INFORMATION SYSTEM FOR DIAGNOSTIC COMPETITIVENESS OF THE HOSPITALITY INDUSTRY OF THE REGIONS OF UKRAINE

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Abstract. The purpose of this article is to study the main problems and prospects of ensuring the competitiveness of the hospitality industry of the regions of Ukraine in modern conditions, taking into account international experience in the context of deepening integration ties. The work carried out a diagnosis of the level of competitiveness of the hospitality industry of the regions of Ukraine, based on the developed information system of indicators for assessing the conditions of the competitiveness of the hospitality industry of the region and the formed matrix of the competitiveness of the hospitality industry of the region. A comparison was made of the conditions for ensuring competitiveness, the level of competitive advantages and the level of competitiveness of the hospitality industry of the regions of the state in the pre-war period, as well as the diagnosis of the competitiveness of the hospitality industry of the regions of the state was carried out. The positions of the regions in the pre-war and war periods in terms of the level of competitiveness and availability of tourism potential were determined. A matrix for the selection of target indicators of the integration strategy of regions of Ukraine that have preserved their tourist potential is proposed. The results of the study revealed the main problems of ensuring the competitiveness of the hospitality industry in the regions of Ukraine, and highlighted the potential prospects of the studied processes taking into account the conditions of European integration.

Keywords: information system, competitiveness, hospitality industry

SYSTEM INFORMATYCZNY DLA DIAGNOSTYKI KONKURENCYJNOŚCI BRANŻY GOSPODARCZEJ REGIONÓW UKRAINY

Streszczenie. Celem artykułu jest zbadanie głównych problemów i perspektyw zapewnienia konkurencyjności branży hotelarskiej regionów Ukrainy we współczesnych warunkach, z uwzględnieniem doświadczeń międzynarodowych w kontekście pogłębiania więzi integracyjnych. W pracy przeprowadzono diagnozę poziomu konkurencyjności branży hotelarskiej regionów Ukrainy na podstawie opracowanego systemu informacyjnego wskaźników oceny warunków konkurencyjności branży hotelarskiej regionu oraz utworzonej macierzy konkurencyjności branży hotelarskiej regionu. Dokonano porównania warunków zapewnienia konkurencyjności, poziomu przewag konkurencyjnych oraz poziomu konkurencyjności branży hotelarskiej regionów państwa w okresie przedwojennym oraz diagnozy konkurencyjności branży hotelarskiej regionów stanu została przeprowadzona. Określono pozycje regionów w okresie przedwojennym i wojennym pod względem poziomu konkurencyjności i dostępności potencjału turystycznego. Zaproponowano macierz doboru wskaźników docelowych strategii integracji regionów Ukrainy, które zachowały swój potencjał turystyczny. Wyniki badania ujawniły główne problemy zapewnienia konkurencyjności branży hotelarskiej w regionach Ukrainy, a także zwróciły uwagę na potencjalne perspektywy badanych procesów z uwzględnieniem uwarunkowań integracji europejskiej.

Słowa kluczowe: system informacyjny, konkurencyjność, branża hotelarska

Introduction and literature review

The hospitality industry in the regions of Ukraine is represented by a significant tourist potential, wide specialization, the influence of a number of specific factors, and therefore special attention should be paid to the problems of determining the possibilities of competitive development of the studied industry in the regions based on the formation of an information system for the diagnosis of the studied processes. Each territory has its own special socio-economic and resource potential, competitive advantages, a number of factors that influence the development of the hospitality industry in the regions, accelerating or slowing it down. Today in Ukraine, destructive factors of influence prevail (destruction of infrastructure and a number of historical and cultural monuments in many regions of the country due to Russia's military aggression against Ukraine, the spread of pandemics and epidemics, natural and man-made cataclysms, etc.). However, it is the hospitality industry that can become the driving force of the rapid recovery of the regions, provided the appropriate level of ensuring its competitiveness requires the formation of an information system for the study of these processes.

The study of theoretical, methodological aspects and practical principles of ensuring the competitiveness of the hospitality industry of the regions is the subject of research of a number of scientific schools. Both Ukrainian and foreign practitioners and scientists made a significant contribution to the solution of these issues. In particular, certain aspects of ensuring the competitiveness of products and services of the hospitality industry on the basis of sustainable development are the object of research by Holod A., Honcharenko M., Nikyga O., Yevdoshchenko O. [5], Gorina G. [3], Tkachenko T. [14]. In terms of various types of associations of business entities with the aim of ensuring the competitiveness of the hospitality industry,

this issue is investigated in the works of Hoblyk V., Papp V. [4], and Mikula N. [7].

The global level of competitiveness of products and services of the hospitality industry is studied by such scientists as Baula O., Liulak O., Chepurda L., Chepurda A., Zelinska O. [1], Smirnov I. [12], Yukhnovska J. [17]. At the level of national competitiveness of products and services of the hospitality industry, research was carried out by such scientists as Shtuler I. [13], Bosovska M. [2]., Nikolaychuk O. [9], Kaplina T., Kaplina A [6], Shykina O. [11]. The regional level of competitiveness is studied in the works of scientists Nezdoyminov S., Baldzhy M., Kniazhkovska H. [8], Vakhovich I., Smal B. [16].

Accordingly, the presence of an analytical base actualizes the issue of modeling diagnostics of the competitiveness of the hospitality industry in the regions of Ukraine. The basis of the work is the study of the dynamics of indicators reflecting the level of competitiveness of the hospitality industry of the regions of Ukraine in the pre-war period, the use of information modeling for the diagnosis of the researched processes, the substantiation of their impact on the competitiveness of the hospitality industry of the studied territories. These conclusions will make it possible to develop recommendations based on the European practice of forming strategic programs for strengthening the competitiveness of the hospitality industry.

1. Materials and methods

The following research methods were used:
– methods of economic analysis - to analyze and evaluate the conditions for ensuring the competitiveness of the hospitality industry in the region, the competitive advantages of the hospitality industry in the social, economic and environmental spheres;

- the method of standardization of indicators – for the calculation of partial standardized indicators that characterize the conditions for ensuring the competitiveness of the hospitality industry of the region, the competitive advantages of the hospitality industry of the region in the economic, social and environmental spheres;
- the method of integrating indicators – for calculating the integral index of competitiveness of the hospitality industry of the region;
- rating method – to determine the rating of regions according to the level of competitiveness of the hospitality industry of the region;
- method of grouping – for grouping regions according to the level of conditions for ensuring the competitiveness of the hospitality industry of the region; the level of competitive advantages of the hospitality industry in the social, economic and environmental spheres; the level of competitiveness of the region's hospitality industry;
- graphic methods – for visual representation of the results of an analytical study of the competitiveness of the hospitality industry in the region.

The primary data for analysis were statistical data from UNWTO [10, 15].

After collecting and processing statistical data, a diagnosis of the competitiveness of the hospitality industry in the regions of Ukraine was conducted. The collected and processed statistical material of the analysis made it possible to describe the state, structure and dynamics of the relevant indicators of the hospitality industry in the regions of Ukraine. The results of the statistical analysis made it possible to identify problematic points, positive aspects and shortcomings for the formation of a matrix for the selection of target indicators of the integration strategy of regions of Ukraine that have preserved their tourist potential.

2. Results and discussion

Increasing the competitiveness of the hospitality industry in the region requires complex and systematic analytical studies to identify the level, trends and competitive advantages of each territory of the state in relation to its social resources, the existing institutional environment for the development of the hospitality industry, favorable regional conditions for the effective use of tourism potential, etc. [5]. On the other hand, it is important to study the available resource support for the development of the hospitality industry in the regions of the state from the standpoint of the presence of social, economic, tourist and informational resources as prerequisites for ensuring their competitiveness [3]. In connection with this, issues regarding the choice of a balanced system of indicators and an algorithm of actions for the analysis and assessment of the competitiveness of the hospitality industry of the region in the form of an information system are being updated.

The analysis and assessment of the competitive advantages of the hospitality industry of the regions was carried out in the context of three spheres: economic, social and environmental.

The selection of a system of indicators to assess the conditions for ensuring the competitiveness of the hospitality industry of the region and the competitive advantages of the hospitality industry of the region in the economic, social and environmental spheres (table 1).

In the course of the study, the matrix of the indicator system was obtained, which reflects the conditions for ensuring the competitiveness of the hospitality industry and the competitive advantages of the hospitality industry of the region in the economic, social and environmental spheres.

Table 1. A system of indicators for assessing the conditions of competitiveness of the hospitality industry of the region (compiled by the author based on: [1, 6, 11, 12, 14, 16])

A group of indicators characterizing	Indexes
Resource conditions for ensuring the competitiveness of the hospitality industry of the region	Available population, total fertility rate, labor force, employed local population, proportion of households with internet access, area of protected land and national natural parks
Institutional conditions for ensuring the competitiveness of the hospitality industry in the region	The number of children's health and recreation facilities, the number of places in children's recreation and health facilities, the numer of collective accommodation facilities, the number of tourism entities, the number of tour operators, the number of travel agents, the number of museums
Geopolitical conditions for ensuring the competitiveness of hospitality in the region	The number of employed population in the hospitality industry, the level of GVA of the hospitality industry in the structure of the economy

Such a matrix looks as follows:

$$
X = \begin{bmatrix}
X_{11} & X_{12} & \cdots & X_{1k} & \cdots & X_{1n} \\
X_{21} & X_{22} & \cdots & X_{2k} & \cdots & X_{2n} \\
\cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\
X_{i1} & X_{i2} & \cdots & X_{ik} & \cdots & X_{in} \\
\cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\
X_{w1} & X_{w2} & \cdots & X_{wk} & \cdots & X_{wn}
\end{bmatrix}
$$

here w is the number of regions; n – the number of indicators that characterize the conditions for ensuring the competitiveness of the hospitality industry and the competitive advantages of the hospitality industry of the region in the economic, social and environmental spheres; X_{ik} is the value of the indicator k for the i-th region.

The given system of indicators made it possible to standardize them and calculate an integral index of conditions for ensuring the competitiveness of the region's hospitality industry and competitive advantages of the region's hospitality industry by sphere.

The standardization of indicators was carried out with the aim of bringing the indicators, which are different in terms of content and measurement units, to a single coefficient, the calculation of which will allow to further determine the integral index of the conditions for ensuring the competitiveness of the hospitality industry and the competitive advantages of the hospitality industry of the region in the economic, social and environmental spheres.

Standardization involves the calculation of stimulator indicators (those that have a positive effect on the researched processes) and destimulant indicators (those that negatively affect the researched processes) of the competitiveness of the hospitality industry:

$$X_{ij}^{l} = \frac{X_{ij}}{X_{m+1j}} \qquad (1)$$

or

$$X_{ij}^{l} = \frac{X_{m+1j}}{X_{ij}} \qquad (2)$$

here $i = 1, 2, ..., m$, $j = 1, 2, ..., n$, j-th is the indicator of the best (reference) region (reference is a region with high values of indicators of the studied processes). At the same time, formula (1) is used when the reference indicator is the maximum value, and formula (2) is the minimum value.

At the next stage, the integral index of competitiveness of the hospitality industry of the region was calculated. At the same time, the integral index of the conditions for ensuring the competitiveness of the hospitality industry of the region as calculated as the arithmetic average of three components that characterize it:

$$IIc = \frac{Rc + Ic + Gc}{3} \qquad (3)$$

IIc is an integral index of the conditions for ensuring the competitiveness of the hospitality industry of the region; *Rc* – resource conditions for ensuring the competitiveness of the hospitality industry of the region; *Ic* – institutional conditions for ensuring the competitiveness of the hospitality industry of the region; *Gc* – geopolitical conditions for ensuring the competitiveness of the hospitality industry in the region.

The integral index of the competitive advantages of the hospitality industry of the region was calculated as the arithmetic average of three spheres:

$$Iic = \frac{Esp + Ssp + ECsp}{3} \qquad (4)$$

Iic is an integral index of the competitive advantages of the hospitality industry of the region; *Esp* – the economic sphere of the hospitality industry of the region; *Ssp* – is the social sphere of the region's hospitality industry; *ECsp* – is the ecological sphere of the region's hospitality industry.

Thus, the integral index of competitiveness of the hospitality industry of the region was calculated according to the following formula:

$$Ict = \frac{Ic + Ica}{2} \qquad (5)$$

Ict – is an integral index of competitiveness of the hospitality industry of the region; *Ic* – is an integral index of the conditions for ensuring the competitiveness of the hospitality industry of the region; *Ica* – is an integral index of the competitive advantages of the hospitality industry of the region.

The calculated integral index of the competitiveness of the hospitality industry of the region may vary within [0; 1]. The closer the value of the index is to 1, the more competitive the hospitality industry will be in the region, and vice versa – the closer it is to 0, the region will be characterized by a low level of competitiveness of the hospitality industry.

To establish the limits of the intervals regarding the competitiveness of the hospitality industry of the region, we offer the following levels:
– for the conditions of ensuring the competitiveness of the hospitality industry of the region:
0.00–0.49 – low level of conditions for ensuring the competitiveness of the hospitality industry of the region;
0.50–1.00 – a high level of conditions for ensuring the competitiveness of the hospitality industry in the region;
– for the competitive advantages of the region's hospitality industry in the social, economic and environmental spheres:
0.00–0.49 – low level of competitive advantages of the hospitality industry of the region in the social, economic and environmental spheres;
0.50–1.00 – high level of competitive advantages of the hospitality industry of the region in the social, economic and environmental spheres;

– for the competitiveness of the region's hospitality industry:
0.00–0.33 – low level of competitiveness of the hospitality industry of the region;
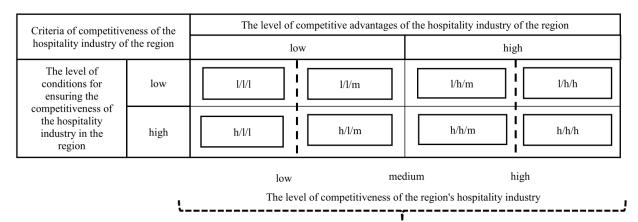0.34–0.67 – the average level of competitiveness of the hospitality industry of the region;
0.68–1.00 – high level of competitiveness of the hospitality industry of the region.

At the last stage, a matrix of competitiveness of the hospitality industry of the region was formed (Fig. 1).

As we can see from the table, the economic, according to the matrix, we obtained eight types of ratios according to the level of competitiveness of the hospitality industry of the region:
– 1 type of regions: l/l/l – low level of conditions for ensuring the competitiveness of the region; low level of competitive advantages of the hospitality industry of the region; low level of competitiveness of the region's hospitality industry;
– 2 type of regions: l/l/m – low level of conditions for ensuring the competitiveness of the region; low level of competitive advantages of the hospitality industry of the region; average level of competitiveness of the region's hospitality industry;
– 3 type of regions: h/l/l – low level of conditions for ensuring the competitiveness of the region; low level of competitive advantages of the hospitality industry of the region; high level of competitiveness of the region's hospitality industry;
– 4 type of regions: l/h/m – low level of conditions for ensuring the competitiveness of the region; high level of competitive advantages of the region's hospitality industry; average level of competitiveness of the region's hospitality industry;
– 5 type of regions: l/h/h – low level of conditions for ensuring the competitiveness of the region; high level of competitive advantages of the region's hospitality industry; high level of competitiveness of the region's hospitality industry;
– 6 type of regions: h/l/l – high level of conditions for ensuring the competitiveness of the region; low level of competitive advantages of the hospitality industry of the region; low level of competitiveness of the region's hospitality industry;
– 7 type of regions: h/l/m – high level of conditions for ensuring the competitiveness of the region; low level of competitive advantages of the hospitality industry of the region; average level of competitiveness of the region's hospitality industry;
– 8 type of regions: h/h/m – high level of conditions for ensuring the competitiveness of the region; high level of competitive advantages of the region's hospitality industry; average level of competitiveness of the region's hospitality industry;
– 9 type of regions: h/h/h – high level of conditions for ensuring the competitiveness of the region; high level of competitive advantages of the region's hospitality industry; high level of competitiveness of the region's hospitality industry.

Each type of region requires a differentiated approach to choosing a strategy to ensure the competitiveness of the region's hospitality industry.

Criteria of competitiveness of the hospitality industry of the region		The level of competitive advantages of the hospitality industry of the region			
		low		high	
The level of conditions for ensuring the competitiveness of the hospitality industry in the region	low	l/l/l	l/l/m	l/h/m	l/h/h
	high	h/l/l	h/l/m	h/h/m	h/h/h

low　　　　　medium　　　　　high

The level of competitiveness of the region's hospitality industry

Fig. 1. Matrix of competitiveness of the hospitality industry of the region

3. Experiment

The next step in our research was the calculation of the level of competitiveness of the hospitality industry of the regions of Ukraine, according to the formed information system. The initial data for building this system is presented in table 4.

The comparison of the level of conditions for ensuring competitiveness, the level of competitive advantages and the level of competitiveness of the hospitality industry of the regions of the state in 2021 is shown in table 2.

We see that there are different ratios in these levels. The ideal ratio "high level of conditions for ensuring competitiveness – high level of competitive advantages of the hospitality industry – high level of competitiveness of the hospitality industry" is typical for the city of Kyiv. In this region, a high level of competitiveness of the hospitality industry is observed due to the formed and effectively used conditions for ensuring such competitiveness, as well as due to the presence of competitive advantages in the field of the hospitality industry compared to other territories of the state. Dnipropetrovsk, Zakarpattia, Lviv, Odesa, Ternopil, Kharkiv and Chernivtsi regions are characterized by the ratio

"low/high level of conditions for ensuring competitiveness – low/high level of competitive advantages of the hospitality industry – low/high level of competitiveness of the hospitality industry". Such discrepancies indicate ineffective use by the territory of its potential opportunities (conditions) and unformed competitive advantages that ensure the competitiveness of the hospitality industry in the regions of the state. The rest of the regions have the ratio "low level of conditions for ensuring competitiveness – low level of competitive advantages of the hospitality industry – low level of competitiveness of the hospitality industry." These regions (Volhynia, Vinnytsia, Donetsk, Zhytomyr, Zaporizhia, Kyiv, Kirovohrad, Ivano-Frankivsk, Luhansk, Poltava, Rivne, Mykolaiv, Ternopil, Sumy, Khmelnytsky, Kherson, Chernihiv, Cherkasy) are outsiders in ensuring the competitiveness of the hospitality industry, which requires the development and implementation of a stabilization strategy through the implementation of a system of adaptive measures to eliminate problems in the hospitality industry.

As a result of the conducted analytical studies, a diagnosis of the competitiveness of the hospitality industry in the regions of the state was made (table 3).

Table 2. Comparison of the level of conditions for ensuring competitiveness, the level of competitive advantages and the level of competitiveness of the hospitality industry of the regions of the state in 2021 in the pre-war period (calculated by the authors)

Regions	Criteria index	Level	Competitive Advantage Index	Level	Competitiveness index	Level
Vinnytsia	0.250	low	0.185	low	0.218	low
Volynska	0.300		0.325		0.313	
Dnipropetrovsk	0.582	high	0.210		0.396	
Donetsk	0.329		0.251		0.290	
Zhytomyr	0.272		0.341		0.307	
Zakarpatia	0.409	low	0.584	high	0.497	high
Zaporizka	0.441		0.239	low	0.340	low
Ivano-Frankivsk	0.338		0.191		0.265	
Kyivska	0.442		0.198		0.320	
Kirovograd	0.225		0.225		0.225	
Lugansk	0.145		0.280		0.213	
Lviv	0.645	high	0.243		0.444	high
Mykolaiv	0.321	low	0.309		0.315	low
Odessa	0.639	high	0.337		0.488	high
Poltava	0.324		0.174		0.249	low
Rivne	0.309	low	0.212		0.261	
Sumska	0.214		0.162		0.188	
Ternopilska	0.268		0.425	high	0.347	
Kharkiv	0.505	high	0.162		0.334	
Kherson	0.319		0.266	low	0.293	
Khmelnytskyi	0.312	low	0.154		0.233	
Cherkasy	0.346		0.171		0.259	
Chernivtsi	0.269		0.748	high	0.509	high
Chernihivt	0.239		0.185	low	0.212	low
m. Kyiv	0.864	high	0.488	high	0.676	high

Table 3. Diagnostics of competitiveness of the hospitality industry of the regions of the state in the pre-war period (compiled according to [9, 13, 12])

Type of regions	Leading regions	Middle regions	Outsider regions
Regions	city Kyiv	Zakarpattia, Lviv, Odesa, Chernivtsi	Volyn, Vinnytsia, Dnipropetrovsk, Donetsk, Zhytomyr, Zaporizhia, Kyiv, Kirovohrad, Ivano-Frankivsk, Luhansk, Mykolaiyv, Rivne, Poltava, Ternopil, Sumy, Kharkiv, Kherson, Khmelnytsky, Cherkasy, Chernihiv Chernivtsi
Growth rate	More positive	Positive/negative	Mostly negative
Strengths (advantages)	A large area of lands of reserves and national nature parks, developed institutional infrastructure of the hospitality industry, high tourist potential, availability of tourist flows, investment attractiveness for the development of hospitality industry facilities, developed information network of familiarization with services in the hospitality industry, favorable environmental situation	Provision of natural and recreational resources, awareness of the population with tourist products, stable income from tourism activities, implementation of a system of measures for waste disposal	The presence of positive growth rates for certain indicators characterizing the competitiveness of the hospitality industry (the share of households that have access to the Internet, the volume of output, the number of museums, average monthly wages, tourist tax)
Weaknesses (problems)	The presence of negative growth rates on certain indicators characterizing the competitiveness of the hospitality industry (population, labor force, number of tourism entities, number of KZR, number of people who were in KZR, number of actually spent bed days in KZR)	Lack of qualified force in the hospitality industry, insufficient level of investment attractiveness of the territory, low pay for hospitality workers, insufficient number of people in the KZR, decrease in the number of labor force, decrease in the number of tourism entities	Low output in the hospitality industry, low labor cost, low employment, morally and economically obsolete technologies for providing services in the hospitality industry, unsatisfactory ecological state of territories, low level of access to the Internet, inefficient use of the territory's potential for the development of the hospitality industry, low investment in hospitality industry
Possibilities of the external environment	Improving the business climate, stimulating the development of the hospitality industry, increasing the popularity of domestic tourism, increasing the investment attractiveness of territories, forming environmental awareness of the population, activating grant and project work in the field of the hospitality industry		
Threats of the external environment	Unfavorable economic, political and environmental situation in the country and regions in particular, migration of skilled labor in the field of tourism, decrease in the purchasing power of the population, decrease in the financial capacity of territories, inability to implement modern technologies in the field of hospitality industry		

Therefore, each group of regions is characterized by different rates of growth, the presence of opportunities and threats, strengths and weaknesses that shape the external environment. For the leading regions (the city of Kyiv), the strengths in ensuring the competitiveness of the hospitality industry are the large area of land reserves and national natural parks, the developed institutional infrastructure of the hospitality industry, high tourist potential, the presence of tourist flows, investment attractiveness for the development of hospitality industry facilities, a developed information network for familiarization with services in the hospitality industry, a favorable environmental situation. At the same time, the regions have weaknesses, which in the future may weaken their position in ensuring the competitiveness of the hospitality industry: a decrease in the population, a decrease in the number of the workforce, a decrease in the number of subjects of tourist activity, a decrease in the number of collective means of accommodation, a decrease in the number of persons who stayed in them, a decrease in the number of bed-days actually spent in collective means of accommodation). As we can see, the regions against the backdrop of growth rates for most indicators also have negative growth trends for some indicators, which requires the use of preventive measures to minimize and eliminate them.

Strengths for regions that have different ratios in the levels of competitiveness of the hospitality industry are the supply of natural and recreational resources, the population's awareness of tourist products, stable income from tourism activities, and the implementation of a system of waste disposal measures. On the contrary, their weaknesses that do not allow to achieve a high level of conditions for ensuring the competitiveness of the hospitality industry, a high level of competitive advantages of the hospitality industry, a high level of competitiveness of the hospitality industry are the lack of qualified personnel in the field of the hospitality industry, insufficient level of investment attractiveness of the territory, low wages of hospitality industry workers, an insufficient number of people staying in collective means of accommodation, a decrease in the number of the workforce, a decrease in the number of subjects of tourist activity. The mentioned problems should become the object of research for regional authorities and subjects of tourism activity.

Outsider regions have significant problems that form their weak points in ensuring the competitiveness of the hospitality industry: low output in the hospitality industry, low labor costs, low employment of the population, morally and economically outdated technologies for providing services in the hospitality industry, unsatisfactory ecological condition of the territories, low level of access to the Internet, inefficient use of the potential of the territory for the development of the hospitality industry, low volume of investment in the facilities of the hospitality industry. However, the presence of advantages in growth rates (the share of households with access to the Internet, the volume of production, the number of museums, average monthly wages, and tourist tax) will allow these regions to stabilize the situation and create favorable conditions and competitive advantages in ensuring the competitiveness of the hospitality industry.

Authorities at the state and regional levels, the institutional environment create opportunities (improving the business climate, stimulating the development of the hospitality industry, increasing the popularity of domestic tourism, increasing the investment attractiveness of territories, forming environmental awareness of the population, activating grant and project work in the field of hospitality industry) and threats (unfavorable economic, political and environmental situation in the country and regions in particular, migration of skilled labor in the field of tourism, decrease in the purchasing power of the population, decrease in the financial capacity of territories, inability to implement modern technologies in the field of hospitality industry) to each region in ensuring the competitiveness of the hospitality industry.

Therefore, regions should make the most of their strengths and opportunities created by the external environment to strengthen their competitive positions in terms of the development of the hospitality industry.

It is worth noting that the presence of military actions in Ukraine since 2022 has changed the conditions for ensuring the competitiveness of certain regions of the state and their competitive advantages in the economic, social and environmental spheres. The tourism potential of many regions has been destroyed, the subjects of the tourism industry have stopped their activities due to the impossibility of carrying them out due to danger and threats, and a large part of the population has emigrated abroad or to safer regions. All this has a negative impact on the competitiveness of the hospitality industry in certain regions of the state and the country as a whole. Therefore, it is worth highlighting the regions that are currently in the zone of active hostilities and have lost their tourist potential, and that need special state support in the post-war period (table 4).

Table 4. Positioning of regions in the pre-war and post-war periods (calculated by the authors)

Positioning of regions in the pre-war period	
Low level of competitiveness of the hospitality industry	High level of competitiveness of the hospitality industry
Volyn, Vinnytsia, Dnipropetrovsk, Donetsk, Zhytomyr, Zaporizhia, Kyiv, Kirovohrad, Ivano-Frankivsk, Luhansk, Mykolayiv, Rivne, Poltava, Ternopil, Sumy, Kharkiv, Kherson, Khmelnytsky, Cherkasy, Chernihiv.	Zakarpattia, Lviv, Odesa, Chernivtsi, Kyiv.
Positioning of regions during the war period	
Regions that have lost their tourist potential	Regions that have preserved tourist potential
Dnipropetrovsk, Donetsk, Zaporizhzhya, Kyiv, Luhansk, Mykolaiv, Sumy, Ternopil, Kharkiv, Kherson, Chernihiv, Kyiv.	Vinnytsia, Volyn, Zakarpattia, Zhytomyr, Lviv, Odesa, Ivano-Frankivsk, Kirovohrad, Poltava, Rivne, Khmelnytskyi, Cherkasy, Chernivtsi.

For regions that have lost their tourist potential (Donetsk, Dnipropetrovsk, Zaporizhzhia, Kyiv, Luhansk, Mykolaiv, Sumy, Ternopil, Kharkiv, Kherson, Chernihiv, Kyiv) a balanced state and regional policy aimed at restoring conditions and competitive advantages should be developed in ensuring the competitiveness of the hospitality industry. Thus, the typology of regions of the state according to the level of competitiveness of the hospitality industry in the pre-war and post-war periods requires the use of a differentiated approach to the development of a strategy for its improvement.

When forming the integration strategy of the hospitality industry of the region, one should take into account the peculiarities of the regions of Ukraine, as potential participants of international economic groups (cross-border clusters, strategic alliances of the hospitality industry, etc.) [4, 7]. A clearly defined information system of integration elements (policies, programs, techniques, methods, methods, tools, etc.) will allow speeding up the achievement of success. However, ensuring the competitiveness of the hospitality industry of the regions is not a stable process, but a dynamic one and requires constant control [10]. Considering this, it is advisable to form target indicators of the integration strategy for each defined type of regions of Ukraine for a general system of indicators, which will facilitate management processes in terms of control in table 5.

The expected result of the implementation of integration strategies in the regions of Ukraine is the strengthening of the competitiveness of the hospitality industry [2, 17]. The effectiveness of the implementation of these strategies can be determined with the help of target indicators, that is, clearly defined indicators, with the help of which conclusions can be drawn about the success of the implementation of the selected integration strategy in the region. The target indicators of the integration strategy of Ukraine's regions defined by us are measurable, which greatly simplifies the control function.

Table 5. Matrix for the selection of target indicators of the integration strategy of regions of Ukraine that have preserved their tourist potential (calculated by the authors)

Types of regions	Groups of regions in the selection matrix of target indicators	Integration strategies	Target indicators	
			Regional	General
Regional leaders	city Kyiv	Integration transformation strategy	– Creation of cross-border hospitality cooperation. – Ensuring the functioning of the hospitality industry in accordance with international standards – Development of competencies of representatives of the hospitality industry	– Sustainable growth of quantity, quality and competitive hospitality products and services at the national, regional and local levels. – Increasing Ukraine's position in the Global Competitiveness Index – Increasing the share of industries in the added value of the country – Creation of a competitive hospitality industry market. – Development of hospitality industry infrastructure. – Improving the quality of hospitality products and services. – Accelerating the integration of the hospitality industry into the global services market. – Increasing the number of associations of hospitality industry subjects. – Increasing the number of internal and external investments. – Increasing the number of geographical indications in the regions. – Improvement of socio-economic indicators of the hospitality industry in the region. – Increasing the share of industry in GDP to the world average level. – Stimulating the development of hospitality innovations.
Middle peasant regions	Odesa, Zakarpattia, Lviv	Integration development strategies	– Formation of high-quality and comprehensive hospitality products and services. – Increasing the number of associations of hospitality entities. – Stimulation of investments in projects related to improving the condition of tourist destinations. – Increasing the share of small and medium-sized hospitality businesses	
Outsider regions	Vinnytsia, Volyn, Zhytomyr, Ivano-Frankivsk, Kirovohrad, Poltava, Rivne, Khmelnytsky, Cherkasy, Chernivtsi	Integration interaction strategy	– Formation of new and improvement of existing hospitality industry clusters and other associations. – Increasing the volume of tourist flows – Increasing the number of people employed in the hospitality industry to the total number of employed. – Improvement of existing and formation of new regional quality standards.	

The strengthening of the integration processes of business entities of the hospitality industry is based on the existing market structure in the region, specific features of the industry of the regions, the intensity of consumption of the offered hospitality products and services, the level of application of innovations in the researched field, etc. [8, 11]. Today, the integration processes of the hospitality industry depend on the specifics of the relationship with other business entities related to hospitality. In this case, the research processes are formed based on international competition and market concentration of hospitality industry resources. In addition, before starting regional strategic planning for the development of the researched industry, it is necessary to take into account the specifics of the development of the hospitality industry.

A mandatory condition for the effective development of the modern hospitality industry is the coherence of strategic decisions at all hierarchical levels, for this purpose a hierarchy of strategic relations of the hospitality industry was built, where four main levels are distinguished: global or international, national, regional and local or local. It is justified that normative documents should include clear and specific information, normative legal documents of state regulation of hospitality should take into account the interests of all stakeholders (business entities, enterprises and related industries) operating in the market. Territorial development programs, regional strategies and other regulatory documents for the development of the industry under study must comply with international standards, norms and rules, as well as be based on the interests of regional (small and medium-sized) businesses, take into account the goals of national strategic decisions. In addition, strategic decisions at the level of local business entities must take into account the interests of the state and the need to protect and reproduce the historical, cultural and natural resources of the region, the state and regional concept of market positioning.

4. Conclusions

An information system and a methodical approach to the analysis and assessment of the competitiveness of the hospitality industry of the region have been developed, which allows to assess the resource, institutional, geopolitical conditions for ensuring the competitiveness of the hospitality industry and its competitive advantages in the economic, social and environmental spheres, and on this basis – to calculate the integrated index of the industry's competitiveness hospitality

The analysis and assessment of the competitiveness of the hospitality industry of the regions of the state in terms of the conditions for ensuring the competitiveness of the hospitality industry and its competitive advantages in the social, economic and environmental spheres was carried out. The diagnosis of the competitiveness of the hospitality industry in the regions of the state was carried out. The integral index of the conditions for ensuring the competitiveness of the hospitality industry of the regions of the state, the integral index of the competitive advantages of the hospitality industry of the regions of the state, the integral index of the competitiveness of the hospitality industry of the regions of the state was calculated.

Each group of regions (leading regions, middle-class regions, outsider regions) is characterized by different growth rates, the presence of strengths and weaknesses, opportunities and threats that shape the external environment. For the leading regions (the city of Kyiv), the strengths in ensuring the competitiveness of the hospitality industry are the large area of land reserves and national natural parks, the developed institutional infrastructure of the hospitality industry, high tourist potential, the presence of tourist flows, investment attractiveness for the development of hospitality industry facilities, a developed information network for familiarization with services in the hospitality industry, a favorable environmental situation. At the same time, these regions have weaknesses that in the future may weaken their position in ensuring the competitiveness of the hospitality industry: a decrease in the population, a decrease in the number of the workforce, a decrease in the number of subjects of tourist activity, a decrease in the number of collective means of accommodation, a decrease in the number of people who stayed with them, a decrease in the number of bed-days actually spent in collective means of accommodation).

For regions that have lost their tourist potential (Donetsk, Dnipropetrovsk, Zaporizhzhia, Kyiv, Luhansk, Mykolaiv, Sumy, Ternopil, Kharkiv, Kherson, Chernihiv, Kyiv) it is advisable to develop a balanced state and regional policy aimed at restoring conditions and competitive advantages in ensuring the competitiveness of the hospitality industry. Thus, the typology of regions of the state according to the level of competitiveness of the hospitality industry in the pre-war and post-war periods requires the use of a differentiated approach to the development of a strategy for its improvement.

The process of formation of strategic integration positions of the regions as a set of stages is substantiated, which reflects the logic of the formation of the algorithm of actions through the definition of structural elements that ensure the formation of an effective toolkit for achieving the conceptual goal. The algorithm for choosing the strategic integration positions of the regions should be complex and systemic, and all strategic elements of the integration processes of the region should be coordinated and aimed at achieving the strategic goal – the definition of an effective, optimal strategy that is able to ensure the implementation of the target priorities and strategic guidelines of the proposed concept of ensuring competitiveness hospitality industry of the region.

A matrix for choosing the type of strategies groups of regions has been built, which allows for effective management of the hospitality industry in the region, applying a system of functions, principles, tools and methods for ensuring the competitiveness of the region's hospitality, taking into account the influence of modern factors. The proposed matrix is adaptive, able to modify the structure of the hospitality industry in the region due to the formation of new elements (associations of hospitality entities), the appearance of which is conditioned by the spectrum of defined target tasks.

References

[1] Baula O., Liulak O., Chepurda L., Chepurda A., Zelinska O.: Financial levels and consequences of implementation of world experience of business activity in domestic tourism. Financial and credit activity: problems of theory and practice. University of Banking 4 (35), 2020, 476–485.

[2] Bosovska M.: Integration processes in tourism: monograph. National Trade and Economy Univ., Kyiv 2015.

[3] Gorina G.: Hierarchical clustering of regional hotel services markets in Ukraine by infrastructure components. Investment: Practice and Experience 23, 2019, 5–10.

[4] Hoblyk V., Papp V.: The formation of cross-border transport and logistics clusters as a priority direction for the development of the border regions of Ukraine. Economic Forum 4, 2013 55–63.

[5] Holod A., Goncharenko M.., Nikyga O., Yevdoshchenko O.: Innovative principles of sustainable development of ethno-gastronomic tourism in the region. Manager. Bulletin of the Donetsk State University of Management. Economy series 4 (89), 2020, 40–47.

[6] Kaplina T., Kaplina A.: Hospitality industry of Ukraine: development trends. Collection of scientific works Problems and prospects of entrepreneurship development 27, 2021, 116–127.

[7] Mikula N.: Priorities for the creation of innovation-investment cross-border clusters and industrial zones in the western regions of Ukraine: analytical note to the Administration of the President of Ukraine, 2011. http://www.niss.lviv.ua/file/2011/03/173222 .pdf (available: 28.06.2023)

[8] Nezdoyminov S., Baldzhy M., Kniazhkovska H.: Regional measurement of the hotel sector development of a tourist destination (on the example of Odessa region, Ukraine). Journal of Geology, Geography and Geoecology 30 (2), 2021, 344–354.

[9] Nikolaychuk O.: Development trends of the domestic hospitality industry in the conditions of Covid-19. Bulletin of KhNU named after Karazin. Series "International relations. Economy. Local studies. Tourism" 13, 2021.

[10] Prychepa I., Adler O., Ruda L., Lesko O., Bondarenko Z., Yanan L., Mussayeva D.: An information model for assessing the competitiveness of the tourism industry in the context of European integration policy. Informatyka, Automatyka, Pomiary w Gospodarce i Ochronie Środowiska – IAPGOS 12(4), 2022, 47–52.

[11] Shikina O.: Index of tourism competitiveness as an indicator of tourism potential of Ukraine. Bulletin of the Khmelnytskyi National University 2, 2017, 275–279.

[12] Smirnov I.: Determining the level of competitiveness of the countries of the world in tourism: modern approaches. Foreign trade: economy, finance, law. Series: Economic Sciences 5-6(82-83), 2015, 37–49.

[13] Stuler I.: Peculiarities of the development of the hospitality industry in the conditions of the European integration vector of Ukraine. Actual problems of the economy 1, 2022, 79–86.

[14] Tkachenko T.: Competitiveness in tourism as a leading direction of sustainable development. Scientific and information bulletin of the Academy of Sciences of Higher Education of Ukraine 2(79), 2012, 96–104.

[15] UNWTO, Tourism Highlights, http://www2.unwto.org (available: 28.06.2023)

[16] Vakhovich I., Matviychuk L., Smal B.: The development of the hospitality industry in modern conditions: trends and measures to strengthen competitive advantages. Financial and credit activity: problems of theory and practice 6(41), 2021, 494–502 [http://doi.org/10.18371/fcaptp.v6i41.251512].

[17] Yukhnovska J.: Impact of globalization and European integration on the tourism industry of Ukraine. Scientific Bulletin of the Uzhhorod National University. Series: International economic relations and the world economy 23, 2019, 147–152.

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