

# “Analysis of countries’ investment attractiveness in the field of tourism industry”

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| <b>ARTICLE INFO</b> | Olha Kozmenko, Oleksandra Poluliakhova and Olesia lastremska (2015).<br>Analysis of countries’ investment attractiveness in the field of tourism industry.<br><i>Investment Management and Financial Innovations</i> , 12(3), 56-63 |
| <b>RELEASED ON</b>  | Thursday, 15 October 2015   |
| <b>JOURNAL</b>      | "Investment Management and Financial Innovations"   |
| <b>FOUNDER</b>      | LLC “Consulting Publishing Company “Business Perspectives”  |



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

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## Analysis of countries' investment attractiveness in the field of tourism industry

### Abstract

The paper analyzes factors influencing the investment attractiveness of countries in the field of tourism. It distinguishes groups of countries with different levels of investment attractiveness of the tourism industry based on the cluster analysis. The research's result is a discriminant analysis, which helps build a model for evaluating the relationship of indicators of tourism investment attractiveness of each of the selected clusters.

**Keywords:** tourism, tourist flows, index of life quality, international innovation index, investment attractiveness.

**JEL Classification:** E22.

### Introduction

**Problem statement.** Under conditions of integration of the tourism industry of Ukraine into the world economic environment the competitiveness of countries depends on their willingness and capacity to move from the use of traditional types of tourism to the implementation of innovative forms. The ability of countries to develop and implement new types of tourism activities depends on the availability of the required financial resources, compliance of investment policies with strategic objectives of innovative development, sufficient levels of human, information and material resources. In addition, the key to successful implementation of the new types of tourism is the availability of an appropriate methodological framework that would allow making informed decisions regarding investment into these types of tourism and determining the probability of achieving the set goals. The existing methodological approaches cannot be applied in pure form for making investment decisions in implementing innovative forms of tourism. It explains the need in their development taking into account the peculiarities of each country. In turn, the existing in the contemporary economic literature division of countries into American, European and Asian centers cannot provide an adequate assessment of the competitiveness of countries in terms of investment attractiveness of their tourism industries. This is what defines the relevance of the article.

### Analysis of the recent research and publications.

Attraction of investment resources to the development of the tourism sector has become the basis for the study of this problem by domestic and foreign scientists such as A. Hayduk [5], B. Hryniova [8], B.

Hoblyk [6], B. Kyfiak [11], O. Liubitseva [14] M. Malska [12] M. Sokolenko [16], B. Sukhodub [17], T. Tkachenko [18], I. Tubolets [19], M. Christian, K. Fernandez-Stark [3], G. Ahmed, G. Gereffi [2], D. Honeck [4]. In addition, in the current literature sources regarding the methodological provision of the tourism sector a significant place belongs to the question of developing the concept of clustering described in the works of foreign scientists: M. Nedosvyt [13], M. Porter [14], B. Harrison [17] and others.

### Earlier unsolved parts of the overall problem.

Along with these descriptions of various aspects of investment attractiveness of the tourism sector there is the unresolved issue of a homogeneous grouping of countries in terms of the different levels of development of tourism and the characteristics of each of the selected group of countries by constructing a discriminant model of the dependence of the probability of belonging to a certain cluster on the relevant indicators of its quantitative evaluation.

**Purpose of the study.** The paper's goal is to carry out a cluster and discriminant analysis of investment attractiveness of tourism industry in the world.

**The main results of the study.** In the structure of national economies in many countries the tourism sector is one of the priority areas of economic activity. A prerequisite for the successful functioning of the tourism industry is the attraction of investments, because to ensure the effectiveness of any sphere of economic activity it is necessary to have resources, while the allocation of public funds does not fully cover its maintenance and development. Each country has its own peculiarities of its tourism industry, although it does not influence the attraction of investments [9]. Therefore, it is necessary to study the investment attractiveness of countries and investments into the little-developed forms of tourism.

Investment attractiveness of the tourism sector is a combination of micro- and macro-level factors that help potential investors form a general idea of the

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region and provide an opportunity to assess its appeal [11]. The investment attractiveness depends on the following factors: the level of socio-economic development of the research object; investment activities; the level of tourism development, particularly, the dynamics of tourist flows, provision of tourist infrastructure, the availability of investment resources and others.

Studying the investment attractiveness of the tourism sector it is proposed to consider twenty-six countries selected according to the rating of tourist

flows (Table 1). For the grouping of countries according to the investment attractiveness of the innovative tourism sector we propose to choose three indicators as a basis for cluster analysis for the selected countries: “International tourist arrivals”, “Where-to-be-born Index” (out of 10), “International Innovation Index”. The first indicator characterizes the flow of tourist arrivals. The indicator “Where-to-be-born Index” (out of 10) is a quantitative assessment of the environment. In turn, the third indicator measures the level of innovation in the country [21].

Table 1. Information provision for the cluster analysis of countries in terms of the investment attractiveness of the innovative tourism sector

|                            | 2013             | International tourist arrivals, million | Where-to-be-born Index (out of 10) | International Innovation Index |
|----------------------------|------------------|---|------------------------------------|--------------------------------|
| Africa and the Middle East | Morocco          | 10                                      | 5.67                               | -0.57                          |
|                            | South Africa     | 9.5                                     | 5.89                               | 0.33                           |
|                            | Tunisia          | 6.2                                     | 5.77                               | 0.14                           |
|                            | Algeria          | 2.7                                     | 5.86                               | -0.83                          |
|                            | Saudi Arabia     | 13.2                                    | 6.49                               | -0.12                          |
|                            | Egypt            | 9.1                                     | 5.76                               | -0.47                          |
|                            | Jordan           | 3.9                                     | 5.63                               | -0.15                          |
|                            | Israel           | 2.9                                     | 7.23                               | 1.36                           |
| The Americas               | United States    | 69.8                                    | 7.38                               | 1.8                            |
|                            | Mexico           | 23.7                                    | 6.41                               | -0.16                          |
|                            | Canada           | 16.5                                    | 7.81                               | 1.42                           |
|                            | Argentina        | 5.5                                     | 6.39                               | -0.97                          |
| Asia and the Pacific       | China            | 55.7                                    | 5.99                               | 0.73                           |
|                            | Thailand         | 26.5                                    | 5.96                               | 0.12                           |
|                            | Malaysia         | 25.7                                    | 6.62                               | 1.12                           |
|                            | Hong Kong, China | 25.6                                    | 7.8                                | 1.88                           |
|                            | South Korea      | 12.1                                    | 7.25                               | 2.26                           |
|                            | Japan            | 10.3                                    | 7.08                               | 1.79                           |
|                            | India            | 6.8                                     | 5.67                               | 0.06                           |
| Europe                     | France           | 84.7                                    | 7.04                               | 1.12                           |
|                            | Italy            | 47.7                                    | 7.21                               | 0.21                           |
|                            | Turkey           | 37.8                                    | 5.95                               | -0.21                          |
|                            | Germany          | 31.5                                    | 7.38                               | 1.12                           |
|                            | Austria          | 24.8                                    | 8.12                               | 1.15                           |
|                            | Ukraine          | 24.6                                    | 4.98                               | -0.45                          |
|                            | Greece           | 17.9                                    | 6.65                               | 0.12                           |

Development of practical recommendations for conducting a cluster analysis is based on the STATISTICA package (module “Cluster modules”). The main analysis methods include: Joining (tree clustering) – a group of hierarchical methods used if the number of clusters is unknown in advance; K-Means Clustering (K-means method) – if the user has information about the approximate number of clusters.

The metrics of distance is Euclidean distance. In turn, the target function is in-group sum of squares of Euclidean distances [20]. Cluster

analysis algorithm includes the following sequence of stages: if there are  $n$  elements and the matrix of distances between them. Initially it is considered that each element is a separate cluster. Then, at every stage these two clusters are united, which leads to a minimal increase in the target function.

Proceeding to the practical implementation of the cluster analysis we construct a diagram considering investment attractiveness of countries (Figure 1).

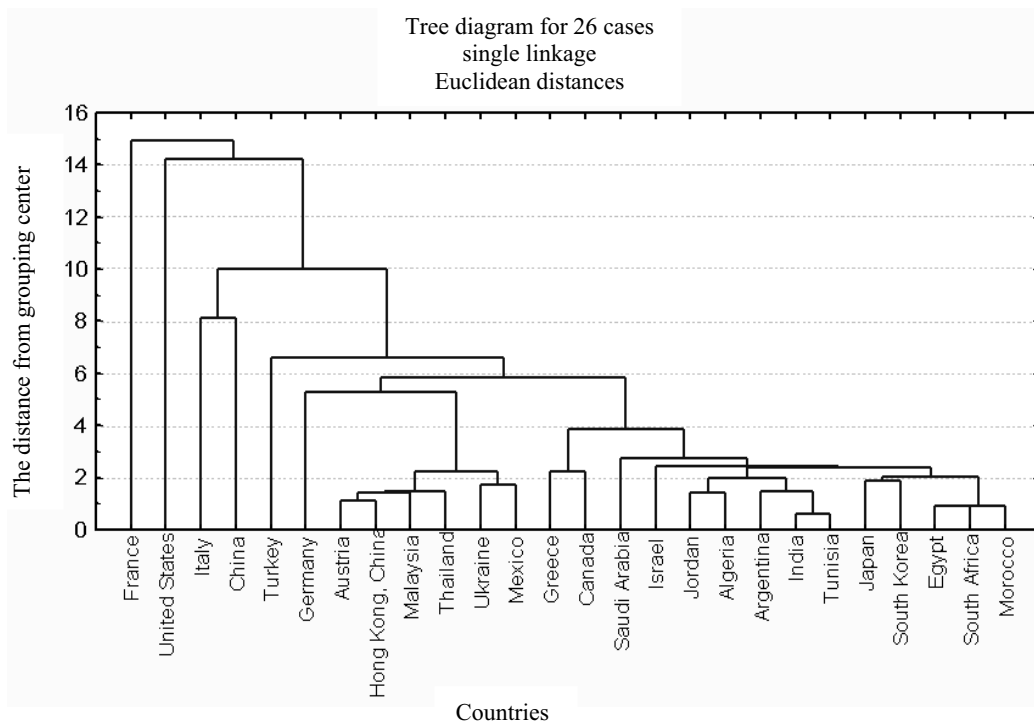


Fig. 1. Diagram grouping of countries considered in terms of investment attractiveness

The graph of Figure 1 shows four groups of clusters. The first group includes: the USA, China, France. The second group includes countries such as Mexico, Thailand, Malaysia, Hong Kong (China), Italy, Turkey, Germany, Austria, Ukraine. The third group in the cluster analysis includes: Morocco, South Africa, Saudi Arabia, Egypt, Canada, South Korea, Japan, and Greece. Finally, the fourth group of countries includes Tunisia, Algeria, Jordan, Israel, Argentina, India.

The expediency of conducting a cluster analysis of countries from the point of view of investment attractiveness of the innovative tourism sector is caused by the fact that geographical division of countries according to the world financial centers – the

Middle East, America, Asia and the Pacific, Europe does not take into account the specific characteristics of each of them, giving only a general characterization, which does not differ much during the transition from one center to another. Mathematical substantiation for ineffectiveness of the existing geographical grouping of countries in terms of investment attractiveness of their tourism sector is the results of the discriminant analysis (Table 2).

Based on the data of Table 2 it is proposed to build a system of linear regression equations for the dependency of the probability of belonging to a certain group on tourist flows, the quality of life and international innovation index, which takes the following form:

Table 2. Discriminant analysis of countries according to geographical clustering

| Variable                                | Functions classification |                       |                       |                       |
|---|--------------------------|-----------------------|-----------------------|-----------------------|
|   | G_1:1<br>$p = .30769$    | G_2:2<br>$p = .15385$ | G_3:3<br>$p = .26923$ | G_4:4<br>$p = .26923$ |
| International tourist arrivals, million | 0.23                     | 0.32                  | 0.25                  | 0.34                  |
| Where-to-be-born index (out of 10)      | 31.33                    | 34.68                 | 30.06                 | 34.15                 |
| International innovation index          | -25.26                   | -27.52                | -22.78                | -27.40                |
| Constant                                | -97.07                   | -120.56               | -90.86                | -117.37               |

$$\begin{cases}
 p_{G1} = 97.07 + 0.23ITA + 31.33WI - 25.26III \\
 p_{G2} = -20.56 + 0.32ITA + 34.68WI - 27.52III \\
 p_{G3} = -90.86 + 0.25ITA + 30.06WI - 22.78III \\
 p_{G4} = -117.37 + 0.34ITA + 34.15WI - 27.40III.
 \end{cases} \quad (1)$$

where  $p_{G1}$  ( $p_{G2}$ ,  $p_{G3}$ ,  $p_{G4}$ ) is the probability of belonging to the first (respectively, second, third,

fourth) group of countries in terms of investment attractiveness of the innovation tourism industry;  $ITA$  – international tourist flows;  $WI$  – quality of life index;  $III$  – international innovation index.

The analysis of parameters for the variables in the regression equation (1) shows that they do not differ much from one another during the transition

from one group of countries to another and the inexpediency to conduct the above grouping in terms of investment attractiveness of the innovative tourism industry. Therefore, it is proposed to conduct a cluster analysis by using the *k*-means method.

The countries in the first group have a high level of tourist attractiveness shown by the high level of economic development in general and tourist services in particular; rich natural and recreational potential; innovative methods of tourism activities; highly developed tourist infrastructure; transport accessibility. These aspects explain the results of calculations in which this group has the highest indicators in comparison to other groups. Thus, the average value of the indicator International tourist arrivals, million, is 70.06; Where-to-be-born Index (out of 10) – 6.80; International Innovation Index – 1.21.

A specific feature of countries in the second cluster is the formation of a considerable part of financial flows due to beach tourism. In addition, this group should include Austria, Germany and Ukraine – countries of active, cultural and “green tourism”. Analyzing the performance characteristics of this cluster we can see that International tourist arrivals indicator takes on a much smaller average value than for the countries in the first group. For the US, China and France it is 70.06., while for their group of countries it is under 29.76. The quality of life index is 6.71, while international innovation index is 0.53. The value of the last indicator is caused by the low activity of governments in promoting and supporting innovation activities with their state policies.

Analyzing the third group of countries it should be noted that this cluster is characterized by eco-tourism, exotic and wellness tourism which have become very important areas of international tourism. Analyzing quantitative characteristics of countries in this cluster we can conclude: in comparison with the first and second group countries the third group has a lower rate of International tourist arrivals; its average value is 12.32 while the indicators of the previous groups stand at 70.06 and 29.76 respectively.

Countries of the fourth group specialize in the quality medical services. Thus, Jordan has become the most popular Middle East country due to the high development of its medical infrastructure. Israel is

well known for its highly qualified specialists in the field of medical tourism. The costs of procedures in Israeli clinics are much lower than in the US and Britain. The resorts in India provide alternative medicine health services. In addition, a defining feature of Tunisia is a thalassotherapy. If we analyze the data obtained through cluster analysis, it is necessary to indicate a very significant lead of the indicator “International tourist arrivals” in this group in comparison with the previous three groups. This also applies to the international innovation index: if this index of the first group of countries has the value of 1.21 while for the second and the third group of countries it is 0.53 and 0.59 accordingly, its value for the fourth group is negative (-0.06).

Determining the specific features and characteristics of the selected clusters in terms of statistical analysis, it is necessary to calculate and interpret such generalized economic indicators as a mean and standard deviation (Table 2). Thus, the average value of the indicator “International tourist arrivals” assumes the highest value (70.07 million) for the first cluster, which is 2.35 times higher than the indicator of the second cluster of countries and respectively 5.67 and 15.13 times higher than in the third and fourth groups of countries. Identifying the patterns of standard deviations of the indicator “International tourist arrivals”, i.e. the level of dispersion (deviation) of the indicator’s value in the context of relatively average countries, we see a common trend for the four clusters – variations within 20%.

Another indicator chosen for the clustering of countries is “Where-to-be-born index”, the value of which ranges from 6.09 to 6.80 during the transition from one group of countries to another indicating a high level of the quality of life in the countries attractive in terms of tourism.

Analyzing the mean and standard deviation of the third indicator of clusterization of countries in terms of investment attractiveness of innovative tourism we should note fundamental differences of this indicator for the first three groups and the fourth group. Thus, the first, second and third clusters are characterized by a positive value of the indicator “International Innovation Index”, while the fourth cluster – by negative. This fact is caused by a very low level of innovations in general and in the innovative tourism sector for the fourth group as opposed to others.

Table 3. Statistical indicators of characteristics of the selected clusters

| Variable                                | Descriptive statistics for Cluster 1 |                    | Descriptive statistics for Cluster 2 |                    | Descriptive statistics for Cluster 3 |                    | Descriptive statistics for Cluster 4 |                    |
|---|--------------------------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|--------------------|
|   | Mean                                 | Standard deviation | Mean                                 | Standard deviation | Mean                                 | Standard deviation | Mean                                 | Standard deviation |
| International tourist arrivals, million | 70.07                                | 14.51              | 29.77                                | 8.08               | 12.33                                | 3.33               | 4.67                                 | 1.74               |

Table 3 (cont.). Statistical indicators of characteristics of the selected clusters

| Variable                           | Descriptive statistics for Cluster 1 |                    | Descriptive statistics for Cluster 2 |                    | Descriptive statistics for Cluster 3 |                    | Descriptive statistics for Cluster 4 |                    |
|------------------------------------|--------------------------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|--------------------|
|                                    | Mean                                 | Standard deviation | Mean                                 | Standard deviation | Mean                                 | Standard deviation | Mean                                 | Standard deviation |
| Where-to-be-born index (out of 10) | 6.81                                 | 0.73               | 6.71                                 | 1.01               | 6.58                                 | 0.78               | 6.09                                 | 0.62               |
| International innovation index     | 1.22                                 | 0.54               | 0.53                                 | 0.81               | 0.61                                 | 1.08               | -0.06                                | 0.84               |

Confirmation of the above-described features of the selected groups of countries is the results of the cluster analysis by using the Two-way Joining method (Figure 2). Thus, the relevant indicator for the grouping is the indicator “International tourist

arrivals”, which is characterized by a significant level of color variations on this figure and, therefore, by distinguishing four clusters (red, orange, yellow and green), while the next two indicators make it possible to divide countries into two groups.

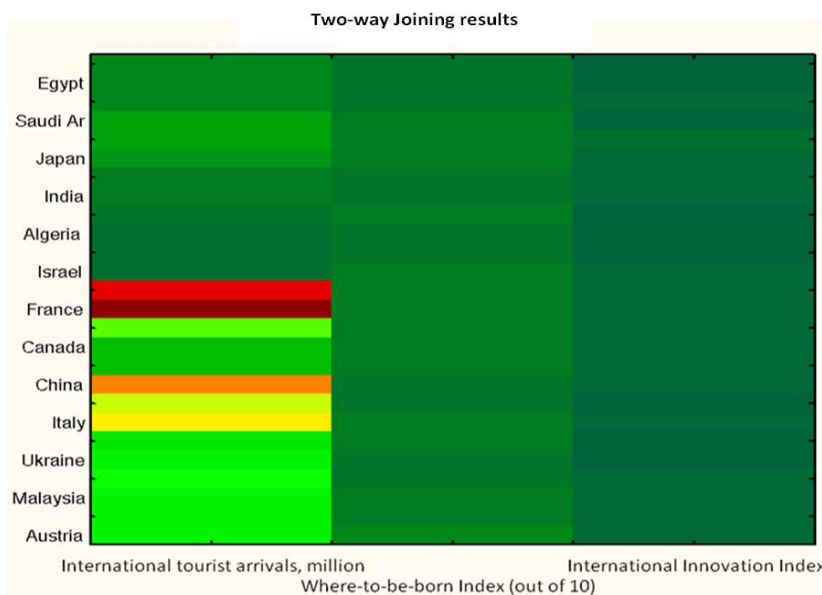


Fig. 2. The results of cluster analysis of countries in terms of investment attractiveness of tourism by using the Two-way Joining method

Conducting a cluster analysis of countries in terms of investment attractiveness of tourism serves as a basis for further discriminant analysis, which makes it possible to build a model of investment attractiveness of each group separately (Table 4),

which will quantitatively describe the impact of each of the selected indicators on the probability of referring a country to the appropriate cluster, the behavior of the indicators within the selected homogeneous groups of countries.

Table 4. Discriminant analysis of countries according to clusterization by k-means method

| Variable                                | Classification        | Functions             | Grouping              | Group 4               |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
|   | G_1:1<br>$p = .11538$ | G_2:2<br>$p = .34615$ | G_3:3<br>$p = .30769$ | G_4:4<br>$p = .23077$ |
| International tourist arrivals, million | 1.04                  | -0.02                 | -0.43                 | -0.62                 |
| Where-to-be-born index (out of 10)      | 14.94                 | 21.34                 | 22.70                 | 23.57                 |
| International innovation index          | -8.88                 | -14.44                | -15.39                | -16.86                |
| Constant                                | -83.95                | -68.63                | -68.60                | -72.36                |

Based on the data of Table 4 we write a system of linear multiple regression equations of the dependence of probability of belonging to a certain cluster in terms of investment attractiveness of innovative tourism sector on the factors of its quantitative assessment:

$$\begin{cases}
 p_{G1} = -83.95 + 1.03ITA + 14.93WI - 8.88III \\
 p_{G2} = -68.63 + 0.01ITA + 21.33WI - 14.43III \\
 p_{G3} = -68.59 + 0.42ITA + 22.70WI - 15.38III \\
 p_{G4} = -72.35 + 0.61ITA + 23.5615WI - 16.86III,
 \end{cases} \quad (2)$$

where  $p_{G1}$  ( $p_{G2}$ ,  $p_{G3}$ ,  $p_{G4}$ ) is the probability of belonging to the first (respectively, second, third, fourth) group of countries in terms of investment attractiveness of the innovation tourism industry – green tourism; *ITA* – international tourist flows; *WI* – quality of life index; *III* – international innovation index.

The analysis of the equation (2) leads to the following conclusions: the growth of the indicator of international tourist flows is accompanied by the increased probability of the considered country belonging to the first cluster and, accordingly, reduced probability for others. A direct impact on the effective indicator is observed within all selected clusters in terms of the quality of life index, while the biggest increase in the probability of belonging to the cluster is observed in the fourth cluster (the value is 23.56). The opposite trend is typical for the international innovation index,

which with its growth leads to a decrease in the effective indicator.

We will consider the clusterization of countries on the basis of Table 5. Thus, each country is characterized by four probabilities of belonging to each cluster indicating the simultaneous use by countries of different combinations of behavior models, when the biggest priority is given to the model, the probability of use of which becomes more likely. Consequently, Morocco, which is a representative of the group of countries “Africa and the Middle East”, is assigned to the fourth cluster, as the probability takes on the highest value at 0.5166. At the same time, this country is characterized by the simultaneous use of behavior models of the second and third cluster as evidenced by probabilities 0.007 and 0.4761. The US, China, France, Italy are the countries that mainly use behavior models of only one cluster.

Table 5. Clusterization of countries in terms of investment attractiveness of innovative tourism

| Case             | Posterior probabilities (Spreadsheet 1. sta) Incorrect classifications are marked with* |                       |                       |                       |                       |
|------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|
|                  | Observed classif.   | G_1:1<br>$p = .11538$ | G_2:2<br>$p = .34615$ | G_3:3<br>$p = .30769$ | G_4:4<br>$p = .23077$ |
| *Morocco         | G_3:3   | 0                     | 0.007288              | 0.476102              | 0.516611              |
| South Africa     | G_3:3   | 0                     | 0.015395              | 0.711966              | 0.272639              |
| *Tunisia         | G_4:4   | 0                     | 0.002927              | 0.536344              | 0.460728              |
| Algeria          | G_4:4   | 0                     | 0.000053              | 0.116393              | 0.883554              |
| Saudi Arabia     | G_3:3   | 0                     | 0.017424              | 0.607962              | 0.374615              |
| *Egypt           | G_3:3   | 0                     | 0.004641              | 0.451937              | 0.543422              |
| Jordan           | G_4:4   | 0                     | 0.000691              | 0.355294              | 0.644015              |
| *Israel          | G_4:4   | 0                     | 0.000312              | 0.513681              | 0.486008              |
| United States    | G_1:1   | 1                     | 0                     | 0                     | 0                     |
| Mexico           | G_2:2   | 0                     | 0.683381              | 0.292690              | 0.023929              |
| Canada           | G_3:3   | 0                     | 0.066920              | 0.843642              | 0.089438              |
| Argentina        | G_4:4   | 0                     | 0.000064              | 0.103684              | 0.896252              |
| China            | G_1:1   | 0.999891              | 0.000109              | 0                     | 0                     |
| Thailand         | G_2:2   | 0                     | 0.945810              | 0.053053              | 0.001137              |
| Malaysia         | G_2:2   | 0                     | 0.930035              | 0.069264              | 0.000701              |
| Hong Kong, China | G_2:2   | 0                     | 0.839854              | 0.158663              | 0.001482              |
| South Korea      | G_3:3   | 0                     | 0.055567              | 0.904746              | 0.039687              |
| Japan            | G_3:3   | 0                     | 0.020904              | 0.884550              | 0.945546              |
| *India           | G_4:4   | 0                     | 0.004131              | 0.556275              | 0.439594              |
| France           | G_1:1   | 1                     | 0                     | 0                     | 0                     |
| Italy            | G_2:2   | 0.000045              | 0.999910              | 0.000045              | 0                     |
| Turkey           | G_2:2   | 0                     | 0.999281              | 0.000716              | 0.000003              |
| Germany          | G_2:2   | 0                     | 0.981035              | 0.018843              | 0.000121              |
| Austria          | G_2:2   | 0                     | 0.541988              | 0.439473              | 0.018539              |
| Ukraine          | G_2:2   | 0                     | 0.946038              | 0.052360              | 0.001601              |
| Greece           | G_3:3   | 0                     | 0.143118              | 0.712844              | 0.144039              |

Evaluation of investment attractiveness of innovative tourism requires more detailed analysis

of foreign direct investment, urban population, trade in services, agricultural land.

Table 6. Discriminant analysis of countries according to clusterization by the *k*-means method

| Variable                     | Functions classification |                       |                       |                       |
|------------------------------|--------------------------|-----------------------|-----------------------|-----------------------|
|                              | G_1:1<br>$p = .25000$    | G_2:2<br>$p = .25000$ | G_3:3<br>$p = .25000$ | G_4:4<br>$p = .25000$ |
| Forest area (% of land area) | -437.3                   | -86.0                 | -164.2                | -180.6                |

Table 6 (cont.). Discriminant analysis of countries according to clusterization by the *k*-means method

| Variable   | Functions classification |                       |                       |                       |
|--|--------------------------|-----------------------|-----------------------|-----------------------|
|  | G_1:1<br>$p = .25000$    | G_2:2<br>$p = .25000$ | G_3:3<br>$p = .25000$ | G_4:4<br>$p = .25000$ |
| CO <sub>2</sub> emissions (metric tons per capita)         | 85.6                     | 98.2                  | 57.0                  | 50.1                  |
| Foreign direct investment, net inflows (BOP, current US\$) | -0.7                     | -0.6                  | -0.5                  | -0.6                  |
| Urban population (% of total)                              | 187.0                    | 70.5                  | 96.6                  | 109.6                 |
| Trade in services (% of GDP)                               | 242.0                    | 140.6                 | 152.9                 | 162.1                 |
| Agricultural land (% of land area)                         | 697.8                    | 417.1                 | 477.5                 | 507.1                 |
| Constant   | -29234.2                 | -12046.3              | -14192.7              | -16197.4              |

Based on the data of Table 6 we write a system of linear multiple regression equations of the dependence of probability of belonging to a certain

cluster in terms of investment attractiveness of innovative tourism sector on the factors of its quantitative assessment:

$$\begin{cases} p_{G1} = -29234.2 - 437.3FA + 85.6Ce - 0.7FDI + 187.0UP + 242.0Ts + 697.8AL \\ p_{G2} = -12046.3 - 86.0FA + 98.2Ce - 0.6FDI + 70.5UP + 140.6Ts + 417.1AL \\ p_{G3} = -14192.7 - 164.2FA + 57.0Ce - 0.5FDI + 96.6UP + 152.9Ts + 477.5AL \\ p_{G4} = -16197.4 - 180.6FA + 50.1Ce - 0.6FDI + 109.6UP + 162.1Ts + 507.1AL, \end{cases} \quad (3)$$

where  $p_{G1}$  ( $p_{G2}$ ,  $p_{G3}$ ,  $p_{G4}$ ) is the probability of belonging to the first (respectively, second, third, fourth) group of countries in terms of investment attractiveness of the innovation tourism industry – green tourism; *FA* – forest area; *Ce* – CO<sub>2</sub> emissions; *FDI* – foreign direct investment; *UP* – urban population; *Ts* – trade in services; *AL* – agricultural land.

Thus, by carrying out the analyzing (3) the following conclusions can be made: the growth of the “forest area” indicator by 1 per cent is accompanied by the reduction of integrated indicator of the first cluster (respectively, CO<sub>2</sub> emissions, foreign direct

investment, urban population) by 437.3, 86.0, 164.2 and 180.6. Regarding the impact of “CO<sub>2</sub> emissions”, this indicator takes on the biggest value within the second cluster. Thus, for the first cluster the defining indicators are 1, 3, 4 and 6; for the second cluster – 2, for the third cluster – 5.

### Conclusion

The paper proves the expediency of grouping countries in terms of investment attractiveness of tourist services; it carries out a cluster analysis of 26 countries, which makes it possible to identify four groups, each of which has its own specific characteristics in the field of tourism.

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