











“Foresight (prevision) of development of the tourist system in Ukraine”

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FORESIGHT (PREVISION) OF DEVELOPMENT OF THE TOURIST SYSTEM IN UKRAINE

Abstract

Considering the war in Ukraine, it will be necessary to restore the tourism system. The use of foresight as a means of predicting the future will ensure the formation of conditions for its development. The study aims to assess the functioning of the tourism system in Ukraine under martial law and to develop foresight scenarios for its development. The analysis of the main economic indicators of tourism and hotel entities during the war period indicates potential opportunities (a stable or growing trend). The volume of tax revenues to the state budget in 2023 increased by 15.6%. 2023 hotels' KPIs (RevPAR, ADR, Occupancy) for the main destinations compared to the same period in 2022 increased by 206.0%, 66.0%, and 44.0%, respectively. The study scans the horizon within which the factors affecting the development of the tourism system are determined and assesses the levels of their potential impact and probability of occurrence. The BANI method is used to identify possible α - and β -scenarios of development, and the matrix method is used to interpret the strategic development directions. Industry factors are combined into four groups: development trends, the state of the market, technologies, innovations, and professional competence of staff. Thus, α - (optimistic) and β - (pessimistic) development scenarios future states in the tourism development. A prognostic vision of the future in a situation of prospective uncertainty makes it possible to determine the factors for mitigating the effects of military actions in the post-war period. It stimulates finding alternatives for strengthening the cohesion of the tourism system.

Keywords

tourism business entity, hotel business entity, management, crisis, investments, risks, strategy, KPI, innovations, foresight scenarios

JEL Classification

L80, C53, M20, Z32

INTRODUCTION

In an environment where force majeure factors prevail, the use of foresight is the basis for the formation of priorities regarding the restoration of tourist destinations and the investment attractiveness of the tourist system in Ukraine. The object-subject essence of the tourism system determines the inter-sectoral interaction of institutional structures and business entities for the production, sale, and organization of consumption of a complex tourist product. The importance of its functioning is confirmed by the involvement of more than 30 types of economic activity, the basis of which are subjects of the tourism and hotel business.

In contrast to forecasting, which defines the future state as a linear evolutionary process, foresight visualizes the future, the state of which is determined by rapid, unpredictable, violent changes based on scenario design, trend analysis, and strategic analysis, which determine the symbiosis of qualitative and quantitative methods (Fernández-Güell & Collado, 2014). Foresight provides an opportunity to present the future, which cannot be interpreted as an evolutionary continuation of the past since the future state acquires fundamentally new content, forms, and structures (Zhurovskyy, 2015).

Due to the state of war and other crisis phenomena, the tourism system of Ukraine is currently unstable, which threatens its subjects with losses in terms of consumer tourist interest, extraordinary losses, and critical destruction of the material and technical base, that is, in general, the existence of business as a whole. Therefore, an essential task for Ukraine is the formation of foresight scenarios and components (cycles) regarding future investment attractiveness and mechanisms for the rapid accumulation of financial, infrastructural, and social potentials for the recovery and development of the tourism and hotel business.

Foresight is based on three components: the actual state (inertial trend), analysis of the current state, and determination of prospects i.e.; the foresight methodology is formed by the combined methods of scenario planning, forecasting, strategic analysis, and expert survey for building development scenarios. The formed fundamental principle of foresight as an idea of the future, which correlates with the conceptual space of the future, contributes to forming an expanded vision of development prospects (Skrypnyshenko, 2021). Industry foresight research will allow determining the driving forces and triggers of future socioeconomic development processes of Ukraine's tourism system.

1. LITERATURE REVIEW

Foresight as a research technology began its evolution in the 1970s and developed methodologically, taking into account social trends and innovations. The concept of foresight is actively developed in scientific sources. Firstly, it means "the process (systematic attempt) of forecasting the long-term future" (Martin, 1993), the purpose of which is "to determine the levels of strategy, the possible future through the format of scanning the external environment, creating a desired image in the short- and long-term" (Conway, 2015). Secondly, it is "a system of methods for expert assessment of long-term prospects for innovative development, identification of technological breakthroughs capable of having the most positive impact on the economy and society" (Gokhberg, 2013). Thirdly, it is "a tool that helps confidently face the future, understand its possibilities and risks and develop medium- and long-term development strategies" (Makian & Nematpour, 2021). Fourthly, it is "the ability to understand correctly what will happen in the future and to plan one's actions on the basis of this knowledge" (Cambridge Dictionary, n.d.).

Saritas et al. (2022) consider the evolution of foresight based on scientific mapping and identify its patterns. From an interdisciplinary perspective, Rutting et al. (2022) describe it as a tool for managing socio-ecological systems. Sakellariou and Vecchiato (2022) expanded the vision of the relationship between foresight and the formation of an understanding of its role in influencing cog-

nitive group dynamics, in particular, it concerns aspects of developing new products taking into account dynamic technological and market changes. On the one hand, Aguirre-Bastos and Weber (2018) consider foresight as a tool for forming an innovative environment, systems, and processes, and on the other hand, as a means of ensuring inclusive development in developing countries.

Scientists also consider foresight to have potential for strategic research, particularly as an institutional and organizational basis for conducting a foresight study of Ukraine's economy (Skrypnyshenko, 2021). Kryvtsova (2020) considers the influence of socioeconomic factors of the foresight of the regional economy in Ukraine on the formation and development of the region's human potential.

Therefore, this study interprets foresight as a comprehensive approach to forecasting the future, which operates with a system of methods and tools for processing the information field to determine possible scenarios for the unfolding of events and the formation of development strategies/patterns of behavior of certain economic units (micro- and macro-level).

Foresight studies are expected in industries whose development is significantly influenced by innovations. According to the conclusions of the European Commission, these are industries related to technology, business, environment, and energy (European Commission et al., 2009). The

Strategic Foresight of Ukraine project was developed for Ukraine in 2022 as part of the Accelerator Lab, a project of the United Nations Development Program (UNDP) in Ukraine in cooperation with international partners. The project simulates a radar, the content of which reflects signals, trends, events, and problems that will influence the formation of the future of Ukraine and the world in terms of social, technological, economic, ecological, political-legal, ethical, and demographic dimensions (Strategic Foresight of Ukraine, n.d.).

One of the areas of application for foresight research is the tourism system, which is characterized by unstable trends in the dynamics of tourist flows, sensitive to external shocks. Melnychenko et al. (2020) assessed the potential of foresight in studying priorities for developing the national (Ukrainian) tourism system. They also analyzed theoretical foundations and substantiation of methodological aspects in applying the foresight of the development of tourism as an economic system of Ukraine. Mazaraki et al. (2022) demonstrated the development opportunities and the attractiveness of investing in this area from the point of view of payback and profitability of accommodation facilities because the level of occupancy and profitability is sufficient (RevPAR). Therefore, in the post-war period, investing in the hotel business can become profitable for business diversification and as the main source of income.

Foresight has also been used in regional studies of tourism development to determine its competitive advantages (Awedyk & Niezgodna, 2016) and strategic development of beach destinations (Fernández-Güell & Collado, 2014). Scenarios of tourism development through the prism of the dynamics of critical competitive forces and trends are revealed by Varum et al. (2011). Makian and Nematpour (2021) viewed the planning of variable scenarios in tourism as one of the most vulnerable sectors of the economy to regional and global crises. Prymak et al. (2020) studied the reasons for destabilizing tourist services markets.

Therefore, this study aims to evaluate the functioning of Ukraine's tourism system under martial law conditions and develop foresight scenarios for its development.

2. METHODS

The state of development and potential of the tourism system were investigated based on the analysis of individual indicators¹. They included the amount of revenues to the budget of the tourism system entities, the number of entities, and the structure of tax payments. Indicators of accommodation entities' development (as the most important component in the tourism system) are: the amount of investments and operational indicators of hotels (ADR – average price per room, UAH, RevPAR – revenue per available room, UAH, Occupancy – occupancy level, %) in the main destinations of Ukraine (Kyiv, Lviv, Odesa, Bukovel).

The method of scanning the horizon of Ukraine's tourism system was carried out according to the methodology and data of Strategic Foresight of Ukraine (n.d.), conducted with the support of the UNDP Innovative Development Laboratory in Ukraine in 2022². 7 dimensions have been identified in the mentioned study: social, technological, economic, ecological, political-legal, ethical, and demographic, for each of which factors (environmental challenges) have been determined. The impact of each signal was evaluated by points based on the metrics of the potential impact level (1 – insignificant, 2 – moderate, 3 – moderate, evolutionary, 4 – pronounced strong, 5 – disruptive impact) and the level of probability (1 – very unlikely, 2 – unlikely, 3 – possible, 4 – likely, 5 – very likely). Taking into account the sectoral factors of the tourism system in Ukraine, they were interpreted according to these features. Certain specific factors were added, and their potential impact and probability of occurrence were determined. The social dimension was considered as social and cultural. A weighted average indicator was calculated for each of the specified measurements.

1 Under martial law conditions in Ukraine, business entities are not required to submit reports. Accordingly, without most generalized indicators, it is impossible to evaluate the activities of the tourism system's entities comprehensively.

2 The information was collected by the Future Analysis Group of the "Strategic Foresight of Ukraine", which includes 23 analysts gathered for collaborative future analysis. Data were collected with the methodological support of the Joint Research Center of the European Commission. Based on this, 160 signals, trends, events, and problems that can influence the formation of the future of Ukraine and the world have been identified (Strategic Foresight of Ukraine, n.d.).

Empirical methods were used to substantiate industry factors that directly reflect the state of the tourism system. They are combined into four groups: 1) trends in the development of the tourism system; 2) the state of the tourist and hotel services market; 3) technologies, innovations, research, and development results in the tourism system; and 4) competence of the staff of the tourism system.

3. RESULTS

The tourism system of Ukraine, like other components of the economy, is currently under the influence of crisis factors and is characterized by development instability. The central body of the executive power in the field of tourism of Ukraine is the State Tourism Development Agency. It includes hotel and tourist enterprises as the main subjects of the tourism system. At the macroeconomic level,

one of the main industry indicators is the volume of revenues to the state budget. From tourist and hotel enterprises of Ukraine for 9 months of 2023, this figure is 1,451.3 million UAH, which is 13.0% less than in the same period in 2022 and 15.6% less than in the pre-war period (Figure 1).

On the one hand, in 2023, there was an increase in tax revenues to the state budget of Ukraine from the entities of the tourism system compared with the first year of the war. However, the projected trend line shows a possible decrease to approximately 1,300 billion UAH in 2024. In the event of an escalation of war, the “plateau” effect for tourist flows may work; that is why such a forecast is probable. This is also confirmed by the reduction in the number of taxpayers (business entities), in particular, caused by “personnel starvation” (mobilization and emigration of employees) and the reduction of tourist flows due to physical threats to tourists (Figure 2).

Source: State Tourism Development Agency of Ukraine (2023).

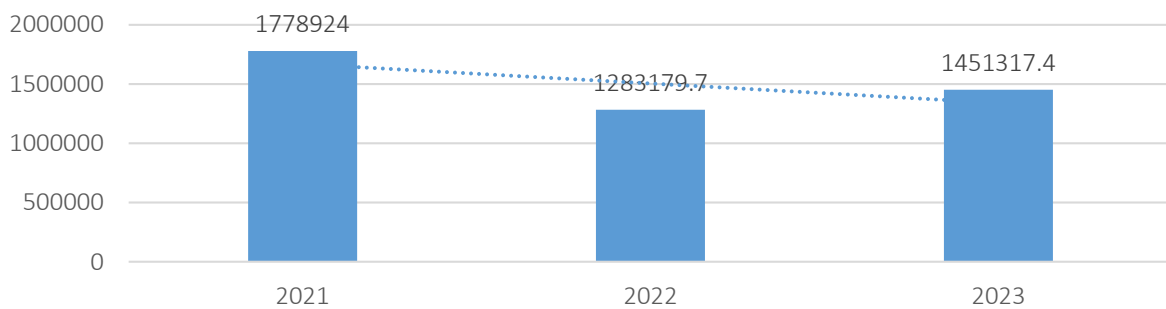


Figure 1. Dynamics of tax revenues to the state budget of Ukraine from the entities of the tourism system (for 9 months of 2021–2023), thousand UAH

Source: State Tourism Development Agency of Ukraine (2023).

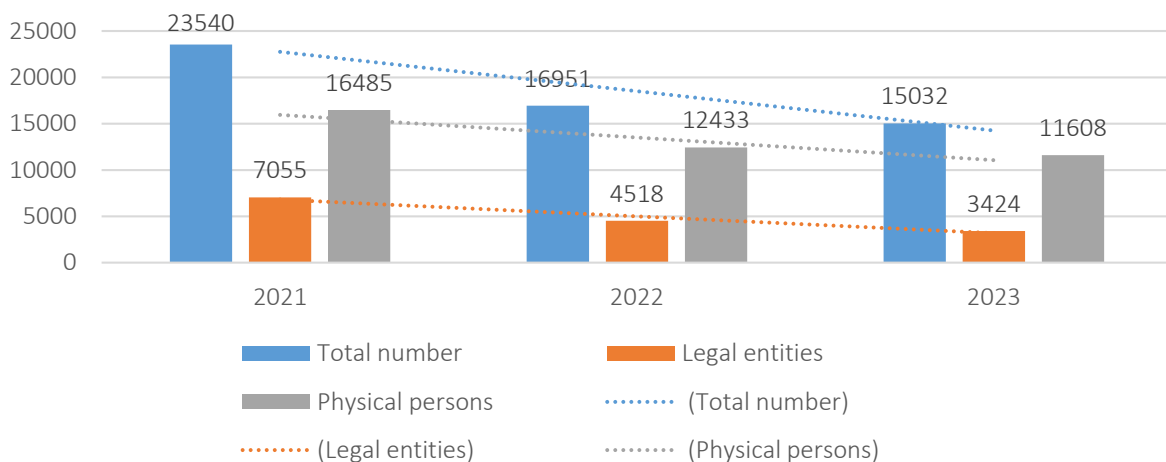


Figure 2. Dynamics of the number of tax payers-subjects of the tourism system of Ukraine (for 9 months of 2021–2023), persons

Source: State Tourism Development Agency of Ukraine (2023).

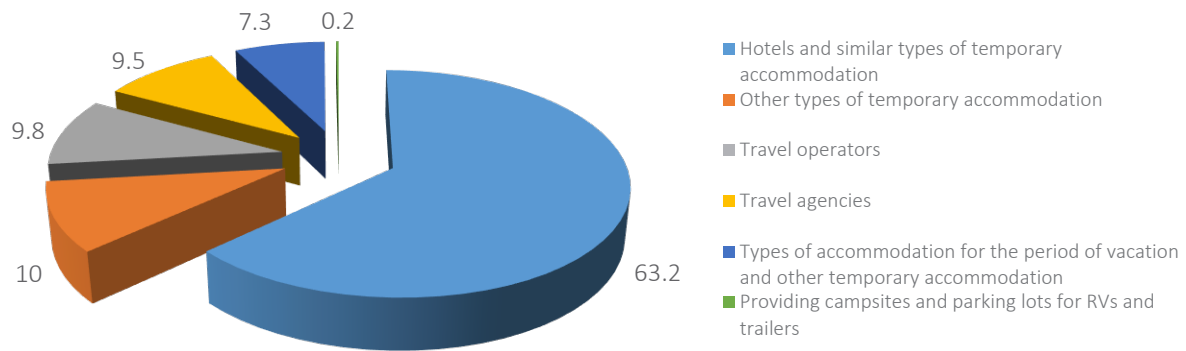


Figure 3. The structure of tax payments by entities of the tourism system of Ukraine (for 9 months of 2023), %

The structure of tax payments of the specified entities based on the results of 9 months of 2023 is presented in Figure 3.

In the structure of tax payments by the entities of Ukraine’s tourism system for 9 months of 2023, the biggest share of revenues relates to the activities of hospitality establishments, in particular, hotels and similar types of temporary accommodation – 63% and other types of temporary accommodation – 10%.

As a component that represents the material and technical aspects of the consumption of a tourist product, hospitality establishments are the most in need of investment in development. Considering the significant losses of hospitality facilities during shelling, forecasts regarding investment attractiveness are also mostly negative. But today, all hospitality establishments take care of the physical safety of tourists, providing

shelters (bomb shelters), which gives positive forecasts for tourist flows. Therefore, the correlation of negative expectations from the possible destruction of infrastructure is overlapped by positive expectations of the growth of tourist interest in Ukrainian tourist attractions: cultural, social, “military”, etc. To determine the prospects for developing Ukraine’s tourism system, evaluating the pre-war experience of investing in its most crucial component, the hospitality sector, (Figure 4) is necessary.

In the dynamics of investments in the hospitality sector of Ukraine, a “slump” can be traced to the period 2013–2016, which in Ukraine is characterized by the beginning of the Russian military invasion, the occupation of territories in 2014, and adaptation to the crisis. The recovery in 2017 stopped in 2019, when the global pandemic began, and interest in the infrastructure industries expectedly fell, and also in 2022 with

Source: Ukrstat (n.d.), Minfin (2023).

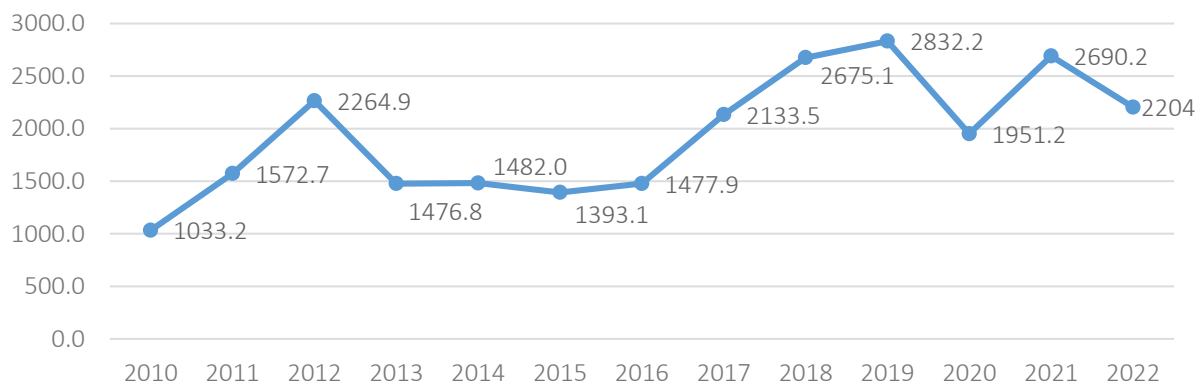


Figure 4. Dynamics of investments in the field of hospitality business of Ukraine, 2010–2022 (million UAH)

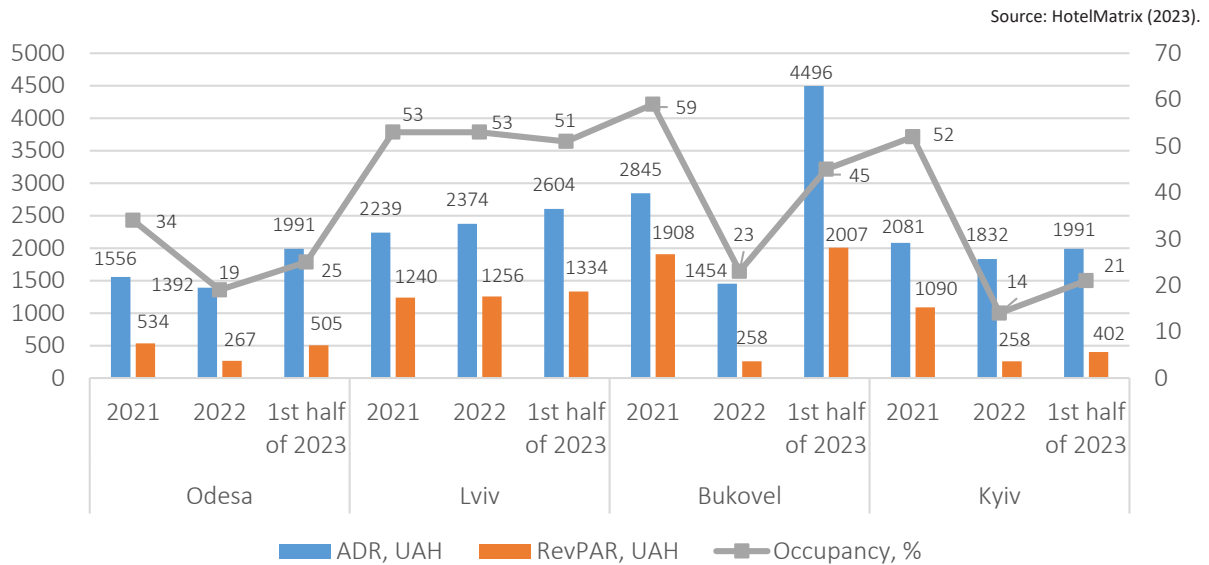


Figure 5. Dynamics of economic indicators of accommodation facilities (hotels) in the main destinations of Ukraine, 2021 – first half of 2023

the start of a full-scale war on the territory of Ukraine. Therefore, in 2022, the main interest of investors was focused on relatively calm regions of Ukraine (Bukovel, Lviv) bordering the countries of the European Union.

Evaluating the perspective of development and investment in the material and technical base of the tourist system, it is essential to study the main indicators of hotel activity (ADR – average price per room, UAH, RevPAR – revenue per available room, UAH, Occupancy – load level, %) in destinations of Ukraine from the highest level of development – Kyiv, Lviv, Odesa, Bukovel (Figure 5).

Despite the state of war in Ukraine (from February 2022 to the present), in the first half of

2023, hotels in the main regions have restored and even improved specific performance results. According to the RevPar indicator based on the results of the first half of 2023 compared to 2021, Lviv hotels grew by 7.5%, and Bukovel hotels – by 5.1%; and according to ADR indicators, Bukovel hotels grew by 58.0%, Odesa by 28.0%, Lviv by 16.3%. Moreover, such a key indicator that reflects the commercial efficiency of using room capacity as RevPar (determined by multiplying the average tariff by the load of hotel rooms) in the summer period of 2023 in all the specified destinations increased (Figure 6).

The generalized results of scanning the horizon for the development of the tourism system in Ukraine on a global scale are shown in Table 1, and detailed calculations are in Appendix A.

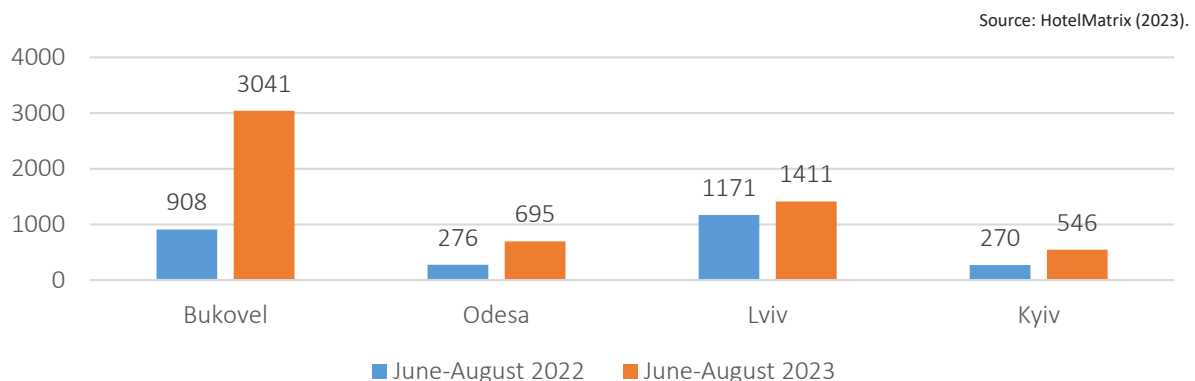


Figure 6. Dynamics of the RevPAR indicator for the main destinations of Ukraine in the period June-August 2022–2023

Table 1. Scanning the horizons for the development of the tourism system in Ukraine on a global scale

Factors (challenges) of the environment	Metrics	
	level of potential impact	level of probability
Socio-cultural dimension	4.4	4.2
Technological dimension	4.3	4.2
Economic dimension	4.3	4.1
Ecological dimension	4.0	4.6
Political and legal dimension	5.0	4.4
Ethical dimension	3.6	3.3
Demographic dimension	4.3	4.6

Scanning the horizons for the development of the tourism system in Ukraine makes it possible to determine the potential impact of its factors and demonstrates the probability of their impact. Factors affecting the development of the tourism system are grouped in the context of the following dimensions: socio-cultural, technological, economic, environmental, political-legal, ethical, and demographic. The highest influence on the development of the tourism system is demonstrated by factors of the political and legal dimension (5.0) and the lowest – ethical dimension (3.6). Regarding the probability level, the highest probability concerns ecological and demographic dimensions (4.6 each), as well as political and legal dimensions (4.4). This indicates the interdependence of the factors of the tourism system development and the need to take them into account for the development of strategic decisions. In general, summarizing the results of scanning the horizons for the development of the tourism system in Ukraine, it can be noted that the trend toward remote jobs, the scaling of the use of digital technologies and artificial intelligence, the movement of the population, the growth of environmental requirements, and the need for inclusiveness will continue in society. The indicated global factors (challenges) of the environment and their combination are characterized by signs comparable to the elements of the BANI concept (Brittle – fragility, Anxious – anxiety, Nonlinear – non-linearity, Incomprehensible – incomprehensibility). The situation in the world is such that at any moment, everything can change dramatically or even disappear – the world’s fragility. Confirmation of this is the COVID-19 pandemic, the full-scale invasion of the Russian Federation in Ukraine, and the conflict in Israel. All this

contributes to fear, anxiety about the future, not understanding how to act (non-linearity), and inability to act. However, knowledge and consideration of the specified global factors (challenges) of the environment will contribute to the determination by the tourism system entities of a strategic vision of development areas, particularly the formation/adjustment of the vision, mission, and strategic goals.

In addition to global factors, foresight is based on considering industry factors that directly reflect the state of the tourism system. These factors are combined into four groups: 1) trends in the development of the tourist system; 2) the state of the tourist and hotel services market; 3) technologies, innovations, and results of the implementation of research and development in the tourism system; 4) professional competences of the tourism system personnel (Table 2).

Several areas of foresight scenarios for the development of the tourism system are being developed:

- 1) optimistic (tourist flows are growing due to tourist interest in Ukraine and activation of domestic tourism, business entities receive additional investments);
- 2) pessimistic (the number of business entities and tourist flows is decreasing; correspondingly, the opportunities for development due to domestic investments are decreasing);
- 3) neutral (“plateau effect” – the situation on the tourist services market is unchanged, not progressing). Since this scenario reflects the situation’s stability, inertia, this study does not have any options for the development of events.

In order to justify possible optimistic (α -scenarios) and pessimistic (β -scenarios) ways for the development of the tourism system in Ukraine, a matrix was formed in which:

- 1) the components of the BANI concept are presented horizontally (Brittle – fragility, Anxious – anxiety, Nonlinear – non-linearity, Incomprehensible – incomprehensibility) (Cascio, 2020), reflecting the correlation of the influence of global factors;

Table 2. Industry factors for the development of the tourism system in Ukraine

Groups of factors	Industry situational factors
Trends in the development of the tourist system	<ol style="list-style-type: none"> 1. Restoration of certain key indicators in the development of the tourism system entities caused by the beginning and deployment of the full-scale military invasion of the Russian Federation on the territory of Ukraine. 2. The need for short-term rest. 3. The need for psychological rehabilitation. 4. Growth of domestic tourist flows. 5. Demand for hotel services from foreign corporate consumers (international organizations, mass media, event organizations). 6. Direction of tourist flows to the western regions of Ukraine. 7. Distribution of business ecosystems and communities through public-private partnerships, partnership interactions, franchising, collaborations, and associations.
State of the tourist and hotel services market	<ol style="list-style-type: none"> 1. Offer of new conceptual tourist products (excursions) within 150-200 km of territorial accessibility from large cities. 2. Investing in developing hospitality facilities and opening new hotel enterprises, usually with certain conceptual solutions. 3. Hybrid format of hospitality establishments by adding restaurant services, craft productions, event services, and infrastructure components. 4. Reorientation of the outbound tourist flow from Ukraine through Moldova, Romania, Poland, Slovakia, and Hungary airports.
Technologies, innovations, research, and development results in the tourism system	<ol style="list-style-type: none"> 1. Possibilities of artificial intelligence. 2. Scale of digitization of business processes. 3. The extent of involvement of social networks in promoting tourist and hotel products.
Competences of personnel in the tourism system	<ol style="list-style-type: none"> 1. Professional tourist associations. 2. Increase in staff professionalism. 3. The emergence and activity of bloggers aimed at developing components of the tourism system. 4. Promotion of English language learning by Ukrainian citizens.

2) and vertically – industry factors combined into four groups.

Specific foresight scenarios (presented in the form of strategies and management decisions) were determined in such a way that for a group of industry factors:

1. development trends of the tourism system – development strategies were used;
2. the market of tourist and hotel services – a portfolio of market and product strategies was used;
3. technologies, innovations, research, and development results in the tourism system – innovative strategies were used (Freeman, 1982);
4. competencies of the staff of the tourism system – options for personnel policy were used.

In the case of negative expectations, it is suggested to use the pessimistic β -scenario and, accordingly, in the case of positive ones, the optimistic α -scenario to ensure the efficiency and safety of the subjects of the tourism and hotel business.

Considering the influence of certain factors of the external environment, the directions of foresight scenarios, and the potential of the tourism system, the study proposes specific scenarios for the development of events for the formation of strategic models of behavior and the creation of competitive advantages of the tourism system entities. Such modeling of foresight scenarios will make it possible to determine the potential development opportunities of the subjects of the Ukrainian tourism system (Table 3).

Table 3 shows the implementation matrix of the foresight strategic objectives. Combining elements horizontally determines the competitiveness and effectiveness of the tourist system foresight areas. It should be noted that the α -scenario assumes the starting point of the foresight for an economic entity in a normal financial state or requires minimal interventions to restore the previous state. In turn, the β -scenario deals with start-ups, venture investments, or the critical (catastrophic) state of an economic entity, when only visionary (strategies, road maps, etc.) or transformational actions are possible. In principle, there is still a third type of scenarios, the inertial one, when the economic entity does not significantly change its state and functions on established management approach-

Table 3. Foresight scenarios for the development of the Ukrainian tourism system based on the BANI concept

Characteristics of environmental factors	Brittle (A1) (fragility)		Anxious (A2) (anxiety)		Nonlinear (A3) (non-linearity)		Incomprehensible (A4) (incomprehensibility)	
	Foresight scenarios (P)							
	α-scenario	β-scenario	α-scenario	β-scenario	α-scenario	β-scenario	α-scenario	β-scenario
Knowledge of global trends (S1)	Business growth	Closing or reformatting of business	Change management, combined strategies	Anti-crisis management, lack of strategizing	Innovative technologies, management by facts	Limited growth	Long-term strategic management, investment, diversification	Business reduction
Market and product knowledge (S2)	Development of new products and markets	Curtailment of market activity, adaptability	Product diversification	Product modification	Territorial expansion	Replenishment	Related diversification	Unrelated diversification
Knowledge of technologies, innovations, research and development results (S3)	Offensive strategy	Defensive strategy	Diversification strategy	Niche strategy	Robber strategy	Traditional strategy	Imitation strategy	Dependent strategy
Competencies to reflect the priority state of the future (S4)	Active personnel policy, strengthening of corporate culture	Passive personnel policy, «dilution» of personnel by new employees	Active personnel policy	Reactive personnel policy	Personnel development programs	Personnel programs to support reorganization	Preventive personnel policy	Adventurous personnel policy

es. However, its zero desire for forecasting and unfolding of events gives reason not to use it in modeling foresight scenarios. The proposed scenario focused on forming foresight sessions and strategic actions, when it is crucial to determine the determinants for the competitiveness of the product, market, and region to form a compliance system of values, standards, and security of the foresight subject.

For mathematical identification of foresight scenarios of the tourism system development (Si), four strategic structural components (result directions) are defined: S1 – knowledge of global trends; S2 – knowledge of the market and products; S3 – knowledge about technologies, innovations, research and development results; S4 – competences for reflecting the priority state of the future. The foresight methodology can be presented in the form of a matrix:

$$S_i = (S1; S2; S3; S4). \quad (1)$$

The directions of actions are marked with A, namely: A1 – Brittle; A2 – Anxious; A3 – Nonlinear; A4 – Incomprehensible. Types of actions aimed at the permanent transformation of foresight processes are presented in the form of a column matrix:

$$A_j = \begin{pmatrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{pmatrix}. \quad (2)$$

When multiplying the selected matrices a rectangular matrix is obtained:

$$P_{ij} = S_i A_j, \quad (3)$$

where the elements of matrix P_{ij} are goals that determine the qualitative improvement of foresight scenarios, that is, strategic goals.

The obtained matrices can reflect an optimistic scenario, $P_{ij}\alpha$:

$$P_{ija} = \begin{pmatrix} S_1 A_{1a}; S_2 A_{1a}; S_3 A_{1a}; S_4 A_{1a} \\ S_1 A_{2a}; S_2 A_{2a}; S_3 A_{2a}; S_4 A_{2a} \\ S_1 A_{3a}; S_2 A_{3a}; S_3 A_{3a}; S_4 A_{3a} \\ S_1 A_{4a}; S_2 A_{4a}; S_3 A_{4a}; S_4 A_{4a} \end{pmatrix} = \begin{pmatrix} P_{11a}; P_{12a}; P_{13a}; P_{14a} \\ P_{21a}; P_{22a}; P_{23a}; P_{24a} \\ P_{31a}; P_{32a}; P_{33a}; P_{34a} \\ P_{41a}; P_{42a}; P_{43a}; P_{44a} \end{pmatrix} \quad (4)$$

and a pessimistic scenario, $P_{ij\beta}$:

$$P_{ij\beta} = \begin{pmatrix} S_1A_{1\beta}; S_2A_{1\beta}; S_3A_{1\beta}; S_4A_{1\beta} \\ S_1A_{2\beta}; S_2A_{2\beta}; S_3A_{2\beta}; S_4A_{2\beta} \\ S_1A_{3\beta}; S_2A_{3\beta}; S_3A_{3\beta}; S_4A_{3\beta} \\ S_1A_{4\beta}; S_2A_{4\beta}; S_3A_{4\beta}; S_4A_{4\beta} \end{pmatrix} = \begin{pmatrix} P_{11\beta}; P_{12\beta}; P_{13\beta}; P_{14\beta} \\ P_{21\beta}; P_{22\beta}; P_{23\beta}; P_{24\beta} \\ P_{31\beta}; P_{32\beta}; P_{33\beta}; P_{34\beta} \\ P_{41\beta}; P_{42\beta}; P_{43\beta}; P_{44\beta} \end{pmatrix}. \quad (5)$$

In order to create competitive advantages, tourism business entities of Ukraine can form the necessary strategic models of behavior.

Therefore, the foresight of the tourism system development and its subjects is a deterministic process that:

- allows to determine and describe directions of development, taking into account global factors;
- specify the scenarios for the unfolding of events;
- make strategic and operational management decisions based on assessing the influence of hierarchical factors.

4. DISCUSSION

As a technology for strategic planning of variable development directions foresight is characterized by the growing importance for business entities.

Torres and Pena (2021) reasoned that enhancing corporate behavior in the long run minimizes biases inherent in the decision-making process and gives relevant information to the organization's management. Forecasting methods and tools have enabled mitigating problems arising from bounded rationality in decision-making processes. This provision closely correlates with the statement that foresight takes into account situational influences and offers scenarios for searching and making decisions about strategic development because

mitigating problems eliminates possible negatives regarding development prospects.

Castillo-Camarena and López-Ortega (2021) emphasize that foresight's results "support the organizational planning process." Moreover, this theoretically confirms that foresight has a significant positive impact on the intention of business entities to use possible scenarios of unfolding events to form optimistic or pessimistic strategic behavior models, i.e., it becomes an integral component of organizational planning. Kovářiková et al. (2017) note that "the key determinants of the behavioral intention to use foresight" are "...the expected performance, the construct of personal innovativeness, as well as social influence." This position is confirmed based on the horizon scanning method.

The provision that foresight contributes to the prediction of a certain state of the business environment and creates opportunities for the formation of business development scenarios by one's own potential was found by Popper et al. (2007), Cascio (2020), Kryvtsova (2020). In particular, Varum et al. (2011) consider foresight as a set of "scenario techniques" that "helps policymakers and managers to recognize, consider and reflect on the uncertainties they may face" and "provides a framework for developing and evaluation of sound strategies and policies".

Makian and Nematpour (2021) deepened the interpretations of foresight, viewing foresight as "foresight thinking" and "scenario planning as a crisis management tool." That is, it covers both the issues of scenario approaches in developing policies (strategic models of behavior) of business entities and the security objectives of using foresight.

Supporting the opinion that foresight is a process of predicting the future, this study appeals to other views (Gokhberg, 2013; Makian & Nematpour, 2021; Skrypnychenko, 2022) and claims that the combination of quantitative and qualitative (expert) methods and tools ensure a high level of realism of forecasts regarding the future state of this process.

The study has a number of limitations that require additional research. Firstly, the analytics of the tourist and hotel business during martial law in Ukraine is not officially reflected, and the data collection was carried out on the basis of individ-

ual publications of the central executive body of tourism regulation – the State Agency for Tourism Development in Ukraine. Secondly, there is an uncertain timeframe for the escalation of the war and possible further losses, damage to the material and technical base and infrastructure. Therefore,

the findings of foresight scenarios remain a priori probabilistic. Nevertheless, the results of the foresight for the development of the tourism system and the pre-crisis experience of its financial self-sufficiency create the theoretical and practical value of the research.

CONCLUSION

The tourism system of Ukraine under martial law is characterized by instability. However, some key indicators in 2023, compared to the previous year, show slight positive trends. For example, there was a 15.6% increase in tax revenues to the state budget of Ukraine from tourism and hotel business entities. The prospects of the Ukrainian tourism system for development and investment in the post-war period are evidenced by the positive trends of KPI indicators (ADR, RevPAR, and Occupancy during 2021–2022 and in the first half of 2023 in hotels of investment-attractive destinations of Ukraine: Kyiv, Lviv, Odesa, and Bukovel). On average, in 2023 compared to pre-war 2021, only the ADR indicator increased by 24.4%, but compared to 2022, all indicators increased: ADR by 66.0%, RevPAR by 206.0%, occupancy – 44.0%. Such trends, along with ensuring the security of business entities in this area in the future, can strengthen positive scenarios for their further development.

Scanning the horizons of global and national trends of the tourism system and identifying positive or negative effects made it possible to form foresight scenarios of development based on the concept of BANI (Brittle, Anxious, Nonlinear, Incomprehensible) and taking into account the characteristics of environmental factors: global trends, market and products, technologies and innovations, personnel competencies. According to various foresight results, α - and β -scenarios were identified, reflecting more optimistic and realistic-pessimistic future states of this business development.

Taking into account the state of the environment and vision of the future, subjects of the tourism and hotel business can choose possible key areas of strategic development. A prognostic vision of the future, the state of which is caused by nonlinear, difficult-to-predict trends, guides and lays the foundations for strategic decisions regarding the development of potential for tourism and hotel business entities, areas for the implementation of innovations, strengthening the economic and social cohesion of the tourism system entities, and determining the factors that mitigate the consequences of the military actions in the studied sphere of the economy of Ukraine in the post-war period.

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APPENDIX A

Table A1. Scanning the horizons for the development of the tourism system in Ukraine on a global scale

Environmental factors (challenges)	Metrics:									
	level of potential impact:					probability level:				
	1–insignificant	2 – moderate	3 – moderate, evolutionary	4 – pronounced, strong	5 – discontinuous	1 – very unlikely	2 – unlikely	3 – possible	4 – probable	5 – very probable
Socio-cultural dimension	4.4					4.2				
The impact of remote work on emotional intelligence			3					3		
The influence of social media on the target audience					5					5
Growing unemployment in Ukraine					5					5
Charity for the benefit of future generations			3					3		
Loss of objects of Ukrainian cultural heritage due to the war				4					4	
The appearance of new monuments, shrines, places of worship					5					5
The increase in the number of the population of Ukraine with limited travel needs					5					5
Population and business relocation					5					5
Demand for sharing economy models (coliving, coworking)									4	
An increase in the number of cases of post-traumatic syndrome				4						5
The spread of volunteer/ community activities			3					3		
Transformation of Ukraine into a «tourist magnet of the world»					5				4	
Development of internal tourism due to the presence of internally displaced persons					5				4	
Blurring the boundaries between tourism and the usual way of life					5				4	
Expectation of «labor shortages»				4					4	
Technological dimension	4.3					4.2				

Table A1 (cont.). Scanning the horizons for the development of the tourism system in Ukraine on a global scale

Environmental factors (challenges)	Metrics:									
	level of potential impact:					probability level:				
	1–insignificant	2 – moderate	3 – moderate, evolutionary	4 – pronounced, strong	5 – discontinuous	1 – very unlikely	2 – unlikely	3 – possible	4 – probable	5 – very probable
The use of social media for business purposes					5					5
Digitization of business and social sphere					5					5
IT products for crowdfunding the development of the tourism system			3					3		
The influence of satellite communication on the tourist system infrastructure				4				3		
Artificial intelligence for virtual assistants and chats of tourism entities					5					5
Artificial intelligence as a new advantage for Ukraine				4					4	
Economic dimension			4.3					4.1		
Attracting private investments			3							
Restoration of Ukraine as the basis of global peace				4					4	
Standardization of railway tracks between the EU and Ukraine					5				4	
Sharing economy in Ukraine					5				4	
Gig and digital economy as a source of income, development of digital tourism				4					4	
Strengthening the demand for public-private partnership (PPP)					5					5
Destruction of energy and other critical infrastructure					5					5
Freelancing as an adaptation to the challenges caused by the COVID-19 pandemic and war				4					4	

Table A1 (cont.). Scanning the horizons for the development of the tourism system in Ukraine on a global scale

Environmental factors (challenges)	Metrics:									
	level of potential impact:					probability level:				
	1 – insignificant	2 – moderate	3 – moderate, evolutionary	4 – pronounced, strong	5 – discontinuous	1 – very unlikely	2 – unlikely	3 – possible	4 – probable	5 – very probable
Spreading the national identity of the business environment and diversification of business formats				4						5
Ecological dimension	4.0					4.6				
Increased level of air pollution in cities			3							5
Environmental damage caused by the war					5					5
The growing need for rest and recreation within natural landscapes					5					5
Scaling the introduction of environmental standards by the subjects of the tourism system				4					4	
Increasing sanitary and hygienic requirements for subjects of the tourism system			3						4	
Political and legal dimension	5.0					4.4				
Russia's aggression is rooted in ideology					5				4	
Increasing the attractiveness of innovative ecosystems					5					5
Ukraine's future membership in the EU and NATO					5				4	
Strengthening unity and social cohesion					5					5
Information war					5					5
Ukraine as a potential regional political and economic leader					5			3		
Ensuring the safety of tourists					5					5
Ethical dimension	3.6					3.3				
The moral side of the Russian invasion			3						4	

Table A1 (cont.). Scanning the horizons for the development of the tourism system in Ukraine on a global scale

Environmental factors (challenges)	Metrics:									
	level of potential impact:					probability level:				
	1–insignificant	2 – moderate	3 – moderate, evolutionary	4 – pronounced, strong	5 – discontinuous	1 – very unlikely	2 – unlikely	3 – possible	4 – probable	5 – very probable
The role of artificial intelligence in politics and its ethical dimension				4			2			
Taking into account the needs of «inclusive categories» of the population				4					4	
Demographic dimension			4.3					4.6		
Aging population					5					5
Injuries and their impact on the health care system, recreation, tourism				4						5
Aggravation of the demographic crisis as a result of the war				4					4	
The impact of the war on the demography of Europe					5					5
The impact of family separation due to war on demography			3					3		
The growth of the Ukrainian diaspora					5					5
Depopulation of some cities and villages of Ukraine				4						5