

## **RISK ASSESSMENT OF THE CONSUMERS OF TOURIST SERVICES**

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The article presents the analysis of the risk assessment for the consumers of tourism services based on the use of the Saati method, which involves identifying a research problem in the form of a hierarchy, pairwise comparison of factors, and prioritization. The stages of the method are presented, in particular: in the first stage (the studied problem in the form of hierarchy is presented and the hierarchical model of risk assessment of consumers of tourist services is constructed); in the second stage (priorities of the second level criteria are identified and the most important ones are established); in the third stage (on the basis of the matrix of pairwise comparisons, the criteria of the third level are analyzed in relation to the criteria of the second level and their local and global priorities are determined); on the fourth (local priorities for the fourth-level elements relative to the third-level criteria were determined on the basis of the pairwise comparison matrix; on the fifth stage, the global priorities of the fourth-level elements were determined on the basis of the synthesis principle). The problem under study is presented in the form of a hierarchical model, which is based on the typology of consumers of tourist services: inland tourists, inbound tourists, outbound tourists, and the integrated value of tourist risk assessment is formed from: financial risk, which includes the risk of loss of financial resources (funds), price risk, the risk of reliability of the partner (travel agency), force majeure circumstances that led to the loss of financial resources; physical risk that is revealed by the risk of overestimation of own forces (age, health status, etc.), environmental risk (fires, accidents, earthquakes, etc.), risk of accident, political risk (military actions, strikes, terrorist attacks, epidemics, mass diseases, etc.); psychological risk, which is formed at the expense of information risk (incompleteness, reliability of information), the risk of losing time on a tourist trip, the risk of dissatisfaction with the service. The results of the study proved that the highest level of local priorities was noted physical risk of natural and environmental threats, psychological risk – dissatisfaction with the service; a low level of risk describes the financial risk of a partner's reliability. In general, the highest level of risk for consumers of tourist services is observed for outbound tourists and the lowest for inbound tourists.

**Keywords:** tourism services, risk, consumers, method Saati, hierarchy, evaluation.

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### ***Introduction***

The negative impact of the external environment explains and causes the increase of the risks of the consumers of tourism services in Ukraine and abroad. The peculiarity of the tourism activity defines a number of systematic risks, which means that these are the risks of this specific sphere, and which are determined by the peculiarities of institutional development of the tourism sector, the level of tourism culture of the consumers of these

services, by the territory potential etc., and which are quite difficult to consider while consuming. Besides, the risks issue became one of a top priority issues with the beginning of a military operation on the territory of Ukraine. This situation had negative impact on the tourism market and image of the tourism products. The emergence of a new type of risk led to the restrained governmental policy and reduction of business activity of economic entities which may not be taken into account during the



strategic reorientation of the tourism industry.

In order to explain strategic guidelines of the tourism market development it's reasonable to carry out risk assessment of its participants for their timely warning, consideration and compensation.

The most difficult part is that the one-sided vision of benefits and relevant risks of their could be traced from the view of consumers and sellers' of tourism services. The contrast and polarity of the interests of the tourism market subjects is explained by underestimation of the tourism risks of the other side that is a contractual partner. Besides, the problem of tourism market assessment is poorly structured as it cannot be properly explained, and in addition to that not all the characteristic features of the risks are known as there is a fact of human subjectivity. The abovementioned facts prove and determine the relevance and expediency of the study.

**Analysis of recent research and publications**

The issues of the tourism industry development have been an object of the research of the following scientists: Frolova Yu. V., Shymanska V. V., Shmahelska M.O., Tsokhla S.Iu., O. O. Beidyk, N. O. Novosad, Kiptenko V. K., Liubitseva O.O., Komlichenko O.O., Kudla N. Ye. and others. Nevertheless, the problem of assessing the risk for the consumers of tourism services in the new conditions of the country's development requires further study.

**The Purpose of the Paper**

The purpose of the article is risks assessment from the point of view of the consumers of tourism services in this sector of economy within the new

conditions of its development.

**Presentation of the main material**

Let's estimate the degree of the risk for consumers of tourism services using the Saati method. According to the author's point of view, this method allows to consider all the criteria for risk assessment. But first, let's demonstrate the stages of the method (Fig.1) in order to determine their sequence in the assessment process.

In the first stage we determine the risks for the consumers of tourism services.

The following scale of relative weight of the studied objects is used to implement the Saati method table 1. Thus, we evaluate the risk level of the consumers of tourism services using the method of hierarchy analysis. According to the author's point of view, this method allows to consider all the criteria required for the risk assessment as a poorly structured category.

According to Fig.1, the first stage of the analysis represents the studied problem in the form of a hierarchy model (Fig. 2) which consists of four levels of a hierarchy. The first level contains the main purpose of the study, the second level – the factors, the third level – the criteria, the fourth level – the alternatives.

According to Fig. 2 the hierarchical model is based on the types of the consumers of tourism services: domestic tourists, outbound tourists, incoming tourists, and the integrated value of tourism risk assessment include the following:

– Financial risk. It includes the risk of losing financial resources (funds), price risk, partner risk

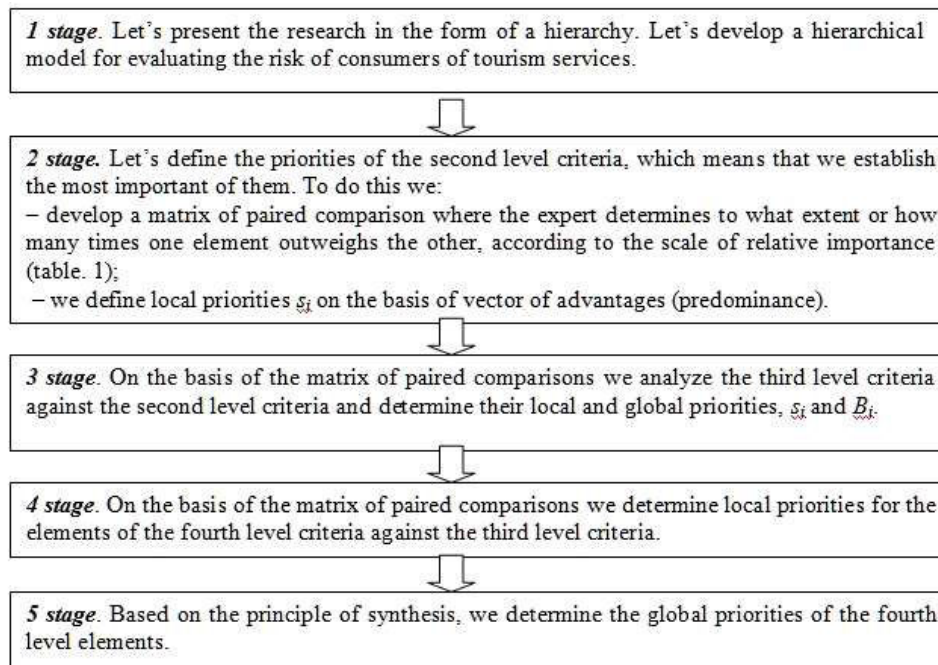


Fig. 1. Stages of Saati method (developed by the author with the use [4,5])

Table 1

The scale of the relative weight of the compared objects

The level of importance		Definition
Basic estimation of the object	Intermediate estimation of the object	
1	2	Comparable object are equivalent
3	4	i object prevails object j
5	6	i object is more important than object j
7	8	i object is much more important than object j
9	–	i object is absolutely more important than object j

Source: [4]

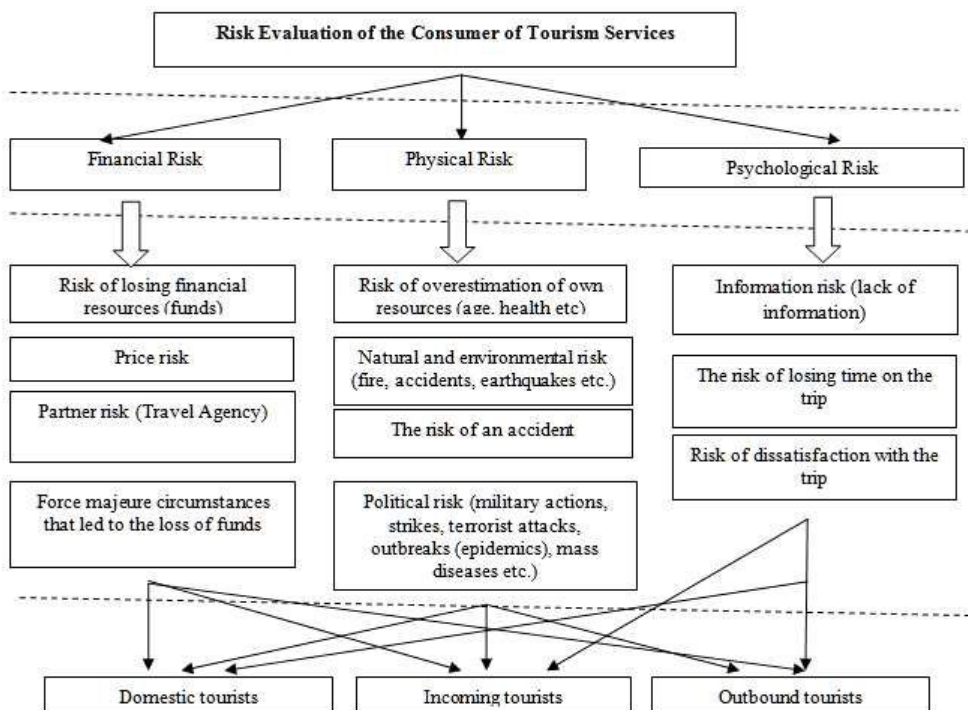


Fig. 2. A hierarchical model for evaluating the risk of consumers of tourism services (developed by the author)

Table 2

The matrix of pairwise comparisons for the second level factors

Elements of the second level	Financial risk	Physical risk	Psychological risk	Vector of advantages (predominance), $\bar{S}_i$	Local priority, $S_i$
Financial risk	1	0.111	0.250	0.303	0.063
Physical risk	9	1	5	3.557	0.743
Psychological risk	4	0.200	1	0.928	0.194
Sum of the elements $a_{ij}$	14	1.311	6.250	4.788	1

Source: developed by the author

(travel agency), force majeure circumstances which led to the loss of funds;

– Physical risk which is disclosed in the following risks: risk of overestimation of own resources (age, health etc.), natural and environmental risk (fire, accidents, earthquakes etc.),

an accident risk, political risk (military actions, strikes, terrorist attacks, outbreaks (epidemics), mass diseases etc.);

– Psychological risk which is based on the information risk (lack and unreliability of information), the risk of losing time on the trip, risk

of dissatisfaction with the trip.

The presented typology of the risks for consumers of tourism services is limited but reflects the brightest and evident cases of its performance.

Let's determine the local priorities of the second level that is define the most important of them. For this reason let's develop a matrix of pairwise comparisons for the second level factors (table 2).

Let's calculate the proper vector of the local priorities with the help of the formula

$$S_i = \frac{\bar{s}_i}{\sum_{i=1}^n \bar{s}_i},$$

де  $\bar{s}_i$  – Vector of advantages:  $\bar{s}_i = \sqrt[n]{\prod_{j=1}^n a_{ij}}$ ,  $i, j = \overline{1, n}$ ,

where  $a_{ij}$  – i element of j column of the matrix of pairwise comparisons, n – number of the compared criteria.

The correspondent calculations of the vector of advantages for the matrix of paired comparisons (table. 2):

$$\bar{s}_1 = \sqrt[3]{1 \cdot 1/9 \cdot 1/4} = 0.303, \quad \bar{s}_2 = \sqrt[3]{9 \cdot 1 \cdot 5} = 3.557, \\ \bar{s}_3 = \sqrt[3]{4 \cdot 1/5 \cdot 1} = 0.928.$$

$$\sum_{i=1}^3 \bar{s}_i = 0.303 + 3.557 + 0.928 = 4.788.$$

Local priorities,  $S_i$ :

$$s_1 = \frac{0.303}{4.788} = 0.063; \quad s_2 = \frac{3.557}{4.788} = 0.743;$$

$$s_3 = \frac{0.928}{4.788} = 0.194;$$

$$\sum_{i=1}^3 s_i = 0.063 + 0.743 + 0.194 = 1.$$

Thus, we can conclude that the most important factor is Physical risk as its weight is 0.743.

Then, we calculate value of consistency of exposition that is index and consistency ratio. Index of consistency ( $I_{y3}$ ) is calculated with the help of the following function [4, 5]:

$$I_{y3} = \frac{\lambda_{\max} - n}{n - 1},$$

where  $\lambda_{\max}$  – maximum proper number of the matrix of pairwise comparisons.

The calculated value of the Index of consistency is compared with the standard value (table 3 [4]), and if the following condition is fulfilled:  $I_{y3} \leq 0.1 \cdot I_{ET}$ , then we can make a conclusion that the results of the expert's survey or jury of opinion are satisfactory.

The maximum number of the proper number of the matrix of pairwise comparisons is defined in

the following way:  $\lambda_{\max} = \sum_{i=1}^n u_i \cdot s_i$ , де  $u_i = \sum_{j=1}^n a_{ij}$ . Let's

calculate the vector-range  $u_i$  for every column of the matrix of pairwise comparisons:

$$u_1 = \sum_{i,j=1}^3 1 + 9 + 4 = 14;$$

$$u_2 = \sum_{i,j=1}^3 1/9 + 1 + 1/5 = 1.311;$$

$$u_3 = \sum_{i,j=1}^3 1/4 + 5 + 1 = 6.250;$$

$$\lambda_{\max} = 0.063 \cdot 14 + 0.743 \cdot 1.311 + \\ + 0.194 \cdot 6.250 = 3.071.$$

Then, the index of consistency is:

$I_{y3} = \frac{3.071 - 3}{3 - 1} = 0.036$ , let's compare it with the standard value:  $0.036 \leq 0.058 (0.1 \cdot 0.58)$ . As the condition is fulfilled then we can conclude that the obtained results are satisfactory.

In order to define the probability of the obtained results let's calculate the consistency ratio which is determined by dividing the index of consistency by

its standard value:  $I_{\text{СПИБ.УЗГ}} = \frac{I_{y3}}{I_{ET}} = \frac{0.036}{0.58} = 0.061$ .

Thus, the consistency ratio is 6.1% of its standard value. It means that the obtained results are probable results. As the consistency ratio should be within 10% and not exceed the critical value – 20% [4].

Table 3

Reference value of the consistency index

Number of the analyzed objects (n)	3	4	5	6	7	8	9	10
Reference value ( $I_{ET}$ )	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

Source: [4]

Table 4

Matrix of the paired comparisons by the factor «Financial risk»

Compared elements	Risk of losing financial resources (funds)	Price risk	Partner risk	Force majeure circumstances	Vector of advantages (predominance), $\bar{S}_i$	Local priority, $S_i$
Risk of losing financial resources (funds)	1	3	0.25	0.5	0.783	0.161
Price risks	0.333	1	0.333	0.333	0.439	0.090
Partner risk	4	3	1	3	2.449	0.504
Force majeure circumstances	2	3	0.333	1	1.189	0.245
The sum of the elements $a_{ij}$	7.33	10.00	1.92	4.83	4.860	1

Source: developed by the author

In the next stage let's analyze the third level criteria with the respect to each second level factor. The results are presented in the table 4.

The data and calculations presented in the table 4 prove and demonstrate that the most important is Partner risk, the weight coefficient of which equals 0.504.

Let's determine the value of consistency of exposition. But let's calculate the maximum number of the matrix of pairwise comparisons first –  $\lambda_{max}=4.232$ , then, the index of consistency equals:

$I_{v3} = \frac{\lambda_{max} - n}{n - 1} = 0.077$ . As the condition is fulfilled  $0.077 \leq 0.09 (0.1 \cdot 0.9)$  then we can make a conclusion that the obtained results are satisfactory.

The consistency ratio  $\left( I_{\text{числ.в3г.}} = \frac{I_{v3}}{I_{\text{ET}}} = 0.086 \right)$  is 8.6% of its standard value, and this means that the obtained results could be classified as probable results as the calculated value is within 10%.

We analyze the following criteria the same way we analyzed the abovementioned criteria and determine their local priorities. We demonstrate the calculated results in the tables 5–6.

The data demonstrated in the table 5 show that the Natural and environmental risk is the most important. Its weight coefficient equals 0.482.

Index of consistency is:

Table 5

Matrix of the paired comparisons by the factor «Physical Risk»

Compared elements	Risk of overestimation of own resources	Natural and environmental risk	The risk of an accident	Political risk	Vector of advantages (predominance), $\bar{S}_i$	Local priority, $S_i$
Risk of overestimation of own resources	1	0.200	0.333	0.50	0.427	0.088
Natural and environmental risk	5	1	3	2	2.340	0.482
The risk of an accident	3	0.333	1	0.25	0.707	0.145
Political risk	2	0.5	4	1	1.414	0.291
The sum of the elements $a_{ij}$	11.00	2.03	8.33	3.75	4.889	1

Source: developed by the author

Table 6

Matrix of the paired comparisons by the factor «Psychological Risk»

Compared elements	Information risk	The risk of losing time on the trip	Risk of dissatisfaction with the trip	Vector of advantages (predominance), $\bar{S}_i$	Local priority, $S_i$
Information risk	1	0.250	0.200	0.368	0.097
The risk of losing time on the trip	4	1	0.50	1.260	0.333
Risk of dissatisfaction with the trip	5	2	1	2.154	0.570
The sum of the elements $a_{ij}$	10.00	3.25	1.70	3.783	1

Source: developed by the author

$I_{y3} = \frac{\lambda_{max} - n}{n-1} = \frac{4.250-4}{3} = 0.083$ , as the condition is fulfilled  $0.083 \leq 0.09 (0.1 \cdot 0.9)$  then we can make a conclusion that the obtained results are satisfactory. Then, the consistency ratio is

$I_{CPIB.Y3T} = \frac{I_{y3}}{I_{ET}} = \frac{0.083}{0.9} = 0.093$ , that is 9.3% of the standard value, and this means that the obtained results could be classified as probable results as the calculated value is within 10%.

The data presented in the table 6 demonstrate that the Risk of dissatisfaction with the trip is the most important as its weight coefficient equals 0.570.

Index of consistency is:

$I_{y3} = \frac{\lambda_{max} - n}{n-1} = \frac{3.025-3}{3-1} = 0.012$ , as the condition is fulfilled  $0.012 \leq 0.058 (0.1 \cdot 0.58)$  then, we can make a conclusion that the obtained results are satisfactory. Then, the consistency ratio is

$I_{CPIB.Y3T} = \frac{I_{y3}}{I_{ET}} = \frac{0.012}{0.58} = 0.021$ , that is 2.1% of its standard value, so the obtained results could be classified as probable results as its calculated value is within 10%.

Then, we determine global priorities of the third level elements on the synthesis principle:  $B_i = W_i \cdot S_i$ , the results of the calculation are presented below:

$B_1=0.161 \cdot 0.063=0.010$ ;  $B_2=0.090 \cdot 0.063=0.006$ ;

$B_3=0.504 \cdot 0.063=0.032$ ;  $B_4=0.245 \cdot 0.063=0.015$ ;

$B_5=0.088 \cdot 0.743=0.065$ ;  $B_6=0.482 \cdot 0.743=0.358$ ;

$B_7=0.145 \cdot 0.743=0.108$ ;  $B_8=0.291 \cdot 0.743=0.216$ ;

$B_9=0.097 \cdot 0.194=0.019$ ;  $B_{10}=0.128 \cdot 0.194=0.333$ ;

$B_{11}=0.570 \cdot 0.194=0.110$ .

Table 7

Local priorities of the elements of the fourth level by the factor «Financial risk»

Risk of losing financial resources (funds)	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.25	0.14	0.329	0.073
Incoming tourists	4	1	0.2	0.928	0.205
Outbound tourists	7	5	1	3.271	0.722
The sum of the elements $a_{ij}$	12	6.25	1.34	4.529	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.124		0.062	0.107	0.58
Price risk	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.2	0.25	0.368	0.099
Incoming tourists	5	1	0.5	1.357	0.364
Outbound tourists	4	2	1	2.000	0.537
The sum of the elements $a_{ij}$	10	3.2	1.75	3.726	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.094		0.047	0.081	0.58
Partner risk	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.25	0.33	0.437	0.121
Incoming tourists	4	1	0.333	1.101	0.304
Outbound tourists	3	3	1	2.080	0.575
The sum of the elements $a_{ij}$	8	4.25	1.67	3.618	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.217		0.109	0.187	0.58
Force majeure circumstances	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.333	0.20	0.405	0.105
Incoming tourists	3	1	0.333	1.000	0.258
Outbound tourists	5	3	1	2.466	0.637
The sum of the elements $a_{ij}$	9	4.333	1.53	3.872	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.039		0.019	0.033	0.58

Source: developed by the author

Table 8

Local priorities of the elements of the fourth level by the factor «Physical Risk»

Risk of losing financial resources (funds)	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.200	0.20	0.342	0.088
Incoming tourists	5	1	0.500	1.357	0.351
Outbound tourists	5	2	1	2.154	0.556
The sum of the elements $a_{ij}$	11	3.200	1.70	3.854	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.039		0.020	0.034	0.58
Natural and Environmental risk	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.500	0.20	0.464	0.120
Incoming tourists	2	1	0.50	0.794	0.205
Outbound tourists	5	4	1	2.714	0.701
The sum of the elements $a_{ij}$	8	5.500	1.45	3.972	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.103		0.052	0.089	0.58
Risk of an accident	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.143	0.20	0.306	0.079
Incoming tourists	7	1	0.500	1.518	0.392
Outbound tourists	5	2	1	2.154	0.556
The sum of the elements $a_{ij}$	13	3.143	1.70	3.978	–
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.205		0.102	0.177	0.58
Political risk	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.167	0.25	0.347	0.090
Incoming tourists	6	1	0.500	1.442	0.373
Outbound tourists	4	2	1	2.000	0.517
The sum of the elements $a_{ij}$	11	3.167	1.75	3.789	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.069		0.034	0.059	0.58

Source: developed by the author

So, the obtained results allow us to draw a conclusion that the most important third level criteria are Natural and environmental and Political risks.

Let's move on to the next stage where we determine the local priorities of the fourth level elements as for the third level criteria. The results of the calculations are presented in the tables 7 – 9.

According to the obtained results (tables 7–9) based on the assessment of the consistency of experts' expositions we can conclude that the obtained results meet satisfy the requirements of compliance. As for the indexes of consistency the condition is fulfilled  $I_{y3} \leq 0,1 \cdot I_{ET}$  then the value of consistency ration is within 10% or exceeds critical value – 20%.

So, we move on to the last stage, where we determine data global priorities by the fourth level. Applying synthesis principle we estimate them on the basis of the sum of local priorities supplements (applications) of the each element of a given level

to the global priority of the third level elements:

$$Z_i = \sum_{i,j=1}^n d_i \cdot B_i.$$

The results of the study indicate that the highest level of risk for the consumers of tourism services is observed for outbound tourists, and the lowest – for domestic tourists (Fig. 3).

Thus, despite the popularity and significantly high quality of the tourism services abroad, assessment of the relevant risk demonstrate the highest level of the risk for outbound tourists. This can also be explained by the level of literacy of consumers of tourism services in the knowledge of their rights, possibilities to use them, difference in mentality and culture, knowledge of a foreign language or trip experience abroad.

Let's note that the highest level of local priorities

Table 9

Local priorities of the elements of the fourth level by the factor «Psychological Risk»

Information risk	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.200	0.25	0.368	0.095
Incoming tourists	5	1	0.333	1.186	0.306
Outbound tourists	4	3	1	2.289	0.591
The sum of the elements $a_{ij}$	10	4.200	1.58	3.843	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.174		0.087	0.150	0.58
The risk of losing time on the trip	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.333	0.20	0.405	0.105
Incoming tourists	–	1	0.333	1.000	0.258
Outbound tourists	5	3	1	2.466	0.637
The sum of the elements $a_{ij}$	9	4.333	1.53	3.872	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.039		0.019	0.033	0.58
Risk of dissatisfaction with the trip	Domestic tourists	Incoming tourists	Outbound tourists	Vector of advantages (predominance)	Local priority, $S_i$
Domestic tourists	1	0.250	0.20	0.368	0.095
Incoming tourists	4	1	0.333	1.101	0.284
Outbound tourists	5	3	1	2.466	0.637
The sum of the elements $a_{ij}$	10	4.250	1.53	3.935	1
Evaluation of consistency of assessments	$\lambda_{max}$		$I_{y3}$	$IC_{y3}$	IET
	3.136		0.068	0.118	0.58

Source: developed by the author

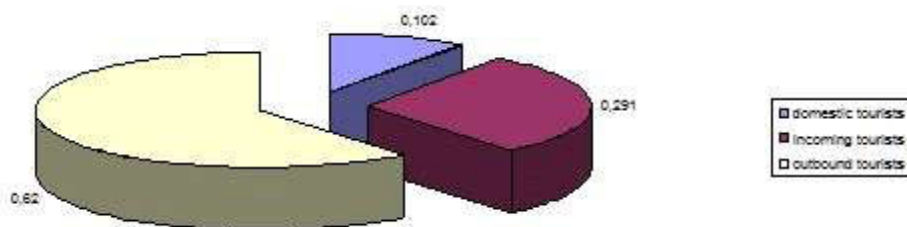


Fig. 3. Assessment of tourism risk for consumers

Source: developed by the author

of the third level to the second level is Physical risk to Natural and environmental risk, psychological risk – to the risk of dissatisfaction with the product or service. It’s necessary to mention that financial side is described as with a low level of risk which is determined by the partner reliability – counteragent of the agreement. The mentioned above confirms the importance of informal factors in the sphere of tourism services. .

Despite the high risk assessment for outbound tourists their value is compensated by the quality of the services provided, that’s why despite a wide range of possible threats, they are in demand. As a strategic goal for tourism development in Ukraine is development of a balance between external and internal tourism, it’s reasonable to correct strategic

tasks in such a way that the aggregate risk of using of tourism services is more or less evenly distributed among the types of tourism. The mentioned information is reasonable to consider in strategic documents.

It’s necessary to mention that the risk in tourism activity – “is the probability of the fact that an enterprise suffers losses or expenses if the managerial decision is not implemented, and if there were some miscalculations or mistakes while making that decision”. Although, it is possible to determine the following types of risks by grouping them as following:

Production (industrial) risk is related to the non-fulfillment by the tourism businesses obligations incurred related to their own activity and is presented by the following types of risks [1,2,3]:



– the risk of refusal of the agreement concluded (related to the clients' refusal from a tourist trip due to any circumstances);

– price risk (the probability of unpredictable financial losses from changes in the price level of services provided);

– bankruptcy risk (related to the probability of a temporal inability of the tourism business to satisfy the creditors' claims and demands);

– operational risk arises from payments delays and offenses due to the nonfulfillment of obligations of the agreements concluded;

– force majeure circumstances (associated with the inability to travel due to the force majeure circumstances (military actions, elemental calamities, epidemics etc.);

Financial risk is characterized by the probability of losses resulting from financial transactions. Financial risks include [1,2,3]:

– the risk of financial losses (is associated with the probability of funds losses resulting from financial transactions);

– tax risk (characterizes a certain uncertainty in the activity of tourism subjects (businesses) related to the unstable governmental e tax policy);

– inflation risk – «is determined by the accuracy level of inflation forecasting and its impact on the outcome of financial and economic activity»;

– currency risk («it is possible when the exchange rates change, and also during the political situation when the exchange rates don't change, but the opportunities of the free currency circulation are limited»).

Investment and innovation risk is characterized by the possibility of financial loss caused by any innovation or investment activity carried out by a tourism business entity. It includes [1,2,3]:

– innovation risk (associated with the development of new tourism services or products);

– credit risk (пов'язаний із несплатою позичальником основного боргу і відсотків, нарахованих за кредит)

– deflation risk (the risk that during deflation the following occurs: the price level reduces, the slowdown of economic conditions worsening and income reduction slowdown);

– selective risk (Latin *selectio* – choice, selection – is the risk of a wrong choice of capital investment, securities for investments in comparison with other types of securities while forming an investment portfolio).

Insurance risk is a prerequisite for the occurrence of an insurance event, which means that it possesses the features of accidental and probable character to which they belong [1,2,3]:

– the risk associated with the loss of material goods (characterizes the probability of material goods

loss of the client's as a result of a tourist trip or unforeseen situations during the trip);

– political risk (the risk of any political event occurrence (war, revolution, rebellion, etc), which may lead to a negative impact of a business and economic performance of tourism business entities);

– environmental risk (considered as the probability of emergency or unfavorable weather conditions during a tourist trip);

– transport risk (related to transport operations that is as a result of tourists transfer during a tourist trip);

– technogenic risk техногенний ризик (related with the probability of damage water supply (plumbing) and heating system accidents, electrical discharge, other accidents etc.)

### Conclusions

Despite the popularity and much higher quality of tourist services abroad, the relevant risk assessments demonstrate the highest level for outbound tourists. The mentioned facts could be also explained by the literacy level of the consumers of tourist services concerning their rights, possibilities to use them, and difference in mentality and culture.

Let's note that the highest level of local priorities of the third level to the second level has Physical risk to natural and environmental threats, psychological risk – dissatisfaction with the product or service. Let's mention that physical side is described with a low level of risk, which is determined by partner reliability – counteragent of the agreement. It proves one more time that the importance of non-formal factors in the sphere of tourist services.

### REFERENCES

1. Denysenko, A.V. (2013). *Osoblyvosti isnuichykh pidkhodiv do klasyfikatsii turystychnykh ryzykiv ta yikhonii vplyv na turystychnu diialnist* [Features of existing approaches to the classification of tourism risks and their impact on tourism activities]. URL: file:///C:/Users/Downloads/vditb\_2013\_17\_37%20(1).pdf [in Ukrainian].
2. Tiazhova, M. *Vydy ryzykiv v turystychnomu biznesi* [Types of risks in tourism business]. URL: [http://infotour.in.ua/tour\\_risk.htm](http://infotour.in.ua/tour_risk.htm) [in Ukrainian].
3. *Ryzyky v turystychnii diialnosti* [Risks in the tourism activity]. URL: <http://infotour.in.ua/shkola3-3.htm> [in Ukrainian].
4. Trunova, O. V. (2013) *Zastosuvannia metodu Saati pry pryiniatti upravlinskykh rishen* [Application of the Saati method in making managerial decisions]. *Visnyk Chernihivskoho natsionalnoho pedahohichnoho universytetu. Pedahohichni nauky. – Bulletin of Chernihiv National Pedagogical University. Pedagogical Sciences. Vol. 108.1.* URL: [http://nbuv.gov.ua/UJRN/Vchdpu\\_2013\\_1\\_108\\_34](http://nbuv.gov.ua/UJRN/Vchdpu_2013_1_108_34) [in Ukrainian].

5. Yevstrat, D. I., & Kushneruk, Yu. I. (2012) *Zastosuvannia metodu analizu ierarhii dlia otsinky marketynhovoї aktyvnosti torhovelnikh pidpriemstv* [Application of the hierarchy analysis method for estimation of marketing activity of trading enterprises]. URL: [http://www.problecon.com/export\\_pdf/problems-of-economy-2012-2\\_0-pages-66\\_71.pdf](http://www.problecon.com/export_pdf/problems-of-economy-2012-2_0-pages-66_71.pdf) [in Ukrainian].

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## ОЦІНЮВАННЯ РИЗИКУ СПОЖИВАЧІВ ТУРИСТИЧНИХ ПОСЛУГ

*Покатаєва О.В., Трохимець О.І.*

У статті здійснено оцінювання ризику споживачів туристичних послуг на основі використання методу Саати, що передбачає визначення проблеми дослідження у вигляді ієрархії, попарного порівняння чинників і визначення пріоритетів. Представлено етапи методу, зокрема: на першому етапі (наведено досліджувану проблему у вигляді ієрархії та побудовано ієрархічну модель оцінювання ризику споживачів туристичних послуг); на другому етапі (визначено пріоритети критеріїв другого рівня та встановимо найбільш важливий із них); на третьому етапі (на основі матриці попарних порівнянь проаналізовано критерії третього рівня відносно критеріїв другого рівня та визначено їх локальні та глобальні пріоритети); на четвертому етапі (на основі матриці попарних порівнянь визначено локальні пріоритети для елементів четвертого рівня відносно критеріїв третього рівня; на п'ятому етапі (на основі принципу синтезу визначено глобальні пріоритети елементів четвертого рівня). Досліджувану проблему надано у вигляді ієрархічної моделі, яка побудована на основі типології споживачів туристичних послуг: внутрішні туристи, в'їзні туристи, виїзні туристи, а інтегроване значення оцінювання туристичного ризику сформовано із: фінансового ризику, до якого віднесено ризик втрати фінансових ресурсів (коштів), цінний ризик, ризик щодо надійності партнера (тур. агентства), форс-мажорні обставини, що призвели до втрати фінансових коштів; фізичного ризику, що розкрито через ризик переоцінки власних сил (вік, стан здоров'я тощо), природно-екологічний ризик (пожежі, аварії, землетруси тощо), ризик настання нещасного випадку, політичний ризик (військові дії, страйки, теракти, епідемії, масові захворювання тощо); психологічного ризику, який сформовано за рахунок інформаційного ризику (неповнота, достовірність інформації), ризику втрати часу на туристичну поїздку, ризику незадоволеності послугою. Результати здійсненого дослідження довели, що найвищий рівень локальних пріоритетів відзначено фізичний ризик щодо природно-екологічних загроз, психологічний ризик – незадоволеність послугою; незначним рівнем ризику описується фінансовий ризик щодо надійності партнера. Загалом, найвищий ступінь ризику для споживачів туристичних послуг спостерігається для виїзних туристів, а найнижчий для внутрішніх туристів.

**Ключові слова:** туристичні послуги, ризик, споживачі, метод Саати, ієрархія, оцінювання.

## ОЦЕНКА РИСКА ПОТРЕБИТЕЛЕЙ ТУРИСТИЧЕСКИХ УСЛУГ

*Покатаева О.В., Трохимец Е.И.*

В статье осуществлена оценка риска потребителей туристических услуг на основе использования метода Саати, предусматривающего определение проблемы исследования в виде иерархии, парного сравнения факторов и определения приоритетов. Представлены этапы метода, в частности: на первом этапе (приведено исследуемую проблему в виде иерархии и построено иерархическую модель оценки риска потребителей туристических услуг); на втором этапе (определены приоритеты критериев второго уровня и установим наиболее важный из них); на третьем этапе (на основе матрицы парных сравнений проанализированы критерии третьего уровня относительно критериев второго уровня и определены их локальные и глобальные приоритеты); на четвертом этапе (на основе матрицы парных сравнений определены локальные приоритеты для элементов четвертого уровня относительно критериев третьего уровня); на пятом этапе (на основе принципа синтеза определены глобальные приоритеты элементов четвертого уровня). Исследуемая проблема представлена в виде иерархической модели, построенной на основе типологии потребителей туристических услуг: внутренние туристы, въездные туристы, выездные туристы, а интегрированное значение оценки туристического риска сформировано с: финансового риска, к которому относится риск потери финансовых ресурсов (средств), ценовой риск, риск по надежности партнера (тур. агентства), форс-мажорные обстоятельства, которые привели к потере финансовых средств; физического риска, который возникает из-за риска переоценки собственных сил (возраст, состояние здоровья и т.п.), природно-экологического риска (пожара, аварии, землетрясения и т.д.), риск наступления несчастного случая, политического риска (военные действия, забастовки, теракты, эпидемии, массовые заболевания и т.п.); психологического риска, который сформирован за счет информационного риска (неполнота, достоверность), риска потери времени на поездку, риска неудовлетворенности услугой. Результаты проведенного исследования показали, что высокий уровень локальных приоритетов отмечено физический риск по природно-экологическим угрозам, психологический риск – неудовлетворенность услугой; незначительным уровнем риска описывается финансовый риск по надежности партнера. В общем, высшая степень риска для потребителей туристических услуг наблюдается для выездных туристов, а самый низкий для внутренних туристов.

**Ключевые слова:** туристические услуги, риск, потребители, метод Саати, иерархия, оценки.

## RISK ASSESSMENT OF HTE CONSUMERS OF TOURIST SERVICES

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*The article presents the analysis of the risk assessment for the consumers of tourism services based on the use of the Saati method, which involves identifying a research problem in the form of a hierarchy, pairwise comparison of factors, and prioritization. The stages of the method are presented, in particular: in the first stage (the studied problem in the form of hierarchy is presented and the hierarchical model of risk assessment of consumers of tourist services is constructed); in the second stage (priorities of the second level criteria are identified and the most important ones are established); in the third stage (on the basis of the matrix of pairwise comparisons, the criteria of the third level are analyzed in relation to the criteria of the second level and their local and global priorities are determined); on the fourth (local priorities for the fourth-level elements relative to the third-level criteria were determined on the basis of the pairwise comparison matrix; on the fifth stage, the global priorities of the fourth-level elements were determined on the basis of the synthesis principle). The problem under study is presented in the form of a hierarchical model, which is based on the typology of consumers of tourist services: inland tourists, inbound tourists, outbound tourists, and the integrated value of tourist risk assessment is formed from: financial risk, which includes the risk of loss of financial resources (funds), price risk, the risk of reliability of the partner (travel agency), force majeure circumstances that led to the loss of financial resources; physical risk that is revealed by the risk of overestimation of own forces (age, health status, etc.), environmental risk (fires, accidents, earthquakes, etc.), risk of accident, political risk (military actions, strikes, terrorist attacks, epidemics, mass diseases, etc.); psychological risk, which is formed at the expense of information risk (incompleteness, reliability of information), the risk of losing time on a tourist trip, the risk of dissatisfaction with the service. The results of the study proved that the highest level of local priorities was noted physical risk of natural and environmental threats, psychological risk – dissatisfaction with the service; a low level of risk describes the financial risk of a partner's reliability. In general, the highest level of risk for consumers of tourist services is observed for outbound tourists and the lowest for inbound tourists.*

**Keywords:** tourism services, risk, consumers, method Saati, hierarchy, evaluation.

## REFERENCES

1. Denysenko, A.V. (2013). *Osoblyvosti isnuiuchykh pidkhodiv do klasyfikatsii turystychnykh ryzykiv ta yikhonii vplyv na turystychnu diialnist* [Features of existing approaches to the classification of tourism risks and their impact on tourism activities]. URL: file:///C:/Users/Downloads/vditb\_2013\_17\_37%20(1).pdf [in Ukrainian].
2. Tiazhova, M. *Vydy ryzykiv v turystychnomu biznesi* [Types of risks in tourism business]. URL: [http://infotour.in.ua/tour\\_risk.htm](http://infotour.in.ua/tour_risk.htm) [in Ukrainian].
3. *Ryzyky v turystychnii diialnosti* [Risks in the tourism activity]. URL: <http://infotour.in.ua/shkola3-3.htm> [in Ukrainian].
4. Trunova, O. V. (2013) Zastosuvannia metodu Saati pry pryiniatti upravlinskykh rishen [Application of the Saati method in making managerial decisions]. *Visnyk Chernihivskoho natsionalnoho pedahohichnoho universytetu. Pedahohichni nauky. – Bulletin of Chernihiv National Pedagogical University. Pedagogical Sciences. Vol. 108.1.* URL: [http://nbuv.gov.ua/UJRN/Vchdp-uP\\_2013\\_1\\_108\\_34](http://nbuv.gov.ua/UJRN/Vchdp-uP_2013_1_108_34) [in Ukrainian].
5. Yevstrat, D. I., & Kushneruk, Yu.I. (2012) *Zastosuvannia metodu analizu ierararkhii dlia otsinky marketynhovoï aktivnosti torhovelynykh pidpryemstv* [Application of the hierarchy analysis method for estimation of marketing activity of trading enterprises]. URL: [http://www.problecon.com/export\\_pdf/problems-of-economy-2012-2\\_0-pages-66\\_71.pdf](http://www.problecon.com/export_pdf/problems-of-economy-2012-2_0-pages-66_71.pdf) [in Ukrainian].