only with remarkable attraction development, on another way we cannot count with the recovery without the heavy change of customs of the consumers and other market factors. The subregion of Jászberény can be developed well, in the remaining three parts – although we can observe successful initiatives –, the expansion of the tourism is not significant yet (Figure 2).

Since the aim of the search is to determine the position in tourism and not individually the grouping of the subregions, hence instead of the second factor the number of 1000 inhabitants per tourism nights came into use as dependent variable-showing the achievement of the tourism-, which is determined by influencing effect of the factors appearing in the first factor. Separating this from the data and run over the analysis again, the position of tourism can be defined from another point of view (Figure 3).

Figure 3

Tourism Achievement-Position of the Subregions in Jász-Nagykun Szolnok County (2005)



Source: own calculation

The lesson of the figure can be found out from the comparison of the 2 three-member subregion groups. Based on the nearly identical makings subregions of Karcag, Tiszafüred and Kunszentmárton got into among the subregions, which reached good achievements, and these territories named tourism paradise in the county. Regions, which are over the average of tourism position, but do not take the advantage of it are called the "waster" areas, which are Jászberény, Törökszentmiklós and Mezőtúr subregions. The Szolnok subregion takes part in the group of areas, which have "irrelevant" position in tourism. During identifying the subregions, it seems that the reasons of the outstanding achievement in the tourism are the fascination and the attractions. The economic wealth of the territory and the level of rurality do not influence the place affiliation.

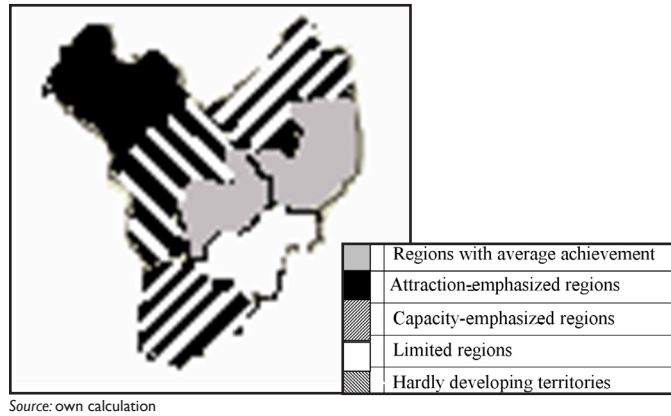
The achievement in tourism is attributable, on the one hand, to the effects proved above, which occur in the factor of tourism, on the other hand, to the makings of the region utilized by tourism, thirdly, to the marketing activities of the area. The major influential of the achievement are the complex products in tourism, including all the above, and were made during the tourism product development, which try to satisfy the delimited needs of the aimed tourists, offering a consciously packed in service as a product.

In the final part of the research, the subregions were categorized and compared according to their position in attraction value category, capacity category and achievement in tourism category. The categories received qualification referring to all three features, like significant, average and low-level. Among the variation of categories based on the features we can distinguish attraction and capacity proportional group, attraction and capacity emphasized group, and a group having achievement restrictive factor, where the scarcity of the capacity or of the attraction is concluded. The group of subregions can be considered as the best region of development, which achievement is above the level of their attractions. The last group contains the subregions having unutilized facilities. It can be seen from the analysis that the subregions of Törökszentmiklós and Karcag,

which have average achievement, utilizes the given opportunities very well, but their possibilities are restricted (mainly the first area), because of the middle-level attractions. That is why the achievement is proportional, but not well balanced. The subregion of Jászberény belongs to the attraction-emphasized category, but the variation of categories belongs to the group proves that the disproportional attraction development results an average achievement, and because of this, the capacity in the subregions must be expanded. The group of subregions has nationally the largest frequency with the average number of attractions, but does not have typical attraction factors, where the clear result of the low number of accommodation is the low achievement, we can classify here the subregion of Szolnok. The subregions of Tiszafüred and Kunszentmárton belong to the capacity-emphasized category, where achievement under the average does not occur. It can be evolved from this that the capacity (hotel, pension) itself can fill in attractive functions based on the programs and services. One of the factors or both restrict the achievement by the fourth group, where we can find the subregion of Mezőtúr. It can be determined from the frequency of the certain variations that the scarce of the capacity is larger setback factor. However, the development of the accommodation capacity itself will not solve the problem, the miss of reputation and marketing communication can be later the obstacle in the growing achievement. The estimation of the subregions of this point of view is illustrated by the Figure 4.

Figure 4

The Tourism Developing Position of the Subregions in Jász-Nagykun-Szolnok County (2005)



Source: own calculation

After the analysis of the subregions secondary data, it can be determined that in the certain subregions different rate of development happens during the expansions. With comparisons of subregions and county, we can define those territory units, which could mostly mobilize the tourism's resources. Further development of these regions is feasible by obtaining new segments, by diversification of assortment, product development, attraction management, and effective communication, and by utilizing the advantages of the product branding. However, it appears that for numerous subregions the tourism development is not a real facility to solve all problems. For inhabitants of most subregions this will remain only an alternative possibility of income acquisition.

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Address:

László Éva, főiskolai docens, Szolnoki Főiskola Üzleti Fakultás Kereskedelmi és Marketing Tanszék, 5000 Szolnok, Ady E. u. 9., Tel.: 56/421-455/3703, E-mail: laszlo@szolf.hu

Dudás Péter, főiskolai docens, Szolnoki Főiskola Üzleti Fakultás Gazdaságelemzési Módszertani Tanszék, 5000 Szolnok, Ady E. u. 9., Tel.: 56/421-455/3733, E-mail: dudas@szolf.hu

Kóródi Márta, főiskolai docens, mb. tanszékvezető, Szolnoki Főiskola Üzleti Fakultás Turizmus Tanszék, 5000 Szolnok, Ady E. u. 9., Tel: 56/421-455/3714, Fax: 56/512-499, E-mail: korodi@szolf.hu