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ECONOMETRIC MODELING OF TOURIST COMPANIES' FINANCIAL RESULTS: MULTIFACTOR REGRESSION ANALYSIS AND SCENARIO FORECASTING

ABSTRACT

The article considers strategic modeling of the competitive capabilities of tourism companies in a dynamic market. The purpose is to design an effective model for assessing competitiveness, using materials from the case study of the tour operator "Join UP!" and applying correlation and regression analysis methods. The constructed model is an effective tool for identifying the most significant factors influencing the company's net income, including the unemployment rate, the number of inbound and outbound tourists, and income from excursion activities. The study findings confirm a close relationship between the dynamics of tourist flows, macroeconomic conditions, and the financial results of tourism industry entities. Based on scenario forecasting (optimistic, realistic, and pessimistic), the author proposes management strategies that contribute to increasing the company's efficiency in its activities, particularly through the development of domestic tourism, diversification of services, and anti-crisis management. The elements of scenario forecasting of the competitive potential of tourism companies are described. The net income from the sale of products (goods, works, services) of the "Join UP!" travel company has been calculated according to three scenarios. The practical value of the study lies in the adaptability of the developed model for making strategic management decisions in the tourism sector. The integration of economic and statistical analysis with correlation and regression modeling allows the identification of the most significant factors that affect the net income of tourism companies in a dynamic market environment. The constructed model can serve as a basis for further research and improvement of strategic approaches to managing competitive potential in the tourism industry and its optimization.

Keywords: tourism, competitive potential, tourism companies, strategic modeling, analysis, scenario forecasting, econometric modeling, financial correlation-regression results, regression analysis, tourism market, management strategies, tourism industry

JEL Classification: H11, H80, L10, L83, O10

INTRODUCTION

In the current conditions of globalization and digitalization, the tourism industry in Ukraine faces intense competition, particularly in large cities such as Kyiv. The hostilities in Ukraine have dramatically changed the conditions for the tourism industry, forcing travel companies to focus on survival and adaptation to extreme economic conditions. The current situation in this area is marked by a high degree of uncertainty and dynamism. Tourism companies ought to adapt to a changing market environment, taking into account economic, social, and environmental factors. At the same time, growing tourist flows, infrastructure development, and changes in consumer preferences create new opportunities for strategic innovation. In 2025, tourist tax revenue increased by almost 36% compared to 2024 and by 55% compared to the pre-war 2021. This trend indicates a gradual recovery of domestic tourism and adaptation of the tourist market to new security and logistical conditions, as well as to travelers' demands (SATD, 2025). The study's topicality is justified by the need for a comprehensive analysis of the competitive capability of travel companies, which allows not only to assess their current

efficiency, but also to predict future financial results. The emphasis is laid on the activities of the travel operator "Join UP!", which is one of the leading companies in the outbound tourism market in Ukraine.

LITERATURE REVIEW

To develop a strategic model of the tourism company's competitive potential, we will draw on and analyze the scientific works directly related to the purpose of this study. A large number of scholars in the field of economics and management have developed various approaches to assessing the competitive potential of business entities, varying in depth of analysis and the level of integration of financial and non-financial factors.

According to Brych V. and Halych N. (2020), one of the key methods for analyzing the competitiveness of tourism businesses is the ABC analysis method, which is used as a tool for managing the ranking of elements of a tourism business's activities. The methodological essence of the proposed approach involves classifying tourism products, customers, or resources according to their contribution to operational results based on the Pareto principle. The use of ABC analysis in the studies mentioned above is mainly static and descriptive in nature. Furthermore, ABC analysis does not consider the influence of macroeconomic, social, and market factors, which are vitally important in the context of the highly turbulent tourism market in Ukraine, especially during wartime and post-war period (Brych, Halych, 2020).

Zaburanna L. V. and Kulik A. V. (2018) demonstrate a more comprehensive approach, combining ABC analysis with XYZ, VEN, and RFM analysis and the BCG matrix, which enables simultaneous assessment of demand stability, strategic product positioning, and consumer behavior characteristics. However, even in this case, the analysis of competitive potential focuses mainly on the internal characteristics of enterprises and is not supported by quantitative modeling of financial results (Zaburanna, Kulik, 2018).

Butko M. (2004) recommends resource and factor index approaches for assessing competitiveness through aggregate indices of resource provision and environmental factors. This allows comparing enterprises/regions according to integrated indicators. On the other hand, the index approach has limited analytical depth because it reduces multidirectional factors to a single generalized indicator and does not enable a quantitative assessment of the impact of individual factors on the financial results of tourism companies, which is crucial for strategic management in an unstable market (Butko, 2004).

Havryliuk S.P. (2001) employs a parametric method and a ranking method to construct relative scales of competitiveness for tourism service enterprises, enabling a comparative analysis of enterprises based on a system of indicators and the formation of rating positions in the tourism market. The advantage of these methods is the ease of their application and the quick identification of the company's strengths and weaknesses. On the other hand, parametric assessment and ranking methods are static and based on fixed indicator values, which limits their use for forecasting financial results and analyzing the dynamics of competitive potential in a changing market environment (Havryliuk, 2001).

The SWOT analysis, actively used by Byba V.V., Tenytska N.B., and Bilyzna A.R. (2019) to assess the competitive advantages of tourism entrepreneurship, enabled the systematization of internal strengths and weaknesses of enterprises, as well as external opportunities and threats. However, it is qualitative and expert in nature and does not provide a quantitative assessment of the individual factor's impact on the performance of tourism companies (Byba, Tenytska, Bilyzna, 2019).

Porter M. (2008) has made a significant theoretical contribution to the study of competitiveness. He developed a methodology for assessing the comparative competitiveness of economic systems, in particular through the concepts of competitive forces, value chains, and competitive strategies. Nevertheless, Porter's concepts are primarily theoretical and strategic in nature and require further adaptation to quantitative models for analyzing the financial results of specific tourism companies (Porter, 2008).

Bochan I. O. (2020) utilizes analytical and graphical tools to assess the competitive potential of the tourism industry in the context of globalization, emphasizing the importance of branding, service, and integration into regional clusters. However, there is no quantitative interpretation of the impact of individual factors on financial results, nor are there any mechanisms for forecasting the development of competitive potential over time (Bochan, 2020).

Kalchenko O.M. applies correlation and regression analysis to identify the main factors influencing the activities of tourism entities, selects the most significant factors, and designs several econometric models to describe these dependencies [8]. The methodological value of this approach lies in its ability to quantitatively estimate the strength and direction of relationships among individual indicators, enabling a transition from descriptive analysis to more formalized economic and mathematical models. However, the primary focus of this approach is on identifying factors, while issues of scenario

forecasting of financial results and strategic interpretation of the models obtained remain outside the scope of the analysis (Kalchenko, 2013).

Koshova B. R. (2018) applies correlation-regression tools to the socio-economic development of tourism infrastructure, which makes it possible to assess which factors accelerate/slow down infrastructure changes. However, these studies are macro-level in nature and do not provide a framework for developing models focused on the financial results of specific tourism companies, which limits their applicability in the strategic management of enterprises.

Almashii, Ya. I. (2013), drawing on economic and mathematical modeling, develops an organizational mechanism for improving the overall efficiency of tourism companies in the region, with an emphasis on management levers. However, the proposed models are generalized and do not reflect the competitive behavior features of individual tourism companies, nor do they incorporate a scenario analysis of risks and market instability, which is critically important in the current environment of the tourism business.

Savitska O. (2013) suggests assessing the development of the tourism industry through the level of tourist infrastructure development, which includes the transport system, accommodation facilities, health resorts, recreation complexes, catering, cultural and entertainment facilities, as well as tourist information infrastructure. This approach justifies infrastructure development as a significant factor in shaping the tourist attractiveness and competitive potential of tourism industry subjects. At the same time, in the current conditions of the tourism market transformation, it is advisable to supplement the infrastructure approach with parameters of tourist activity safety, which are an important criterion of competitive potential.

Hedin (2021) proposes using an integrated index of attractiveness for the tourism and recreation sector, calculated from indicators of cultural, recreational, infrastructural, and investment attractiveness, to assess the competitiveness of the tourism industry. The method of standardization and further ranking developed by Korkun O. (2020) enables a comparative assessment of tourism industry entities and the determination of their competitive positions. Nevertheless, these index approaches have limited potential for assessing the sustainability and security of the tourism industry's development, necessitating their supplementation within the author's methodology.

Although significant research has been conducted, key aspects of the issue remain unresolved: the lack of an integrated approach, limited applicability of econometric models when analyzing competitive potential, insufficient use of scenario forecasting, and fragmented implementation of quantitative results in management decisions.

The elimination of these gaps necessitated the development of a comprehensive model for strategic modeling of the competitive potential of tourism companies, combining correlation and regression analysis with scenario forecasting of financial results.

AIMS AND OBJECTIVES

The goal of this study is to develop an effective mechanism for strategic modeling of the competitive potential of tourism companies in a dynamic market, using the example of the tour operator "Join UP!" in Kyiv. The study aims to identify key factors that determine the level of competitiveness of companies and to determine adaptive management strategies that can increase the effectiveness of their activities.

To achieve the goal, it is necessary to solve the following tasks:

1. To systematize scientific approaches to assessing the competitive potential of tourism enterprises.
2. To determine a system of indicators that characterizes the competitive environment of the tourism industry in Kyiv.
3. To build a correlation-regression model of the dependence of the net income of the tourism operator "Join UP!" on key factors of competitive potential.
4. To identify the most significant factors influencing the financial results of tourism companies.
5. To define scenarios for the development of competitive potential (optimistic, realistic, and pessimistic) and forecast them.
6. To substantiate proposals for management strategies aimed at increasing the efficiency of tourism companies in a changing market environment.

METHODS

The methodological basis of the study is a combination of scenario analysis and economic and mathematical modeling, which ensures a comprehensive assessment of the competitive potential of tourism companies in a dynamic market environment.

Firstly, correlation-regression analysis was used to identify key factors influencing the tour operator's financial performance. This allowed us to reveal the strength and trend of the relationship between Join UP!'s net income and a file of macroeconomic, social, and market indicators. Based on the correlation matrix, the most informative variables were selected (the unemployment rate, the number of inbound and outbound tourists, and income from excursion activities) and integrated into the multiple linear regression model.

In the current conditions of the dynamic development of the Ukrainian tourism market, especially in millionaire cities, strategic modeling of the competitive potential of tourism companies is becoming particularly relevant. The travel operator "Join UP!" was chosen as an example for analysis, since it is one of the leading companies in the field of outbound tourism (Ierko, 2025). The tourism industry in Kyiv is a highly competitive environment, where both large national tour operators and numerous travel agencies operate. The tour operator LLC "Join Up" is one of the leaders in this market, occupying a significant share in the field of outbound tourism in Ukraine (Ierko, 2025).

Numerous factors influence the company's net income structure: the volume of tourists served and tours sold, macroeconomic conditions, the level of competition, the state of tourism resources, and external (ecological, social, and economic) changes. The study focuses on identifying how these factors affect the profitability of "Join UP!" and what the prospects are for the development of the tourism business in the competitive environment of Kyiv, using the example of LLC "Join UP!" (Ierko, 2025).

Analysis of the input information allows us to conclude that there is a linear form of relationship between the selected economic indicators:

$$y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \dots + b_nx_n \quad (1)$$

To identify the relationship between net income from sales of products (goods, works, services) of the tour operator "Join UP!", in UAH thousand, and partial indicators reflecting the competitive potential of tourism industry entities in Kyiv, a correlation model was constructed by the following factors:

number of tourists served by tour operators and travel agents (x1); number of tourist packages sold by travel agents and tour operators, by region (x2); cost of one tour sold by tour operators and travel agents, by region, in UAH thousand (cost/total quantity) (x3); average cost of one tour sold by tour operators and travel agents, by region, UAH thousand (cost/total number) (x4); number of tour days according to tourist vouchers sold by tour operators and travel agents, by region (x5); land area of nature reserve fund objects (x6); number of nature reserve fund objects (x7); mortality rate (x8); share of working-age population in the total population of the region, % (x9); total natural population growth (decline) rate in Ukraine (x10); unemployment rate (aged 15 to 70) (x11); inflation rate (consumer price index) (x12); ratio of exports to imports (x13); emissions of pollutants into the atmosphere from stationary sources of pollution, thousand tons (x14); generation of Class IV hazardous waste per capita, kg (x15); amount of recycled wastes, thousand tons (x16); amount of disposed Class IV hazardous wastes, thousand tons (x17); income from tourism services, UAH thousand (x18); number of inbound tourists (foreign citizens) (x19); number of outbound tourists (abroad) (x20); number of inbound tourists (x21); expenses of tourism entities for services of third-party organizations included in the cost of tourist packages, by region (UAH thousand) (x22); direct investments (equity instruments in temporary accommodation and meal provision enterprises): balances by region (x23); income from excursion activities, UAH thousand (x24); income of the population by region of Ukraine, UAH million (x25); current population, persons (x26); average monthly salary of full-time employees and its growth rates by region of Ukraine (x27); total birth rates per 1,000 persons of the existing population (x28); number of actual overnight stays in collective accommodation facilities, thousand units (x29); average length of stay of foreigners in collective accommodation facilities, nights (x30); average length of stay of Ukrainian residents in collective accommodation facilities, nights (x31); the coefficient of the collective accommodation facilities occupancy rate (x32); average length of stay in collective accommodation facilities, overnight stays (x33); number of active economic entities by type of economic activity of tour operators and travel agents by region (x34); food and beverage services (x35); passenger ground transportation (x36); hotels and related types of accommodation (x37); health resorts (x38); health resort facilities (x39); capacity of health resort facilities (number of beds, in months of maximum occupancy) (x40); number of museums, number of units (x41); number of people employed in the hospitality industry, thousand people (x42); average monthly

salary of hospitality industry employees, UAH (x43); number of children staying in children's health and recreation facilities, persons (x44); number of persons staying in collective accommodation facilities, thousand persons (x45); number of foreigners staying in collective accommodation facilities, persons (x47); number of Ukrainian residents staying in collective accommodation facilities, thousand persons (x48); number of children's health and recreation facilities (x49); number of beds in children's health and recreation facilities, units (x50); number of collective accommodation facilities, units (x51) (Ierko, 2025).

A correlation model (by 51 factors) was created to identify the dependence between the net income from the sale of products (goods, works, services) of the "Join UP!" tourist company, in UAH thousand, and partial indicators that reflect the competitive potential of the tourism industry entities of Kyiv (Ierko, 2025).

When constructing the mentioned model, we calculate the pairwise correlation coefficient to measure the potency of linear relationships between different pairs of variables (features) from a given set. It is taken into account that the relationship between each pair of features is influenced by the relationships between all other features and features from this pair (Ierko, 2025).

Secondly, a Multicollinearity Test of Independent Variables is applied to ensure the reliability of the results, avoid statistical distortions in the model, and maintain the interpretative reliability of the obtained coefficients. Additionally, the coefficient of determination (R^2), multiple correlation coefficient, and F-test are used to confirm the model's high explanatory potency.

Thirdly, scenario forecasting is used to account for dynamic market changes. Three development scenarios (optimistic, realistic, and pessimistic) have been created to reflect the variability of macroeconomic conditions, geographical diversification, and seasonal fluctuations in demand. A risk-based scenario approach can ensure the adequacy of the forecasts.

Fourthly, the method of establishing cause-and-effect relationships is applied to form a system of management decisions aimed at improving the competitive potential of tourism companies in a dynamic market.

Finally, to summarize the results of the study, it is appropriate to use logical generalization and analytical methods.

RESULTS

To identify the relationship between net income from sales of products (goods, works, services) of the tour operator "Join UP!" and partial indicators that reflect the competitive potential of tourism industry entities in Kyiv, a Table 1 of initial data was formed, the results of the standardization of which became the basis for constructing a regression model.

Table 1. Matrix of pairwise correlation coefficients.

	Y	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26
Y	1.00	0.93	0.85	0.77	0.58	0.86	-0.31	-0.10	-0.06	0.68	-0.25	-0.79	-0.18	-0.80	-0.43	-0.52	-0.37	-0.25	0.80	0.94	0.89	0.69	0.85	-0.10	0.86	0.22	0.24
X1		1.00	0.95	0.87	0.61	0.81	-0.29	-0.06	-0.02	0.83	-0.19	-0.85	-0.23	-0.56	-0.54	-0.46	-0.37	-0.25	0.85	0.95	0.96	0.67	0.88	-0.10	0.86	0.24	0.22
X2			1.00	0.97	0.75	0.87	-0.04	0.21	0.26	0.90	-0.39	-0.70	-0.35	-0.47	-0.53	-0.19	-0.12	0.00	0.90	0.83	0.99	0.45	0.91	-0.28	0.91	0.46	0.38
X3				1.00	0.84	0.89	0.16	0.41	0.47	0.89	-0.56	-0.53	-0.42	-0.44	-0.46	0.00	0.08	0.20	0.92	0.69	0.96	0.27	0.91	-0.42	0.92	0.63	0.52
X4					1.00	0.91	0.55	0.70	0.62	0.85	-0.78	-0.34	-0.81	-0.35	-0.62	0.38	0.48	0.59	0.74	0.39	0.72	-0.16	0.78	-0.82	0.91	0.86	0.85
X5						1.00	0.20	0.39	0.39	0.82	-0.63	-0.55	-0.56	-0.68	-0.54	-0.02	0.13	0.25	0.84	0.69	0.87	0.23	0.89	-0.55	0.99	0.65	0.63
X6							1.00	0.96	0.85	0.20	-0.80	0.54	-0.68	0.28	-0.08	0.96	1.00	1.00	0.11	-0.54	-0.09	-0.88	0.11	-0.88	0.20	0.84	0.82
X7								1.00	0.93	0.38	-0.90	0.41	-0.68	0.14	-0.12	0.88	0.94	0.97	0.35	-0.34	0.16	-0.73	0.33	-0.89	0.40	0.95	0.87
X8									1.00	0.29	-0.86	0.47	-0.42	0.00	0.11	0.79	0.83	0.84	0.38	-0.28	0.23	-0.61	0.32	-0.70	0.38	0.89	0.70
X9										1.00	-0.44	-0.67	-0.67	-0.19	-0.78	0.05	0.10	0.23	0.81	0.65	0.86	0.18	0.85	-0.54	0.88	0.57	0.59
X10											1.00	-0.23	0.60	0.23	0.07	-0.62	-0.78	-0.83	-0.60	0.05	-0.39	0.44	-0.59	0.86	-0.63	-0.97	-0.92
X11												1.00	0.20	0.40	0.72	0.64	0.61	0.50	-0.50	-0.61	-0.69	-0.73	-0.57	-0.11	-0.59	0.16	0.05
X12													1.00	-0.08	0.76	-0.57	-0.63	-0.71	-0.34	-0.02	-0.28	0.48	-0.42	0.91	-0.58	-0.72	-0.85
X13														1.00	0.02	0.46	0.28	0.23	-0.44	-0.65	-0.54	-0.52	-0.49	-0.04	-0.58	-0.12	-0.07
X14															1.00	-0.02	0.00	-0.11	-0.32	-0.46	-0.46	-0.06	-0.42	0.44	-0.57	-0.23	-0.39
X15																1.00	0.96	0.94	-0.11	-0.69	-0.26	-0.96	-0.13	-0.74	-0.02	0.69	0.63
X16																	1.00	0.99	0.04	-0.61	-0.17	-0.90	0.03	-0.85	0.13	0.81	0.78
X17																		1.00	0.15	-0.50	-0.05	-0.85	0.15	-0.91	0.25	0.87	0.85
X18																			1.00	0.69	0.92	0.37	0.99	-0.40	0.90	0.61	0.56
X19																				1.00	0.66	0.84	0.73	0.15	0.71	-0.03	-0.03
X20																					1.00	0.51	0.93	-0.23	0.61	0.43	0.35
X21																						1.00	0.38	0.62	0.25	-0.49	-0.48
X22																							1.00	-0.45	0.94	0.61	0.59
X23																								1.00	-0.56	-0.91	-0.98
X24																									1.00	0.67	0.66
X25																										1.00	0.94
X26																											1.00

(continued on next page)

Table 1. Continued.

	Y	X27	X28	X29	X30	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51
Y		0,27	-0,11	0,42	0,41	-0,20	0,55	0,03	0,52	0,51	0,81	0,39	-0,57	-0,57	-0,57	-0,56	0,38	0,69	0,46	0,47	0,53	0,39	0,54	-0,37	0,44	-0,56
X1		0,27	-0,14	0,44	0,22	-0,24	0,65	0,02	0,55	0,47	0,75	0,32	-0,38	-0,38	-0,38	-0,52	0,66	0,63	0,37	0,49	0,66	0,44	0,53	-0,17	0,53	-0,56
X2		0,49	-0,37	0,34	0,06	-0,38	0,52	0,15	0,64	0,54	0,73	0,47	-0,38	-0,38	-0,38	-0,64	0,80	0,69	0,51	0,33	0,68	0,26	0,38	-0,31	0,68	-0,69
X3		0,65	-0,53	0,24	-0,03	-0,45	0,36	0,27	0,70	0,61	0,72	0,60	-0,44	-0,44	-0,44	-0,72	0,82	0,75	0,64	0,17	0,62	0,10	0,24	-0,45	0,76	-0,77
X4		0,87	-0,82	-0,29	-0,36	-0,83	-0,04	-0,01	0,90	0,87	0,74	0,87	-0,61	-0,61	-0,61	-0,96	0,58	0,88	0,78	-0,34	0,19	-0,42	-0,24	-0,75	0,96	-0,99
X5		0,68	-0,56	0,05	0,04	-0,60	0,23	0,07	0,79	0,77	0,84	0,74	-0,68	-0,68	-0,68	-0,88	0,50	0,88	0,74	0,03	0,39	-0,07	0,13	-0,71	0,79	-0,89
X6		0,82	-0,90	-0,75	-0,70	-0,65	-0,77	0,13	0,55	0,56	0,14	0,73	-0,34	-0,34	-0,34	-0,59	0,17	0,43	0,61	-0,90	-0,45	-0,92	-0,86	-0,63	0,60	-0,57
X7		0,93	-0,96	-0,59	-0,61	-0,65	-0,64	0,27	0,66	0,65	0,31	0,82	-0,43	-0,43	-0,43	-0,70	0,37	0,57	0,75	-0,76	-0,24	-0,80	-0,71	-0,69	0,72	-0,69
X8		0,87	-0,84	-0,29	-0,36	-0,45	-0,49	0,56	0,48	0,46	0,20	0,71	-0,34	-0,34	-0,34	-0,58	0,42	0,47	0,73	-0,54	0,01	-0,59	-0,47	-0,67	0,56	-0,57
X9		0,59	-0,56	-0,05	-0,35	-0,66	0,32	-0,15	0,81	0,70	0,74	0,58	-0,36	-0,36	-0,36	-0,75	0,81	0,75	0,50	-0,01	0,42	-0,04	0,03	-0,31	0,88	-0,82
X10		-0,98	0,93	0,40	0,30	0,56	0,55	-0,38	-0,78	-0,81	-0,61	-0,96	0,75	0,75	0,75	0,85	-0,32	-0,81	-0,96	0,57	0,17	0,63	0,50	0,84	-0,72	0,79
X11		0,13	-0,18	-0,33	-0,15	0,21	-0,77	0,45	-0,33	-0,26	-0,53	0,01	0,12	0,12	0,12	0,26	-0,39	-0,35	0,05	-0,53	-0,51	-0,50	-0,54	-0,12	-0,34	0,33
X12		-0,71	0,80	0,75	0,75	0,96	0,31	0,46	-0,84	-0,82	-0,51	-0,75	0,43	0,43	0,43	0,82	-0,31	-0,68	-0,51	0,70	0,27	0,73	0,65	0,57	-0,91	0,86
X13		-0,16	-0,04	-0,43	-0,70	0,02	-0,35	-0,23	-0,19	-0,28	-0,51	-0,28	0,57	0,57	0,57	0,39	0,10	-0,46	-0,41	-0,42	-0,39	-0,29	-0,53	0,56	-0,10	0,34
X14		-0,24	0,29	0,34	0,51	0,77	-0,33	0,72	-0,59	-0,52	-0,44	-0,30	0,10	0,10	0,10	0,54	-0,41	-0,44	-0,07	0,15	-0,14	0,17	0,12	0,14	-0,72	0,64
X15		0,66	-0,76	-0,73	-0,75	-0,57	-0,73	0,10	0,33	0,32	-0,13	0,51	-0,06	-0,06	-0,06	-0,37	0,13	0,16	0,37	-0,88	-0,41	-0,89	-0,85	-0,45	0,46	-0,38
X16		0,78	-0,86	-0,76	-0,66	-0,59	-0,82	0,15	0,49	0,52	0,09	0,70	-0,33	-0,33	-0,33	-0,54	0,08	0,37	0,59	-0,91	-0,50	-0,93	-0,87	-0,62	0,53	-0,51
X17		0,85	-0,92	-0,76	-0,69	-0,68	-0,76	0,11	0,59	0,61	0,20	0,77	-0,39	-0,39	-0,39	-0,64	0,17	0,48	0,65	-0,90	-0,44	-0,92	-0,85	-0,67	0,64	-0,62
X18		0,63	-0,52	0,24	0,07	-0,27	0,21	0,32	0,76	0,70	0,88	0,66	-0,64	-0,64	-0,64	-0,71	0,72	0,84	0,75	0,17	0,41	0,14	0,21	-0,40	0,66	-0,70
X19		0,00	0,14	0,58	0,44	-0,05	0,78	-0,05	0,32	0,27	0,64	0,10	-0,29	-0,29	-0,29	-0,32	0,44	0,46	0,17	0,68	0,68	0,62	0,71	-0,05	0,29	-0,35
X20		0,46	-0,32	0,40	0,16	-0,30	0,53	0,20	0,61	0,53	0,75	0,46	-0,43	-0,43	-0,43	-0,62	0,76	0,70	0,53	0,38	0,68	0,32	0,44	-0,32	0,62	-0,65
X21		-0,46	0,58	0,80	0,72	0,48	0,79	0,03	-0,14	-0,17	0,31	-0,34	-0,05	-0,05	-0,05	0,19	0,14	0,03	-0,18	0,91	0,57	0,91	0,89	0,35	-0,26	0,19
X22		0,63	-0,53	0,17	0,04	-0,36	0,22	0,20	0,81	0,76	0,93	0,69	-0,69	-0,69	-0,69	-0,77	0,66	0,89	0,75	0,14	0,37	0,10	0,18	-0,44	0,71	-0,76
X23		-0,91	0,96	0,75	0,67	0,85	0,58	0,11	-0,86	-0,87	-0,54	-0,91	0,60	0,60	0,60	0,87	-0,27	-0,75	-0,76	0,81	0,37	0,84	0,75	0,74	-0,86	0,86
X24		0,70	-0,59	0,04	-0,03	-0,59	0,23	0,06	0,84	0,80	0,88	0,75	-0,67	-0,67	-0,67	-0,88	0,59	0,91	0,74	0,03	0,38	-0,05	0,11	-0,63	0,82	-0,89
X25		1,00	-0,98	-0,45	-0,46	-0,68	-0,48	0,28	0,83	0,82	0,58	0,94	-0,64	-0,64	-0,64	-0,88	0,46	0,80	0,90	-0,60	-0,10	-0,66	-0,53	-0,79	0,83	-0,85
X26		0,94	-0,97	-0,64	-0,55	-0,76	-0,55	0,00	0,92	0,94	0,68	0,97	-0,73	-0,73	-0,73	-0,92	0,32	0,86	0,87	-0,71	-0,32	-0,74	-0,65	-0,76	0,86	-0,89
X27		1,00	-0,97	-0,43	-0,43	-0,68	-0,46	0,28	0,84	0,84	0,61	0,95	-0,67	-0,67	-0,67	-0,89	0,46	0,82	0,91	-0,58	-0,08	-0,64	-0,51	-0,81	0,84	-0,87
X28			1,00	0,60	0,61	0,73	0,56	-0,15	-0,84	-0,83	-0,54	-0,93	0,59	0,59	0,59	0,85	-0,43	-0,76	-0,84	0,72	0,24	0,75	0,67	0,72	-0,85	0,83
X29				1,00	0,80	0,67	0,75	0,49	-0,44	-0,49	-0,06	-0,48	0,22	0,22	0,22	0,41	0,22	-0,24	-0,23	0,95	0,79	0,93	0,95	0,36	-0,44	0,39
X30					1,00	0,69	0,44	0,43	-0,45	-0,37	0,01	-0,34	-0,11	-0,11	-0,11	0,33	-0,31	-0,15	-0,10	0,77	0,40	0,72	0,80	0,06	-0,59	0,40
X31						1,00	0,19	0,44	-0,73	-0,71	-0,40	-0,68	0,32	0,32	0,32	0,79	-0,31	-0,60	-0,44	0,62	0,11	0,69	0,54	0,62	-0,89	0,86
X32							1,00	-0,12	-0,24	-0,33	0,02	-0,47	0,36	0,36	0,36	0,22	0,36	-0,16	-0,42	0,86	0,85	0,82	0,87	0,39	-0,10	0,12
X33								1,00	-0,11	-0,11	0,00	0,14	-0,16	-0,16	-0,16	0,03	0,24	0,06	0,40	0,22	0,32	0,19	0,24	-0,19	-0,17	0,10
X34									1,00	0,98	0,87	0,91	-0,75	-0,75	-0,75	-0,95	0,49	0,95	0,82	-0,44	-0,12	-0,47	-0,40	-0,62	0,92	-0,93
X35										1,00	0,88	0,94	-0,84	-0,84	-0,84	-0,96	0,32	0,96	0,86	-0,49	-0,23	-0,53	-0,44	-0,72	0,86	-0,92
X36											1,00	0,76	-0,86	-0,86	-0,86	-0,82	0,39	0,95	0,78	-0,03	0,05	-0,06	0,01	-0,52	0,68	-0,77
X37												1,00	-0,84	-0,84	-0,84	-0,95	0,31	0,92	0,95	-0,57	-0,22	-0,62	-0,50	-0,85	0,82	-0,90
X38													1,00	1,00	1,00	0,78	0,01	-0,88	-0,88	0,27	0,27	0,31	0,21	0,75	-0,49	0,66
X39														1,00	1,00	0,78	0,01	-0,88	-0,88	0,27	0,27	0,31	0,21	0,75	-0,49	0,66
X40															1,00	0,78	0,01	-0,88	-0,88	0,27	0,27	0,31	0,21	0,75	-0,49	0,66
X41																1,00	-0,39	-0,95	-0,87	0,44	0,04	0,51	0,35	0,82	-0,92	0,98
X42																	1,00	0,40	0,32	0,15	0,61	0,15	0,15	0,00	0,63	-0,49
X43																		1,00	0,90	-0,27	-0,01	-0,32	-0,20	-0,73	0,82	-0,91
X44																			1,00	-0,38	-0,10	-0,44	-0,31	-0,82	0,68	-0,79
X45																				1,00	0,74	0,99	0,99	0,47	-0,45	0,41
X46																					1,00	0,67	0,79	0,12	0,08	-0,06
X47																						1,00	0,95	0,59	-0,50	0,49
X48																							1,00	0,34	-0,39	0,32
X49																								1,00	-0,61	0,77
X50																									1,00	-0,96
X51																										1,00

The multivariate regression analysis results show that net income from sales of products (goods, works, services) of the "Join UP!" tourism company is strongly related to the partial indicators that reflect the competitive potential of tourism industry entities in Kyiv, such as the unemployment rate (aged 15 to 70) (x_{11}); the number of inbound tourists (foreign citizens) (x_{19}); the number of outbound tourists (abroad) (x_{20}); income from excursion activities, UAH thousand (x_{24}) (Ierko, 2025).

All of the above factors concern various aspects of the tourism industry's competitive potential – from macroeconomic conditions and general market demand to specific costs and additional services. Including them in the correlation model enables a comprehensive analysis of the impact of the environment on the net income of the tourist company "Join UP!", taking into account both direct incentives for revenue growth (demand, number of tourists, development of infrastructure) and limiting factors (cost burdens), which corresponds to the economic logic of running a tourism business.

The macroeconomic environment significantly affects the activities and profitability of tourism companies in Kyiv. Unemployment and economic instability lead to a situation where the population reduces spending on recreation until the situation stabilizes. As a result, the revenues of tourism companies are reduced accordingly. As a result, the income of travel agencies is decreasing. The experience of Ukraine confirms this. For example, after the economic crisis and the devaluation of the hryvnia in 2014–2015, the demand for foreign tours fell sharply, and many travel companies experienced a decline in profits. Subsequently, as the economy recovered, the tourism market also revived. During the period 2018–2019, against the backdrop of economic growth, there was a strong surge in tourist flows and industry revenues (Ierko, 2025).

The number of inbound tourists (foreign citizens) (x_{19}) reflects the extent of international tourists' visits to Kyiv/Ukraine. Foreign tourists bring foreign currency into the country's economy and spend significant amounts of money on accommodation, food, excursions, and other services. According to expert estimates, "the economic value of one foreign tourist is equivalent to the expenditure of four domestic tourists due to higher average costs" (Ierko, 2025; Thomas, DiNapoli, 2021). Thus, an increase in the number of foreign guests directly boosts the income of the tourism industry: hotels, restaurants, excursion companies, and tour operators receive more profit. For tour operator "Join UP!", a x_{19} growth could mean greater opportunities to serve foreigners (through the sale of tour packages around Ukraine or the provision of related services) and a general upswing in the industry. Accordingly, a direct correlation is predictable: the more inbound tourists, the higher the company's revenue. The reasoning for including this factor is based on the significance of international tourism as a key aspect of the region's competitive strength, which in turn influences the financial performance of tourism businesses (Ierko, 2025).

The number of Ukrainian citizens traveling abroad (x_{20}) reflects the regional interest in outbound tourism, specifically the number of Ukrainians who leave the country for travel. For the tour operator "Join UP!", individuals traveling abroad form the primary customer base. Data indicate that "the proportion of outbound tourists in Ukraine's tourism flow was over 90% in 2019" (Ierko, 2025). This suggests that most of the revenue for travel agencies comes from selling overseas trips to Ukrainian citizens. An increase in the number of trips leads to a rise in sales for tour operators (tickets, packages) and, consequently, boosts their net income. Therefore, a direct correlation is anticipated between x_{20} and the company's revenue; specifically, as an increasing number of individuals acquire the financial means to travel abroad (due to enhanced well-being or other factors), the revenue of "Join UP!" is expected to grow. The economic viability of considering this factor lies in its ability to define the potential of the local market for outbound tourism, which is the main segment of tour operators' activities (Ierko, 2025).

The incorporation of x_{24} into the model is justified because this segment enhances the competitive capabilities of the tourism sector (broadening the service offerings for clients) and positively impacts the financial outcomes for tour operators (Ierko, 2025).

This dataset enables us to derive variables that best capture the influence of tourist flows (x_{19} , x_{20}), portray the economic status of the area (x_{11}), and incorporate data on income generated from services (x_{24}).

The factors x_{19} , x_{20} , x_{11} , and x_{24} offer adequate diversity of information and decrease the probability of excessive correlation.

Through the processing of information, a correlation relationship between the net income from the sale of products (goods, works, services) of "Join UP!" and the factors in the regression equation has been established.

$$Y = 27512.50 - 1532.25 \cdot X_{11} + 0.0923 \cdot X_{19} - 0.000438 \cdot X_{20} + 0.4728 \cdot X_{24}$$

The computed coefficients indicate the extent to which the average net income from selling products (goods, works, services) of the "Join UP!" company varies when each of the analyzed factors changes by one, while the other factors included in the model remain constant.

Examining how the competitive capabilities of tourism industry players in Kyiv affect the amount of net income generated from the sale of products (goods, works, services) by the "Join UP!" tourism organization, we observe that the growth (Ierko, 2025).

1. Constant (27512.50). This represents the baseline net income (Y) when all other variables are at zero. In our model, this indicates that without the effects of the unemployment rate, the number of inbound tourists, outbound tourists, and revenue from excursion activities, the estimated base income is 27512.50 (UAH thousand).
2. For every 1 percentage point rise in the unemployment rate (x_{11}), net income declines by around 1532.25 (UAH thousand). The negative sign reinforces the detrimental effect of unemployment on this economic indicator.
3. Each additional unit in the indicator representing the number of incoming tourists (x_{19}) corresponds to an increase in net income of 0.0923 (UAH thousand). Considering that X_{19} indicates the count of tourists, this coefficient shows that an increase in foreign tourist numbers has a positive effect on income.
4. For every extra tourist traveling abroad (x_{20}), net income declines by 0.000438 (UAH thousand). The negative value suggests that an increase in outbound tourism could have a minor negative effect on domestic income (potentially due to a decrease in domestic resources). Potential explanations for this occurrence include: the departure of potential clients (if a greater number of locals or tourists opt to travel internationally, they may be less inclined to utilize the

services of the "Join UP!" travel agency); a decline in consumer engagement within the local market, partly due to COVID-19; and competition with global options (the increase in outbound tourism might suggest that there are more appealing foreign offerings, leading to a decrease in demand for local tourism services).

5. Therefore, the rise in the number of tourists traveling abroad has a detrimental impact on the incomes of "Join UP!", as it signifies a loss of potential clients from the local market, resulting in a reduction in the demand for the company's services.
6. Every extra unit in revenue from excursion activities (x_{24}) results in a rise in net income of 0.4728 (UAH thousand). This demonstrates that excursion activities serve as a significant income source.

According to the developed multiple linear regression model, the subsequent indicators were computed:

1. The coefficient of determination, R^2 , is 0.927, indicating that 92.7% of the variability in net income (Y) for the "Join UP!" campaign is accounted for by the model. This suggests that the factors included effectively capture the variations in the dependent variable.
2. The multiple correlation coefficient, R, is 0.962. This signifies a very strong linear relationship between the dependent variable and the group of independent variables.

The findings suggest that the chosen factors, including the unemployment rate, the number of inbound tourists, the number of outbound tourists, and income generated from excursion activities, are quite relevant for explaining the differences in net income (Ierko, 2025).

To anticipate potential outcomes of situations, we present three alternatives: optimistic, realistic, and pessimistic scenarios. Every one of these factors signifies a shift in the variables being analyzed: the unemployment rate (x_{11}) influences the purchasing capacity of the populace, which in turn impacts the extent of spending in tourism sector; the volume of inbound tourists (x_{19}) – a crucial element that affects revenue within the tourism industry; the quantity of tourists traveling abroad (x_{20}) – a rise in this indicator could suggest a financial outflow to foreign destinations, which impacts the local tourism industry; revenue from tourism activities (x_{24}) – a key indicator of the growth of tourism services (Table 2).

To promote positive growth, it is essential to concentrate on boosting inbound tourism, enhancing excursion offerings, and encouraging domestic tourism while reducing unemployment. A negative scenario could arise if unemployment rises and the number of tourists declines.

An examination of how the competitive strengths of organizations within the tourism industry have evolved, specifically focusing on the operations of the tour agency "Join UP!", contends that successful change management and the ability to adapt to market changes are critical for achieving success (Ierko, 2025).

Table 2. Potential scenarios for generating net revenue from the sale of products (goods, works, services) by LLC "Join UP!"

Scenario	Shift in factors - expert values	Scenario characteristics
Optimistic (Favourable market)	Unemployment level (x_{11}) - decrease by 0,5–1,0% Number of inbound tourists (x_{19}) – increase by 25–30% Number of outbound tourists (x_{20}) - slight increase (+5–10%) Income from excursion activities (x_{24}) – increase by 30–40%	A decrease in unemployment will enhance purchasing power and encourage domestic tourism. An increase in the number of inbound tourists will lead to increased revenues in the tourism, hotel, and restaurant business. The slight increase in outbound travelers suggests a steady economy, with no major outflow of funds overseas. Revenue from excursion activities is expected to increase due to the growing popularity of domestic tourism.
Realistic scenario (Stable market)	Unemployment level (x_{11}) – decrease by 0,2–0,5% Number of inbound tourists (x_{19}) - increase by 10–15% Number of outbound tourists (x_{20}) – increase by 5–8% Income from excursion activities (x_{24}) – increase by 10–15%	A slight decrease in unemployment will improve the economic climate, but there will be no considerable rise in development. Inbound tourism is expected to increase gradually, ensuring consistent revenue in the tourism sector. Expenditures by citizens on tourism will continue to be evenly distributed between travel within the country and abroad. Income from excursion activities is expected to be moderate, contributing to the ongoing positive trend.
Pessimistic scenario (Crisis or negative impact of external factors)	Unemployment level (x_{11}) – increase by 1,0–2,0% Number of inbound tourists (x_{19}) – decrease by 10–20% Number of outbound tourists (x_{20}) – increase by 15–25% Income from excursion activities (x_{24}) - 20–30% fall	The increase in unemployment rates will lead to a decrease in the purchasing power of citizens. The anticipated decline in inbound tourists is attributed to economic or political issues, which negatively affect hotels, restaurants, and tour programs. An increase in outbound tourism will mean that citizens prefer to travel abroad, which will contribute to capital outflow. Revenue from excursion activities is projected to decrease significantly, which will have a substantial effect on the operations of travel companies.

We will estimate the potential net income from the sales of products (goods, works, services) of LLC "Join UP!" according to three scenarios and suggest strategies for the company's development (Table 3).

Employing contemporary development approaches, especially the digital transformation of services, broadening tourism offerings, streamlining business operations, and implementing effective marketing, enables the company to sustain a strong competitive edge and enhance profitability (Ierko, 2025).

The elaboration and substantiation of a complex model for scenario forecasting of the competitive potential of tourism companies takes into account multi-level factors of influence. The proposed model is designed to simultaneously analyze macroeconomic conditions, spatial characteristics of the market, seasonal dynamics of tourism demand, and risk components, providing a more comprehensive representation of the processes in the tourism industry that influence and determine its competitive potential (Figure 1).

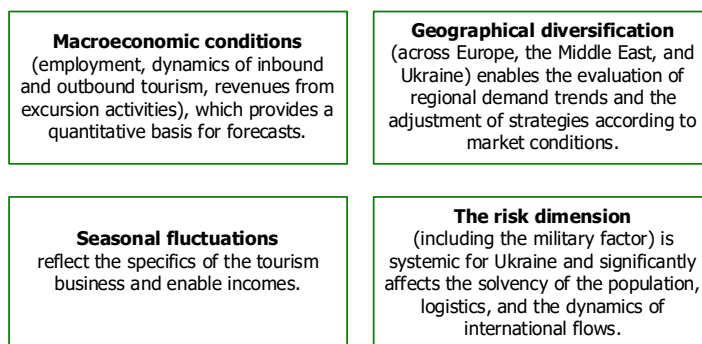


Figure 1. Components of scenario forecasting regarding the competitive capability of tourism businesses.

Table 3. Estimation of the net income volume from the sale of products (goods, works, services) of LLC "Join UP!" according to three scenarios. (Source: Ierko, 2025; TOV «Dzhoin Ap, 2025)

Scenario	Expected conditions (macro)	Geographical details	Seasonal fluctuations	Main risks	Projected net earnings, in UAH thousand	Recommended strategy	Basic actions	Expected results
Optimistic (growing market)	Unemployment ↓ by 1 %; inbound tourism ↑30 %; outbound tourism ↑10 %; revenue from excursions ↑40 %	Europe – demand for premium tours (Italy, Spain, Greece); Middle East – stability + development of the UAE; Ukraine – Black Sea, Carpathians	Summer – peak income; winter – high demand for ski tours; spring/autumn – stability	Limited impact of war on demand abroad; controlled inflation; stable exchange rates	55289,94	Aggressive expansion	Investments in marketing, partnerships with international tour operators, and infrastructure development	↑ market shares, ↑ revenue, brand strengthening
Realistic (stable market)	Unemployment ↓ by 0,5 %; inbound tourism ↑15 %; outbound tourism ↑8 %; revenue from excursions ↑10 %	Europe – bus and combination tours; Middle East – promotional programs to maintain demand; Ukraine – cultural tours, domestic travel	Summer – average demand; winter – stability; spring/autumn – slight decrease	Continued war with limited impact on infrastructure; currency fluctuations; rising logistics and air travel costs	48282,03	Adaptive development	Cost optimization, diversification of directions, and focus on service quality	Maintaining positions, ↑ increasing customer loyalty
Pessimistic (crisis)	Unemployment ↑ by 2 %; inbound tourism ↓20 %; outbound tourism ↓25 %; revenue from excursions ↓30 %	Europe – decrease in demand; Middle East – competition, cheap travel packages; Ukraine – focus on domestic tourism	Summer – slight income increase from domestic tourism; autumn/spring – decline; winter – partial retention of income in the Carpathians	Escalation of hostilities (destruction of infrastructure, closure of borders, decline in solvency);	35735,97	Anti-crisis management	Cost reduction, work with government support programs, and flexible pricing	Minimizing losses, retaining customers despite the crisis
Optimistic (growing market)	Unemployment ↓ by 1 %; inbound tourism ↑30 %; outbound tourism ↑10 %; revenue from excursions ↑40 %	Europe – demand for premium tours (Italy, Spain, Greece); Middle East – stability + development of the UAE; Ukraine – Black Sea, Carpathians	Summer – peak income; winter – high demand for ski tours; spring/autumn – stability	Limited impact of war on demand abroad; controlled inflation; stable exchange rates	55289,94	Aggressive expansion	Investments in marketing, partnerships with international tour operators, and infrastructure development	↑ market shares, ↑ revenue, brand strengthening
Realistic (stable market)	Unemployment ↓ by 0,5 %; inbound tourism ↑15 %; outbound tourism ↑8 %; revenue from excursions ↑10 %	Europe – bus and combination tours; Middle East – promotional programs to maintain demand; Ukraine – cultural tours, domestic travel	Summer – average demand; winter – stability; spring/autumn – slight decrease	Continued war with limited impact on infrastructure; currency fluctuations; rising logistics and air travel costs	48282,03	Adaptive development	Cost optimization, diversification of directions, and focus on service quality	Maintaining positions, ↑ increasing customer loyalty
Pessimistic (crisis)	Unemployment ↑ by 2 %; inbound tourism ↓20 %; outbound tourism ↓25 %; revenue from excursions ↓30 %	Europe – decrease in demand; Middle East – competition, cheap travel packages; Ukraine – focus on domestic tourism	Summer – slight income increases from domestic tourism; autumn/spring – decline; winter – partial retention of income in the Carpathians	Escalation of hostilities (destruction of infrastructure, closure of borders, decline in solvency);	35735,97	Anti-crisis management	Cost reduction, work with government support programs, and flexible pricing	Minimizing losses, retaining customers despite the crisis

(continued on next page)

Table 3. Continued.

Scenario	Expected conditions (macro)	Geographical details	Seasonal fluctuations	Main risks	Projected net earnings, in UAH thousand	Recommended strategy	Basic actions	Expected results
Optimistic (growing market)	Unemployment ↓ by 1 %; inbound tourism ↑ 30 %; outbound tourism ↑ 10 %; revenue from excursions ↑ 40 %	Europe – demand for premium tours (Italy, Spain, Greece); Middle East – stability + development of the UAE; Ukraine – Black Sea, Carpathians	Summer – peak income; winter – high demand for ski tours; spring/autumn – stability	Limited impact of war on demand abroad; controlled inflation; stable exchange rates	55289,94	Aggressive expansion	Investments in marketing, partnerships with international tour operators, and infrastructure development	↑ market shares, ↑ revenue, brand strengthening
Realistic (stable market)	Unemployment ↓ by 0,5 %; inbound tourism ↑ 15 %; outbound tourism ↑ 8 %; revenue from excursions ↑ 10 %	Europe – bus and combination tours; Middle East – promotional programs to maintain demand; Ukraine – cultural tours, domestic travel	Summer – average demand; winter – stability; spring/autumn – slight decrease	Continued war with limited impact on infrastructure; currency fluctuations; rising logistics and air travel costs	48282,03	Adaptive development	Cost optimization, diversification of directions, and focus on service quality	Maintaining positions, ↑ increasing customer loyalty
Pessimistic (crisis)	Unemployment ↑ by 2 %; inbound tourism ↓ 20 %; outbound tourism ↓ 25 %; revenue from excursions ↓ 30 %	Europe – decrease in demand; Middle East – competition, cheap travel packages; Ukraine – focus on domestic tourism	Summer – slight income increase from domestic tourism; autumn/spring – decline; winter – partial retention of income in the Carpathians	Escalation of hostilities (destruction of infrastructure, closure of borders, decline in solvency);	35735,97	Anti-crisis management	Cost reduction, work with government support programs, and flexible pricing	Minimizing losses, retaining customers despite the crisis
Optimistic (growing market)	Unemployment ↓ by 1 %; inbound tourism ↑ 30 %; outbound tourism ↑ 10 %; revenue from excursions ↑ 40 %	Europe – demand for premium tours (Italy, Spain, Greece); Middle East – stability + development of the UAE; Ukraine – Black Sea, Carpathians	Summer – peak income; winter – high demand for ski tours; spring/autumn – stability	Limited impact of war on demand abroad; controlled inflation; stable exchange rates	55289,94	Aggressive expansion	Investments in marketing, partnerships with international tour operators, and infrastructure development	↑ market shares, ↑ revenue, brand strengthening
Realistic (stable market)	Unemployment ↓ by 0,5 %; inbound tourism ↑ 15 %; outbound tourism ↑ 8 %; revenue from excursions ↑ 10 %	Europe – bus and combination tours; Middle East – promotional programs to maintain demand; Ukraine – cultural tours, domestic travel	Summer – average demand; winter – stability; spring/autumn – slight decrease	Continued war with limited impact on infrastructure; currency fluctuations; rising logistics and air travel costs	48282,03	Adaptive development	Cost optimization, diversification of directions, and focus on service quality	Maintaining positions, ↑ increasing customer loyalty
Pessimistic (crisis)	Unemployment ↑ by 2 %; inbound tourism ↓ 20 %; outbound tourism ↓ 25 %; revenue from excursions ↓ 30 %	Europe – decrease in demand; Middle East – competition, cheap travel packages; Ukraine – focus on domestic tourism	Summer – slight income increases from domestic tourism; autumn/spring – decline; winter – partial retention of income in the Carpathians	Escalation of hostilities (destruction of infrastructure, closure of borders, decline in solvency);	35735,97	Anti-crisis management	Cost reduction, work with government support programs, and flexible pricing	Minimizing losses, retaining customers despite the crisis
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The considered development scenarios confirm that under favorable economic conditions, with growing tourist flows and increasing purchasing power of the population, the company possesses all the prerequisites for increasing revenues. During

crises, efficient anti-crisis management, a focus on domestic tourism, and adaptable pricing strategies can help reduce losses and maintain market share (Ierko, 2025).

Thus, using the case study of LLC "Join UP!", we illustrate the successful use of strategic modeling to uphold and enhance the company's competitive position. The research findings can be utilized not only within this company but also in the broader context of the tourism industry development in Ukraine.

DISCUSSION

The research findings expand scientific approaches to assessing the competitive potential of tourism enterprises, as presented in the recent research papers of Ukrainian and foreign scientists. Unlike studies that analyze competitive potential using mainly resource and index methods (Butko M. P.) or parametric and rating approaches (Havryliuk S. P.), this research marks a transition from aggregation-based assessments to the quantitative modeling of key factors' effects on a tourism company's financial results.

Unlike portfolio metrics and matrix tools (ABC analysis, SWOT analysis), which are frameworks actively discussed in the works of Brych V., Halych N., Byba V. V., Tenytska N. B., and Bilyzna A. R. and which enable the identification of structural elements of competitive potential, the findings of this study demonstrate the possibility of quantitative interpretation of their effects on the net income of an enterprise. Thus, the proposed approach does not contradict the above methods, but complements them with econometric analysis tools.

Compared to the studies by Kalchenko O. M., Koshova B. R., and Almashii Y. I., which focus on determining the factors of tourism development mainly at the regional or sectoral levels, the findings of this study specify the competitive potential at the level of an individual tourism company and supplement the factor analysis with scenario forecasting. This enables a company to consider not only the current situation but also to project the possible trajectories of the enterprise's development in an unstable market environment.

The obtained results extend the conceptual provisions of Porter's competitive theory, adapting them to the applied tasks of financial and economic analysis of tourism companies' activities, and form the basis for strategic management decisions.

The research findings argue that the competitive potential of tourism companies is largely determined by the combined influence of socio-economic, market, and infrastructure factors. The constructed multiple linear regression model demonstrates a high level of explanatory power ($R^2 = 0.927$), which indicates its effectiveness in forecasting the net income of a tourism company. The most influential factor, as revealed by the study, is the number of inbound tourists (x_{19}), which is consistent with previous studies highlighting the importance of international tourism for the region's economy. The negative impact of unemployment (X_{11}) confirms a general economic pattern: a decline in the purchasing power of the population reduces demand for tourism services. Notably, the number of outbound tourists (X_{20}) has a slight negative impact on the company's net income, which may indicate competition with foreign tour operators or a loss of domestic demand. Income from excursion activities (X_{24}) proved to be an important additional source of profit, emphasizing the importance of service diversification.

The research's scientific novelty lies in the creation and justification of an extensive model for scenario forecasting the competitive capabilities of tourism enterprises, considering various multi-level influencing factors. In contrast to current approaches that focus solely on macroeconomic parameters or financial indicators, the suggested model integrates macroeconomic factors, geographic diversity, seasonal variations, and risks.

The uniqueness of this approach lies in the creation of risk-adjusted scenarios, where the preliminary forecasts of net income (optimistic, realistic, pessimistic) are modified by a factor representing the probability of a crisis. This modification enables the model to match the actual business environment in Ukraine, thereby enhancing its practical usefulness for management purposes.

In addition, the novelty lies in the combination of quantitative calculations (estimated net income) with qualitative management strategies, enabling a shift from descriptive analysis to specific practical recommendations. Consequently, this model can serve as a resource for strategic planning and crisis management, be applicable not only to the tourism industry but also to a wider range of service sectors within the economy.

CONCLUSIONS

Therefore, the competitive capabilities of tourism enterprises are influenced by both internal organizational and economic factors as well as external macroeconomic, social, and environmental conditions. The primary scientific contribution of this research lies in the integration of economic and statistical analysis with correlation and regression modeling, enabling a rational identification of the most significant factors that affect the net income of tourism companies in a dynamic market environment. In the course of this research, a strategic mathematical model based on multiple linear regression was developed. Utilizing this approach enabled us to quantitatively articulate the relationships between the net income of the company "Join UP!" and individual indicators of the competitive environment, namely, the volume of incoming and outgoing tourists, the unemployment rate, and revenue generated from excursion activities. High coefficient of determination ($R^2 = 0,927$) and the multiple correlation coefficient ($R = 0.962$) confirmed the effectiveness of the constructed model, indicating its high capability to explain the variation of the dependent variable of net income.

The analysis also provided a basis for creating scenarios for a tourism enterprise development depending on changes in key environmental factors. The study has revealed that under an optimistic scenario, with growth in tourist flows and intensification of excursion activities, a significant increase in the tour operator's income is expected. The realistic scenario assumes stable financial dynamics if current market trends remain. At the same time, the pessimistic scenario forecasts a risk of lowering the company's revenue if the unemployment rate increases or international tourist flows decrease. Therefore, the model enables the company to implement strategic planning, considering risk factors and choosing appropriate areas of anti-crisis management.

In addition to quantitative analysis, a qualitative assessment of the impact of individual factors was conducted. Specifically, the study has revealed the strong negative effects of unemployment. The changes in the import-export coverage ratio are explained by a decrease in the purchasing power of the population and their natural unwillingness to spend money on tourism during crisis periods. On the other hand, the growth of inbound tourism and excursion revenues directly correlates with the increase in the company's net income, indicating increased profitability and broader opportunities for domestic tourism. Another important research finding concerns the somewhat negative impact of the growing outbound tourism on the income of "Join UP!", which may indicate a redistribution of cash flows towards international markets and a partial loss of the domestic demand.

The results of the study are not only theoretically significant but also practically oriented. They enable tourism companies, particularly "Join UP!", to create a flexible strategic management system, adapted to the modern market. The study findings can serve as a basis for management decisions in tourism marketing, investment planning, product policy, and sustainable territorial development. The constructed model can prompt further research aimed at improving strategic approaches to managing the competitive capability of the tourism industry.

In further research, it is worth expanding the time frame of the analysis to consider long-term trends and seasonal fluctuations in tourism demand, adding behavioral factors (consumer preferences, digital booking channels, the influence of social networks, etc.) to the model to increase its accuracy, and applying a comparative analysis of the competitive capability of other Ukrainian tourism companies to identify industry patterns.

ADDITIONAL INFORMATION

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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ЕКОНОМЕТРИЧНЕ МОДЕЛЮВАННЯ ФІНАНСОВИХ РЕЗУЛЬТАТІВ ТУРИСТИЧНИХ КОМПАНІЙ: БАГАТОФАКТОРНИЙ РЕГРЕСІЙНИЙ АНАЛІЗ І СЦЕНАРНЕ ПРОГНОЗУВАННЯ

У роботі досліджено стратегічне моделювання конкурентного потенціалу туристичних компаній в умовах динамічного ринку. Метою є формування ефективної моделі оцінювання конкурентоспроможності на прикладі туристичного оператора «Join UP!» із використанням методів кореляційно-регресійного аналізу. Побудована модель дозволила виокремити найбільш значущі чинники впливу на чистий дохід компанії, серед яких рівень безробіття, кількість в'їзних та виїзних туристів, а також дохід від екскурсійної діяльності. Результати підтверджують наявність тісного зв'язку між динамікою туристичних потоків, макроекономічними умовами та фінансовими результатами суб'єктів туристичної індустрії. На основі сценарного прогнозування (оптимістичного, реалістичного та песимістичного) запропоновано управлінські стратегії, спрямовані на підвищення ефективності діяльності компаній, зокрема через розвиток внутрішнього туризму, диверсифікацію послуг та антикризове управління. Охарактеризовано елементи сценарного прогнозування конкурентного потенціалу туристичних компаній. Проведено розрахунок обсягу чистого доходу від реалізації продукції (товарів, робіт, послуг) ТОО «Join UP!» за трьома сценаріями. Практична цінність дослідження полягає в можливості використання розробленої моделі для ухвалення стратегічних управлінських рішень у туристичній галузі. Доведено, що поєднання економіко-статистичного аналізу з кореляційно-регресійним моделюванням дає змогу обґрунтовано вирізнити найбільш значущі фактори, які впливають на чистий дохід туристичних компаній у динамічному ринковому середовищі. Побудована модель здатна стати основою для подальших досліджень і вдосконалення стратегічних підходів до управління конкурентним потенціалом у туризмі. Також ця модель створює підґрунтя для майбутніх наукових пошуків і оптимізації стратегічних підходів до управління конкурентним потенціалом у туризмі.

Ключові слова: туризм, конкурентний потенціал, туристичні компанії, стратегічне моделювання, кореляційно-регресійний аналіз, сценарне прогнозування, економетричне моделювання, туристичний ринок, управлінські стратегії, туристична індустрія

JEL Класифікація: H11, H80, L10, L83, O10