

ASERS

Journal of Environmental Management and Tourism

Quarterly

Volume XI

Issue 4(44)

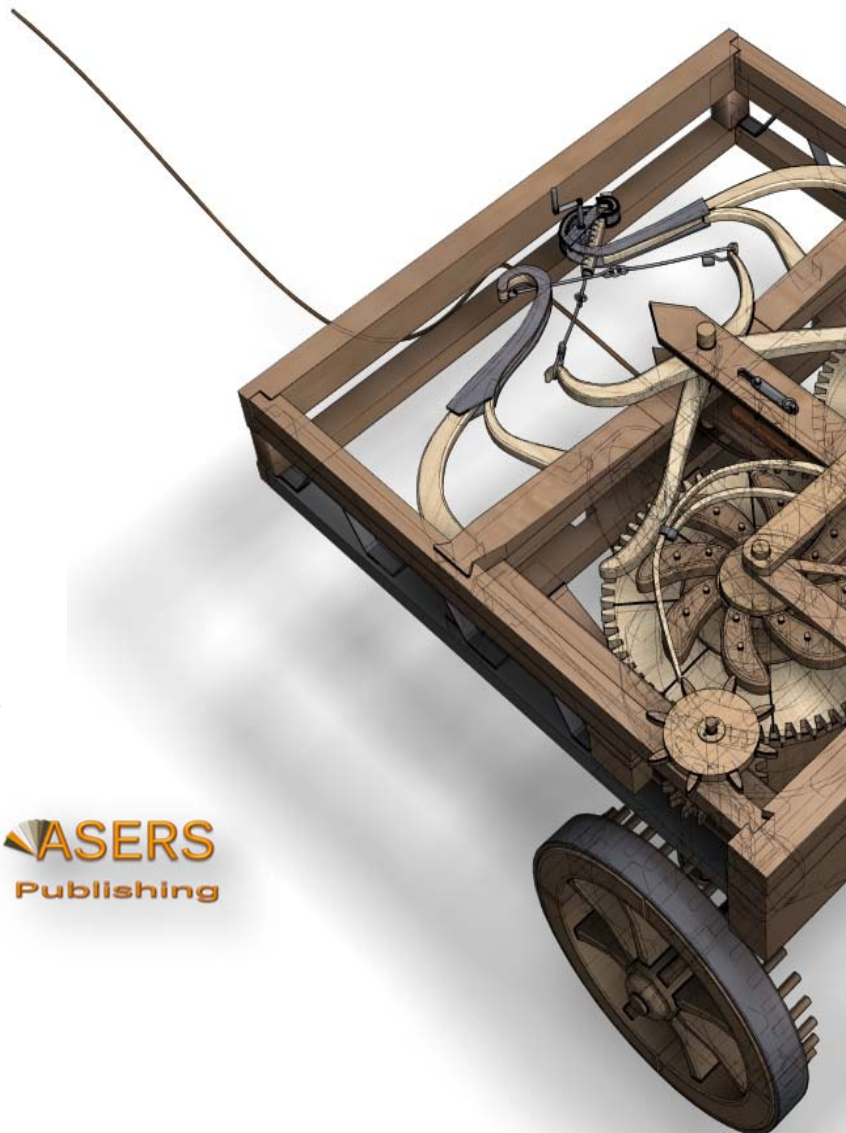
Summer 2020

ISSN 2068 – 7729

Journal DOI

<https://doi.org/10.14505/jemt>

ASERS
Publishing



Editor in Chief

Ramona PÎRVU

University of Craiova, Romania

Editorial Advisory Board

Omran Abdelnaser

University Sains Malaysia, Malaysia

Huong Ha

University of Newcastle, Singapore,
Australia

Harjeet Kaur

HELP University College, Malaysia

Janusz Grabara

Czestochowa University of Technology,
Poland

Vicky Katsoni

Technological Educational Institute of
Athens, Greece

Sebastian Kot

Czestochowa University of Technology,
The Institute of Logistics and International
Management, Poland

Nodar Lekishvili

Tbilisi State University, Georgia

Andreea Marin-Pantelescu

Academy of Economic Studies Bucharest,
Romania

Piotr Misztal

The Jan Kochanowski University in
Kielce, Faculty of Management and
Administration, Poland

Agnieszka Mrozik

Faculty of Biology and Environmental
protection, University of Silesia, Katowice,
Poland

Chuen-Chee Pek

Nottingham University Business School,
Malaysia

Roberta De Santis

LUISS University, Italy

Fabio Gaetano Santeramo

University of Foggia, Italy

Dan Selişteanu

University of Craiova, Romania

Laura Ungureanu

Spiru Haret University, Romania

Table of Contents:

1	Effectiveness of Destination Branding. The Example of National Tourism Organizations Miroslaw MARCZAK, Jacek BORZYSZKOWSKI	779
2	Development of Tourism in Uzbekistan and Cultural-Historical Tourist Resource Potential of Kashkadarya Region Mamatkodir I. NAZAROV, Hayrulla H. JUMAEV, Izimbet R. TURDIMAMBETOV, Sergey L. YANCHUK, Matluba M. EGAMBERDIEVA	794
3	Digital Marketing Tools or e-WOM? Tourists Motivation to Enjoy the Charm of Blue Fire on Ijen Crater Ecotourism Ika Barokah SURYANINGSIH, Gusti Ayu WULANDARI, Kristian Suhartadi Widi NUGRAHA, Cempaka PARAMITA, Queen Islam Brilliant YURI	802
4	Health Medical Tourism: The Present and the Future Mikhail A. OSADCHUK, Alexey M. OSADCHUK, Karina S. SOLODENKOVA, Maxim V. TRUSHIN	809
5	Tourist Preferences on Bunaken Island for Integrated Archipelagic Tourism Development around the Bunaken National Park, Indonesia Bet El Silisna LAGARENSE, Agustinus WALANSENDOW	819
6	Creation and Development of Ethnic Theme Parks in Kazakhstan Aigul SERGEYEVA, Aitolkyn TLEUBAYEVA, Miroslava OMIRZAKOVA, Zhaxylyk AKIMOV, Zhanar DULATBEKOVA, Gulnash ASKAROVA, Gulzhan ABDRAMANOVA	829
7	Economic and Legal Aspects of Regulating the Tourism Industry Olga V. DMITRIEVA, Olga G. ISAEVA, Oxana V. KUBLASHVILI, Victoria B. FROLOVA, Alla B. KONOVALOVA	837
8	Contemporary Conditions for Tourism Sector Transnationalization Denis USHAKOV, Victoria V. TSYPKO, Vadym O. OREHOWSKYI, Volodymyr M. VASYLCHUK, Den Sik KAN	844
9	Development of Forms of the Hotel Business Organization in Modern Conditions Elena E. KONOVALOVA, Aleksandr V. SHELYGOV, Larisa S. ARTAMONOVA, Olga N. DOLINA, Aleksandr I. BOIKOV	857
10	City Branding Strategy, in Order to Show the City of Batu as a Tourist Destination in Indonesia Hotman PANJAITAN	863
11	Efficiency of Tourism Activities in Ukraine: A Regional Comparison Halina HORBAN, Iryna PETROVSKA, Anatolii KUCHER, Anna DIUK	874
12	Digitalization as a Factor of Increasing Investment Activity in the Tourism Industry Galina V. KALABUKHOVA, Olga A. MOROZOVA, Lyudmila S. ONOKOY, Elena Y. CHICHEROVA, Irina G. SHADSKAJA	883
13	Financial Provision of Investment Activities of the Subjects of the World Industry of Tourist Services Natalia V. TRUSOVA, Nataliya S. TANKLEVSKA, Tetiana A. CHERNIAVSKA, Oleksandr S. PRYSTEMSKYI, Denys V. YEREMENKO, Valentina S. DEMKO	890

Editor in Chief

Ramona PÎRVU

University of Craiova, Romania

Editorial Advisory Board

Omran Abdelnaser

University Sains Malaysia, Malaysia

Huong Ha

University of Newcastle, Singapore,
Australia

Harjeet Kaur

HELP University College, Malaysia

Janusz Grabara

Czestochowa University of Technology,
Poland

Vicky Katsoni

Techonological Educational Institute of
Athens, Greece

Sebastian Kot

Czestochowa University of Technology,
The Institute of Logistics and International
Management, Poland

Nodar Lekishvili

Tbilisi State University, Georgia

Andreea Marin-Pantelescu

Academy of Economic Studies Bucharest,
Romania

Piotr Misztal

The Jan Kochanowski University in
Kielce, Faculty of Management and
Administration, Poland

Agnieszka Mrozik

Faculty of Biology and Environmental
protection, University of Silesia, Katowice,
Poland

Chuen-Chee Pek

Nottingham University Business School,
Malaysia

Roberta De Santis

LUISS University, Italy

Fabio Gaetano Santeramo

University of Foggia, Italy

Dan Selişteanu

University of Craiova, Romania

Laura Ungureanu

Spiru Haret University, Romania

ASERS Publishing

<http://www.asers.eu/asers-publishing>

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

14	Search, Action, and Share: The Online Behaviour Relating to Mobile Instant Messaging App in the Tourism Context Usep SUHUD, Mamoon ALLAN	903
15	Organizational and Economic Aspects of the Development of the International Tourism and Hospitality Industry Sayyora R. SAFAEVA, Maxbuba T. ALIEVA, Laylo T. ABDUKHALILOVA, Nargiza E. ALIMKHODJAEVA, Elena E. KONOVALOVA	913
16	Policy on Protection of Cultural Heritage through Communal Copyright in Supporting Sustainable Tourism Ni Luh Made MAHENDRAWATI	920
17	Assessment of the Main Economic Indicators of Tourism Development in Kazakhstan Zhanat K. ALTAIBAYEVA, Sholpan S. KHAMZINA, Maira S. BAUER, Shynar E. MUTALLYAPOVA, Aina S. NARYNBAYEVA, Roza K. ALIMKHANOVA	925
18	Building Tourism from the Optimization of the Landscape as a Creative Economic Activity of the Community Rully Khairul ANWAR, Mohammad Sapari Dwi HADIAN, HENDARMAWAN, Ute Lies Siti KHADIJAH	937
19	Functional Aspects of the Development of International Tourism Elena P. ZVYAGINTSEVA, Olga S. EPISHEVA, Elena E. TSYGANKOVA, Ofeliia A. AZAROVA, Aleksandr V. SHEL'YGOV	955
20	The Role of Information Technology in Promotion Strategy; Case in Taman Mini Indonesia Indah and Raganan, Indonesia Dhian Tyas UNTARI	960
21	Impact of Tourism on Sustainable Development of Rural Areas: International Experience Aleksy G. GERMANOVICH, O.N. VASILIEVA, Marina E. ORDYNSKAYA, Liliya M. ALLANINA, Anna E. GOROKHOVA	965
22	Branding of Tourist Destinations Elena SHUTAIEVA, Viktoriya POBIRCHENKO, Anna KARLOVA, Elena POLYUKHOVICH	973
23	Improving Economic and Legal Regulation in the Tourism Sector Alexander V. KOSEVICH, Nataliya G. NOVIKOVA, Victor I. GLADKIKH, Pavel N. SHARONIN, Mihail A. SMIRNOV	979
24	Smart Travelling or the Impact of IT in Tourism Irina Valentina TUDOR, Cristina POPÎRLAN, Mircea Ovidiu MITUĂ	985
25	Tourist Image Building of the Country: Application of the Historiographical Method Oleg Evgenievich AFANASYEV	994
26	Sustainable Tourism Development in Jordan: Measuring Customer Satisfaction of American Tourists Visiting Petra and Mount Nebo in Jordan Ramzi AL ROUSAN, Hussien IBRAHEIM, Malek BADER, Nermeen KHASAWNEH	1001
27	Development of International Tourism in the Context of Integration Processes Margarita A. KOZHEVNIKOVA, Svetlana N. KURBAKOVA, Yulia V. ARTEMYEVA, Nadezhda V. PALANCHUK, Murad M. UMAROV	1013

Call for Papers Fall Issues 2020 Journal of Environmental Management and Tourism

Journal of Environmental Management and Tourism is an interdisciplinary research journal, aimed to publish articles and original research papers that should contribute to the development of both experimental and theoretical nature in the field of Environmental Management and Tourism Sciences.

Journal will publish original research and seeks to cover a wide range of topics regarding environmental management and engineering, environmental management and health, environmental chemistry, environmental protection technologies (water, air, soil), pollution reduction at source and waste minimization, energy and environment, modeling, simulation and optimization for environmental protection; environmental biotechnology, environmental education and sustainable development, environmental strategies and policies, etc. This topic may include the fields indicated above, but are not limited to these.

Authors are encouraged to submit high quality, original works that discuss the latest developments in environmental management research and application with the certain scope to share experiences and research findings and to stimulate more ideas and useful insights regarding current best-practices and future directions in environmental management.

Journal of Environmental Management and Tourism is indexed in SCOPUS, RePEC, CEEOL, ProQuest, EBSCO and Cabell Directory databases.

All the papers will be first considered by the Editors for general relevance, originality and significance. If accepted for review, papers will then be subject to double blind peer review.

Deadline for submission:	24 th August 2020
Expected publication date:	September 2020
Website:	https://journals.aserspublishing.eu/jemt
E-mail:	jemt@aserspublishing.eu

To prepare your paper for submission, please see full author guidelines in the following file: [JEMT_Full_Paper_Template.docx](#), then send it via email at jemt@aserspublishing.eu.



DOI: [https://doi.org/10.14505/jemt.v11.4\(44\).11](https://doi.org/10.14505/jemt.v11.4(44).11)

Efficiency of Tourism Activities in Ukraine: A Regional Comparison

Halina HORBAN

V. I. Vernadsky Taurida National University, Ukraine
gorbangalina1@gmail.com

Iryna PETROVSKA

V. I. Vernadsky Taurida National University, Ukraine
petroirinaolegovna@gmail.com

Anatolii KUCHER

V. N. Karazin Kharkiv National University, Ukraine
kucher@karazin.ua

Anna DIUK

Vinnytsia National Agrarian University, Ukraine
annaduke@ukr.net

Suggested Citation:

Horban, H., Petrovska, I., Kucher, A., Diuk, A. (2020). Efficiency of Tourism Activities in Ukraine: A Regional Comparison. *Journal of Environmental Management and Tourism*, (Volume XI, Summer), 4(44): 874-882. DOI:[10.14505/jemt.v11.4\(44\).11](https://doi.org/10.14505/jemt.v11.4(44).11)

Article's History:

Received 21st of March 2020; Received in revised form 3rd of April 2020; Accepted 23rd of April 2020; Published 30th of June 2020. Copyright © 2020 by ASERS® Publishing. All rights reserved.

Abstract:

The purpose of the research is to evaluate the efficiency of functioning of tourism entities in the regions of Ukraine using the method of analysis of the functioning environment. It was found that in terms of cost effectiveness, the activities of tour operators in the cities of Kyiv, Lviv, Volyn, and Chernihiv regions were technically effective in 2018, and in other regions ineffective. At the same time, the travel agents of Kyiv, Cherkasy, Lviv and Poltava regions took the leading positions in terms of technical efficiency of operating expenses. According to the results of evaluating the technical effectiveness of the tour operators', tour agents' and subjects' of excursion activity total costs, the analyzed regions are grouped into three groups: (i) entities that form the operating environment – the regions whose positions form the line of technical efficiency, that is, technically effective (Kyiv, Kherson, Volyn, and Chernihiv regions); (ii) the entities whose tourism activities affect the operating environment are the positions of the regions between the technical efficiency line and its projection (Ivano-Frankivsk, Kyiv, Lviv and Odesa regions); (iii) entities whose tourism activities do not affect the environment and depend on the status of such activities in other regions (Vinnytsia, Transcarpathian, Rivne and Cherkasy regions). The results of the study can be used in planning measures to improve the technical efficiency of the tourism business in the regions of Ukraine.

Keywords: tourism; technical efficiency; income; method of analyzing the environment; Ukraine.

JEL Classification: D61; Q56; Z32.

Introduction

The development of tourism in Ukraine is a very promising area of the national economy. At the same time, the industry does not show significant indicators of development, despite the resort and recreational potential and natural and climatic conditions. 2020 is announced the year of green tourism in Ukraine, which results some revival in the direction of creating new tourist sites that meet the world standards of service. The industry is quite promising and can be competitive in the European market due to its relatively lower cost and relatively low quality of service. The effectiveness of the subjects of tourism issue is receiving increasing interest in the economic literature. In particular, M. Cracolici, P. Nijkamp and P. Rietveld (2008) in their work assess the competitiveness of

tourism in the example of Italy regions and point out the growing importance of the tourism sector, increasing competition in the tourist market due to the transition from mass tourism to a new age of tourism, which requires an individual approach to the specific needs of tourists.

In turn, K. Levkov (2017, 2018a) devoted his works to the prospects of the Bulgarian tourism industry development and its problems, in addition the author explores the possibilities and problems of tourist exchange between Bulgaria and Ukraine, as well as Georgia and Bulgaria (Levkov and Pavlova 2015, Levkov and Meskhia 2018b).

A. Mazaraki, M. Boiko, M. Bosovska, N. Vedmid and A. Okhrimenko (2018) investigated the question of national tourist system of Ukraine formation and its effectiveness. The competitiveness of Ukraine in the European tourist services market was investigated by S. Polkovnychenko and A. Krsiy (2020). Some works are also devoted to the investment attractiveness of tourism and investment efficiency (Boiko *et al.* 2018, Kozmenko, Poluliakhova and lastremaska 2015).

M. Ihnatenko, O. Sarapina, A. Sakun, L. Marmul and K. Pylypenko (2019) have devoted their research to the effectiveness of green tourism in European countries. The authors point out that a comprehensive study and European experience of small businesses implementation in rural green tourism in Ukraine should be aimed at achieving its strategic goal – creating a competitive national market and national tourism product that can best meet the needs of both compatriots and foreigners. Trends in sustainable tourism development in Ukraine and the world have been studied by N. Shcherbakova (2019); problems and prospects of tourism industry development are covered in T. Ryabova's (2018), L. Martsenyuk's (2015) works and also in L. Niemets's (2018) research.

In spite of the considerable amount of research, the problem of the efficiency of tourist resultant activity functioning in Ukraine remains unresolved and urgent.

1. Materials and Methods

The purpose of the research is to evaluate the efficiency of functioning of tourism entities in the regions of Ukraine using the method of analysis of the functioning environment.

The article is done on the basis of materials of functioning of subjects of tourist activity (tour operators, travel agents, subjects of excursion activity) according to data of the State statistics service of Ukraine: income from tourist services rendering (free of VAT, excise duties and similar obligatory payments), expenses for payment labor, operating expenses. The development was carried out on the basis of data analysis on the regions of Ukraine (Official site of the State Statistics Service of Ukraine) on the activity of the subjects of tourism activity, where the income from the provision of tourist services is the resultant indicator while the factor indicator – the cost of labor and operating expenses.

The research method used a method analysis of the operating environment, the basic principles of which are adapted to the characteristics of the activities of the entities providing tourist services. This method had been used before for research in other areas of the national economy (Sakhno *et al.* 2019a, Sakhno *et al.* 2019b, Sakhno *et al.* 2019c, Dolgikh 2019) and in tourism (Kovalchuk *et al.* 2020). The main advantage of this method is that it can be used to analyze the operating environment of all entities, regardless of industry affiliation.

The method analysis of the operating environment is not used to calculate the coefficients of technical efficiency, but to identify the connections in the operating environment between tour operators, travel agents and subjects of excursion activity, which is based on the definition of development prospects and problems that currently exist in tourism in Ukraine. For this purpose, we used an approach that allows us to determine the impact of one activity on another using the method analysis of the operating environment, and the development feature is the resulting line of technical efficiency formation.

2. Results and Discussion

The effectiveness of the subjects of tourism activities should be considered on the effectiveness of each of their types: tour operators', travel agents' activities and also subjects of excursion activity. Each entity has its own specifics and takes into consideration the region peculiarities, that is why we propose to evaluate tourism opportunities based on the resultant performance indicators across Ukraine.

To evaluate the opportunities for the development of subject's types of tourist activity, we use the method analysis of the environment (M. Farrell method), which is built on the determination of technical efficiency by building boundaries from the position of technically effective subjects. As a consequence, for all other entities, the performance level can be calculated according to the boundaries built.

Firstly, for our study, in the context of the tourism industry formation in Ukraine, the use of this method will allow us to investigate the state of the functioning environment of each tourist activity. Secondly, this method will allow to build lines of technical efficiency for tour operators', travel agents', and tour agencies' activities. And thirdly, based on the availability of technically efficient activities in all regions of Ukraine, it is possible to build a resultant line of technical efficiency and distribute inefficient kinds by regions, depending on the environmental impact.

Based on the principles of the method analysis of the operating environment, we will use two factors – labor costs (X_1) and operating expenses (X_2) and also one resultant factor – income from the provision of tourist services (free from VAT, excise taxes and similar mandatory payments) (Y). Thus, it is possible to calculate two coefficients – the coefficient of coverage of income from the provision of tourist costs of labor costs (X_1 / Y) and the coefficient of coverage of income from the provision of tourist services of operating expenses (X_2 / Y) based on data of the State Statistics Service of Ukraine for 2018. There are no indicators for tour operators in Ukraine in Kirovograd, Luhansk and Poltava regions (Table 1).

Table 1. Coefficients to cover income from the provision of tourist services labor costs and operating expenses for tour operators for 2018

№	Region	Revenue from the provision of tourist services (free from VAT, excise duties and similar mandatory payments, thsd. UAH) (Y)	Labor costs, thsd. UAH (X_1)	Operating expenses, thsd. UAH (X_2)	X_1 / Y	X_2 / Y
1	Vinnnytska	14899.4	958.7	7815.1	0.06	0.52
2	Volynska	12805.1	1000.7	2402.2	0.08	0.19
3	Dnepropetrovska	5162.9	2107.5	3822.2	0.41	0.74
4	Donetska	6951.0	512.4	5430.7	0.07	0.78
5	Zhytomyrska	1058.6	120.8	965.3	0.11	0.91
6	Transcarpathian	9517.8	1181.7	9717.9	0.12	1.02
7	Zaporizhska	1964.4	719.3	1575.1	0.37	0.80
8	Ivano-Frankivska	432680.6	30429.8	342455.3	0.07	0.79
9	Kyivska	2155.3	792.0	1651.3	0.37	0.77
10	Kirovohradska	-	-	-	-	-
11	Luganska	-	-	-	-	-
12	L'vivska	415437.1	18568.6	124624.2	0.04	0.30
13	Mykolayivska	1372.3	450.5	1232.2	0.33	0.90
14	Odeska	128986.8	4129.8	92236.2	0.03	0.71
15	Poltavska	-	-	-	-	-
16	Rivnenska	5266.5	41.3	5205.9	0.01	0.99
17	Sumska	4888.4	1075.3	4529.5	0.22	0.93
18	Ternopil'ska	2708.8	552.8	1422.8	0.20	0.52
19	Kharkivska	21123.3	711.4	21597.4	0.03	1.02
20	Khersonska	518.4	128.2	394.2	0.25	0.76
21	Khmelnytska	19.4	19.2	28.8	0.99	1.48
22	Cherkaska	5965.1	866.3	3062.8	0.14	0.51
23	Chernivetska	9515.9	2461.5	22062.5	0.26	2.32
24	Chernihivska	388.5	79.0	103.4	0.20	0.27
25	city of Kyiv	19224158.5	291431.5	16473213.9	0.01	0.86

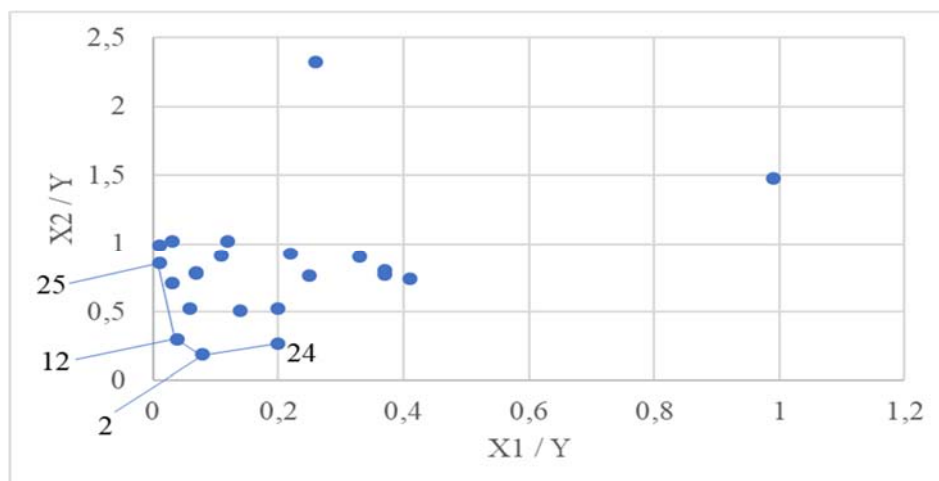
Source: author's calculations-based data on the State Statistics Service of Ukraine.

The lowest coefficient of income coverage from the provision of tourist services labor costs (0.01) characterizes the activity of tour operators in the Rivnenska region and the city of Kyiv, while the highest (0.99) is in the Khmelnytska region. The lowest ratio of coverage of income from the provision of tourist services operating expenses (0.19) was obtained by the activity of tour operators of the Volynska region. For the three other regions (Kharkivska, Transcarpathian and Chernivetska) this figure is higher than the previous one (by 1.02 for the first two and 2.32). This means that the revenue from the provision of tourist services is not sufficient to cover operating expenses.

On the basis of the calculated coefficients magnitude it is possible to construct a line of technical efficiency in the environment of the tour operators in the regions of Ukraine for 2018 (Figure 1).

Thus, we can conclude that the most technically efficient activity of tour operators in 2018 is activity in the city of Kyiv (position 25), L'vivska (12), Volynska (2) and Chernihivska regions (24). The configuration of the technical efficiency line is accordingly represented by the sequence of positions: 1-25-12-2-24. The positions of all other tour operator areas are technically inefficient.

Figure 1. The line of technical efficiency for the environment of tour operators in Ukraine



Source: own composition on the basis data of the State Statistics Service of Ukraine.

Table 2. Coefficients of coverage of revenue from the provision of tourist services labor costs and operating expenses for travel agents for 2018

№	Region	Revenue from the provision of tourist services (free from VAT, excise duties and similar mandatory payments, thsd. UAH) (Y)	Labor costs, thsd. UAH (X ₁)	Operating expenses, thsd. UAH (X ₂)	X ₁ / Y	X ₂ / Y
1	Vinnytska	3079.0	1583.5	2539.3	0.51	0.82
2	Volynska	2310.7	893.6	1816.9	0.39	0.79
3	Dnepropetrovska	25774.9	11231.6	21855.0	0.43	0.85
4	Donetska	21547.3	3175.0	9125.8	0.15	0.42
5	Zhytomyrska	2937.2	1086.9	2278.2	0.37	0.77
6	Transcarpathian	5062.3	1387.4	2312.0	0.27	0.46
7	Zaporizhska	19866.6	7025.1	15928.7	0.35	0.80
8	Ivano-Frankivska	5181.1	2276.3	4798.6	0.44	0.93
9	Kyivska	13093.3	3843.0	10234.1	0.29	0.78
10	Kirovohradska	7746.1	981.6	3384.1	0.13	0.44
11	Luganska	573.1	296.7	547.1	0.52	0.95
12	L'vivska	21220.4	8481.5	25279.2	0.40	1.19
13	Mykolayivska	2787.7	1278.6	2695.9	0.46	0.97
14	Odeska	36904.7	13539.5	30117.0	0.37	0.82
15	Poltavska	5883.3	1740.1	5478.5	0.29	0.93
16	Rivnenska	3062.3	1176.7	2709.3	0.38	0.88
17	Sumska	2732.4	1171.7	2330.5	0.43	0.85
18	Ternopil'ska	3469.3	1073.0	1898.9	0.31	0.55
19	Kharkiv'ska	19429.8	8727.1	17505.5	0.45	0.90
20	Kherson'ska	35305.3	1209.6	10240.1	0.03	0.29
21	Khmelnytska	2409.4	1070.9	2225.7	0.44	0.92
22	Cherkaska	3988.3	944.6	4058.6	0.24	1.02
23	Chernivetska	12062.2	2465.3	6685.3	0.20	0.55
24	Chernihiv'ska	2265.9	895.8	1968.3	0.39	0.87
25	city of Kyiv	456492.9	121071.9	584009.7	0.26	1.28

Source: author's calculations-based data on the State Statistics Service of Ukraine.

The further away from the line of technical efficiency, the less effective in the current environment of

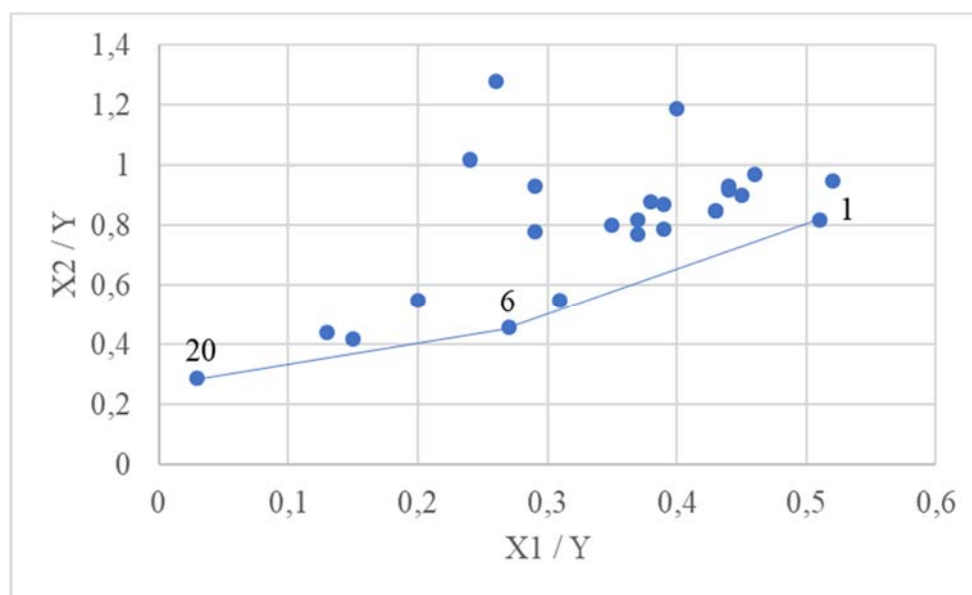
operation of tour operators in the respective region of the state. Naturally, such areas are those where the coverage coefficients are larger or closer to one (Kharkivska, Khmelnytska, Chernivetska and Transcarpathian region).

The lowest factor of coverage of the income from the provision of tourist services on the cost of labor for travel agents (0.03) characterizes the activity in the Khersonska region, and the highest is in the Vinnytska (0.51) and Luganska regions (Table 2).

The lowest coverage ratio for operating expenses from the provision of tourist services was also recorded by the results in Khersonska region (0.29). In some regions of Ukraine, this ratio is higher than one: L'vivska and (1.19), Cherkaska regions (1.02), and the city of Kyiv (1.28). This means that for each of these regions, there is not enough revenue from the provision of tourist services to cover the costs of travel agents in the amount of 19 %, 2 % and 28 % respectively.

Based on the coefficients of coverage, the line of technical efficiency is formed on the basis of three positions: 1 (Vinnytska region), 6 (Transcarpathian region), 20 (Khersonska region) (Figure 2).

Figure 2. Line of technical efficiency for the environment of travel agents functioning in the regions of Ukraine



Source: own composition on the basis data of the State Statistics Service of Ukraine.

Travel agents in all other areas are technically inefficient. The least inefficient characterizes the activity of travel agents in those areas whose positions are as close as possible to the line of technical efficiency, in particular the Kirovogradska, Donetsk, Chernivetska, Ternopilska and Luganska regions. Instead, the highest technical efficiency is observed in the activity of travel agents in the cities of Kyiv, and also in Cherkaska, L'vivska and Poltavaska regions. For all other areas of the state, the level of technical inefficiency of travel agents is approximately the same.

The highest income on excursion activity is observed by the results of activity in the city of Kyiv – 25871.7 thousand UAH. However, there are no statistical data in twelve regions, which significantly complicates the possibility of forming the environment of functioning of tourist services. The lowest value of the coefficient of coverage of income from the provision of tourist services labor costs is observed in the Kyivska (0.07), Ivano-Frankivska and Odeska regions (0.08 each), the most of all in the Zhytomyrska region – 0.85. The maximum value of the coefficient of coverage of income from the provision of tourist services operating expenses is characterized by excursion activity in Cherkaska (3.94) and Zhytomyrska (1.42) regions, and the least value is in the Odeska region (0.29) (Table 3).

The line of technical efficiency for the subjects of excursion activity in the regions of Ukraine consists of the positions of such areas as Cherkaska (22), Ivano-Frankivska (8), Kyivska (9), Odeska (14) and also Rivnenska (16) (Figure 3).

Thus, by analyzing tourism operators' effectiveness in the regions of Ukraine using the method analysis of the operating environment, we can conclude that the activity of providing tourist services is not effective enough, since there are over costs on one hand (operating expenses exceed the income from the provision of tourist services), so and wage savings (the corresponding coverage ratios are quite low).

Building a resultant line of technical efficiency for the tour operators', tour agents' and subjects' of

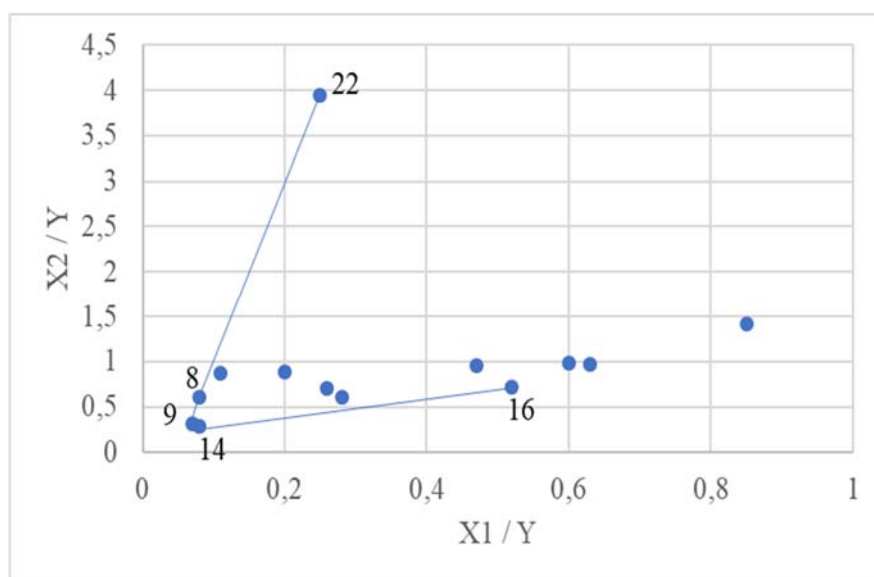
excursion activity operating environment in the regions of Ukraine (Figure 4) is necessary to evaluate the prospects of tourism industry development based on the existing indicators of income from the provision of tourist services, labor costs and operating expenses.

Table 3. Ratios of income coverage from the provision of tourist services labor costs and operating expenses for the excursion activity for 2018

№	Region	Revenue from the provision of tourist services (free from VAT, excise duties and similar mandatory payments, thsd. UAH) (Y)	Labor costs, thsd. UAH (X ₁)	Operating expenses, thsd. UAH (X ₂)	X ₁ / Y	X ₂ / Y
1	Vinnyska	-	-	-	-	-
2	Volynska	223.7	106.4	214.0	0.47	0.96
3	Dnepropetrovska	-	-	-	-	-
4	Donetska	-	-	-	-	-
5	Zhytomyrska	92.7	78.7	131.8	0.85	1.42
6	Transcarpathian	-	-	-	-	-
7	Zaporizhska	-	-	-	-	-
8	Ivano-Frankivska	52.0	4.0	31.4	0.08	0.60
9	Kyivska	5430.8	365.5	1744.0	0.07	0.32
10	Kirovohradska	-	-	-	-	-
11	Luganska	-	-	-	-	-
12	L'vivska	6165.7	1711.6	3792.0	0.28	0.61
13	Mykolayivska	-	-	-	-	-
14	Odeska	6137.4	511.9	1795.9	0.08	0.29
15	Poltavska	10.6	1.2	9.2	0.11	0.87
16	Rivnenska	129.8	67.4	93.2	0.52	0.72
17	Sumska	-	-	-	-	-
18	Ternopil'ska	166.5	105.1	160.9	0.63	0.97
19	Kharkivska	-	-	-	-	-
20	Khersonska	299.9	180.1	294.5	0.60	0.98
21	Khmelnyska	1893.5	375.1	1659.3	0.20	0.88
22	Cherkaska	64.6	16.5	254.5	0.25	3.94
23	Chernivetska	-	-	-	-	-
24	Chernihivska	-	-	-	-	-
25	city of Kyiv	25871.7	6624.1	18125.6	0.26	0.70

Source: author's calculations-based data on the State Statistics Service of Ukraine.

Figure 3. Line of technical efficiency for the environment of excursion entities in Ukraine

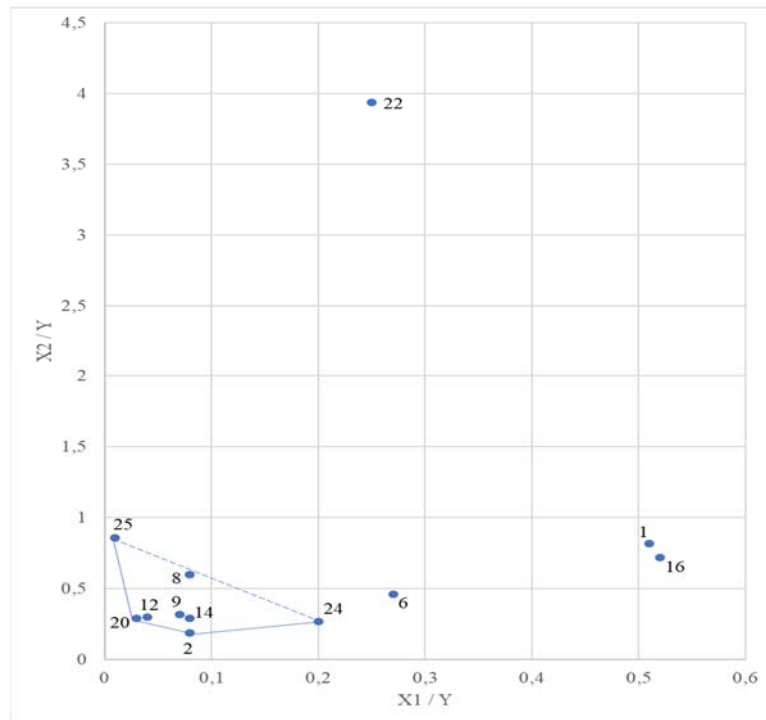


Source: own composition on the basis data of the State Statistics Service of Ukraine.

For this purpose, one should use the positions of the areas where the technical efficiency of the tourist entities has been achieved. In simplified form, that means to identify the most effective areas for tourism among the most effective.

The technical inefficiency of the subjects of excursion activity in other areas is the same except for the Khersonska, Ternopil'ska and Zhytomyr'ska regions.

Figure 4. Resulting line for the environment of tour operators', tour agents' and subjects of excursion activity technical efficiency in the regions of Ukraine



Source: own composition on the basis data of the State Statistics Service of Ukraine.

In our study, this will allow us to assess the state of the environment for the provision of tourist services by specific subjects of activity in the regions of Ukraine and to identify opportunities for its development. The resulting technical efficiency line consists of four areas: 25 (Kyiv city), 20 (Khersonska region), 2 (Volynska region), 24 (Chernihivska region). All positions except 20 (Khersonska region) are positions of regions whose subjects are tourist activities as tour operators. They are called travel agents in the Khersonska region.

Line 24–25 allows you to divide the analyzed entities into three groups:

- the areas that form the operating environment are the regions whose positions form the line of technical efficiency, that is, they are technically efficient (Kyiv; Khersonska, Volynska and Chernihivska regions);
- the areas whose tourist activity influences the functioning environment are the positions of the regions between the technical efficiency line and its projection 24–25 (Ivano-Frankivska, Kyivska, L'vivska and Odeska regions);
- the areas whose tourist activity does not affect the environment and depends on the tourist activity of other regions (Vinnytska, Transcarpathian region, Rivnenska and Cherkaska regions).

Conclusions

As a result of the efficiency evaluation of the functioning of the tourist activity in the regions of Ukraine using the method analysis of the environment of operation, it has been found that the efficiency of wage costs, the tour operators' activity in the city of Kyiv, L'vivska, Volynska and Chernihivska regions was technically effective in 2018, while it was inefficient in the rest regions. At the same time, the travel agents of Kyiv, Cherkaska, L'vivska and Poltav'ska regions took the leading positions in terms of technical efficiency of operating expenses. Considering that the income from the provision of tourist services is not decreasing, the most appropriate for the operating environment is the indicator for covering wage costs in the Chernihivska region (0.20), as it is the highest, which provides technical efficiency in this field. If revenue is not reduced, the most acceptable indicator for covering operating expenses is the indicator in the Volynska region (0.19). Both indicators are provided in the operating environment through the activities of tour operators, their change optimizes the operating environment

while increasing labor costs and reducing operating costs.

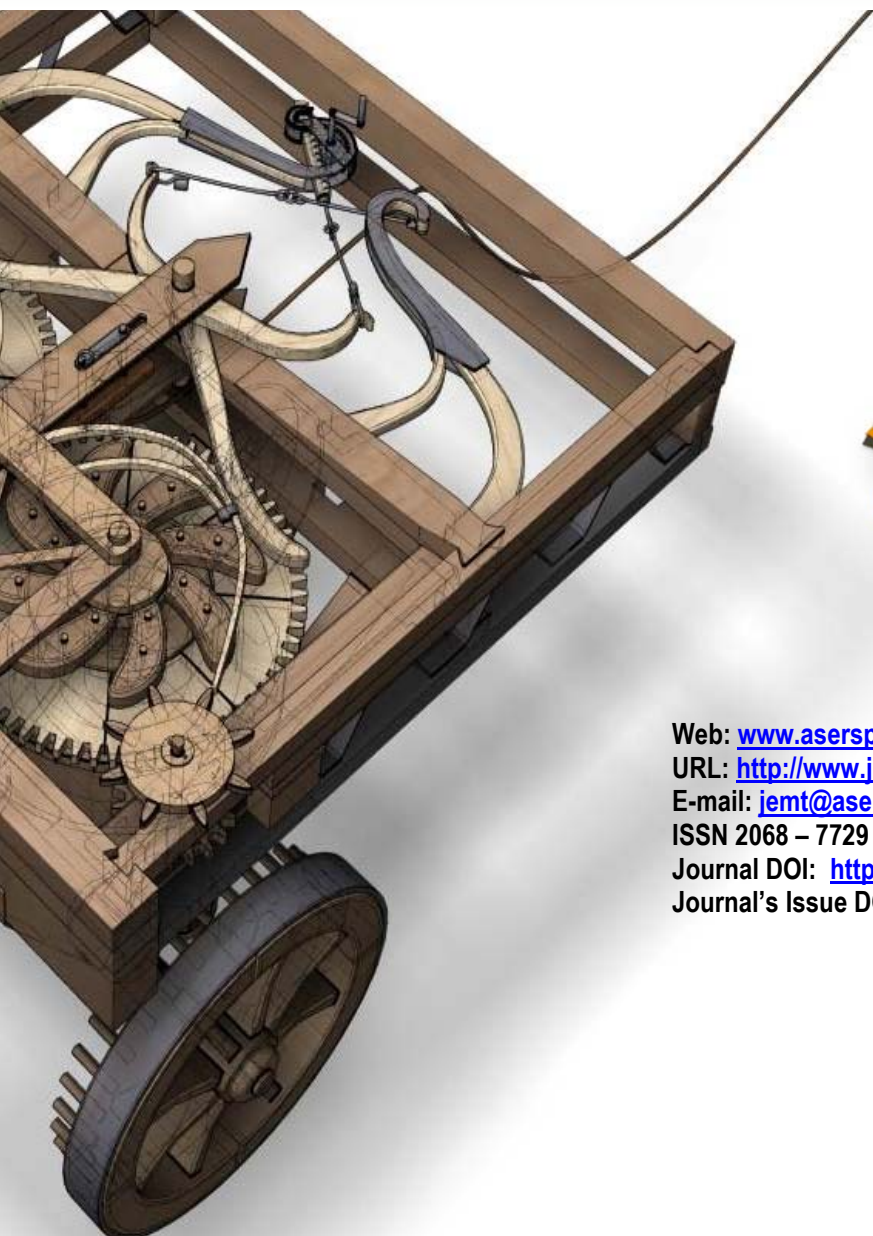
According to the results estimation of the total costs of tour operators', travel agents' and subjects' of the excursion activity technical efficiency, the analyzed regions are grouped into three groups: (i) entities that form the operating environment – regions whose positions form the line of technical efficiency, *i.e.* technically efficient (city of Kyiv, Khersonska, Volynska, and Chernihivska regions); (ii) the entities whose tourism activities affect the operating environment are the positions of the regions between the technical efficiency line and its projection (Ivano-Frankivska, Kyivska, L'vivska and Odeska regions); (iii) entities whose tourism activities do not affect the environment and depend on the tourist activity of other regions (Vinnytska, Transcarpathian, Rivnenska and Cherkaska regions). Strategic development of the existing operating environment is to overcome the technical inefficiency inherent in the activity of all tourism business subjects in the Ukrainian regions. First of all, it is necessary to overcome the relative costs in operating expenses of tourism operators and / or to increase their relative efficiency by increasing their income. The results of the study can be used in planning measures to improve the technical efficiency of the tourism business in the regions of Ukraine.

References

- [1] Boiko, M., Vedmid, N., Bovsh, L. and Okhrimenko, A. 2018. Investment attractiveness of the Ukrainian tourism system. *Investment Management & Financial Innovations*, 15(4): 193. DOI:[http://dx.doi.org/10.21511/imfi.15\(4\).2018.16](http://dx.doi.org/10.21511/imfi.15(4).2018.16)
- [2] Cracolici, M. F., Nijkamp, P. and Rietveld, P. 2008. Assessment of tourism competitiveness by analysing destination efficiency. *Tourism economics*, 14(2): 325–342. DOI:<https://doi.org/10.5367/000000008784460427>
- [3] Dolgikh, Y. 2019. Evaluation and analysis of dynamics of change of efficiency of grain production in Ukraine by DEA method. *Agricultural and Resource Economics*, 5(3): 47–62. DOI:<https://doi.org/10.22004/ag.econ.293985>.
- [4] Ihnatenko, M., *et al.* 2019. Models of implementation of enterprises in agricultural green tourism in European countries and assessment of their efficiency. *International Journal of Innovative Technology and Exploring Engineering* 8(12): 337–340. DOI: <https://doi.org/10.35940/ijitee.L3240.1081219>
- [5] Kovalchuk, Yu., Furman, I., Humenyuk, H. and Kucher, A. 2020. Potential and opportunities for development of tourism in Ukraine. *Journal of Environmental Management and Tourism*, 1(41): 194–201. DOI:[http://doi.org/10.14505/jemt.v11.1\(41\).22](http://doi.org/10.14505/jemt.v11.1(41).22)
- [6] Kozmenko, O., Poluliakhova, O. and Iastremska, O. 2015. Analysis of countries investment attractiveness in the field of tourism industry. *Investment management and financial innovations*, 12(3): 56–63.
- [7] Levkov, K. 2017. Bulgaria's place in world tourism (an attempt to positioning). *New knowledge Journal of science* 6(1): 151–162. Available at: <http://science.uard.bg/index.php/newknowledge/article/view/208/172>
- [8] Levkov, K. and Lakov, P. 2018. The tourism regions in Bulgaria – situation and problems. Proceedings of conference «Regional Economy and Sustainable Development», University of Economics – Varna, 1: 497–506. Available at: <https://ideas.repec.org/a/vra/pr1803/y2018i1p497-506.html>
- [9] Levkov, K. and Meskhia, E. 2018. Opportunities for sustainable development of the tourist exchange between Republic of Georgia and Republic of Bulgaria. *Sustainable development and competitiveness of regions*: collective monograph; ed. O. Stoichkova. Plovdiv: Academic publishing house «Talent», 1: 75–86. Available at: <http://science.uard.bg/index.php/sustdev/article/viewFile/411/332>
- [10] Levkov, K. and Pavlova, D. 2015. Nyakoi vazmozhnosti za uvelichavane na turisticheskiya obmen mezhdou Balgariya i Ukrayna kato chast ot dvustrannite ikonomicheski otnosheniya. IV international scientific-practical conference „Ukraine – Bulgaria – European union: current situation and prospects”, vol. 1. Varna–Kherson, 127–131.
- [11] Martsenyuk, L. V. 2015. Problems and prospects of tourism development in Ukraine. *Economics Bulletin*, 3: 76–82. Available at: https://ev.nmu.org.ua/docs/2015/3/EV20153_076-082.pdf
- [12] Mazaraki, A., *et al.* 2018. Formation of the national tourism system of Ukraine. *Problems and Perspectives in Management*, 16(1): 68-84.

- [13] Niemets, L., *et al.* 2018. Rural tourism in Ukraine: Peculiarities and trends of development. Proceedings of the 32nd International Business Information Management Association Conference, IBIMA 2018 – Vision 2020: Sustainable Economic Development and Application of Innovation Management from Regional expansion to Global Growth, 290–301.
- [14] Polkovnychenko, S. and Krasiy, A. 2020. Ukraine's attractiveness at the European tourism services market. *Efektivna ekonomika* 1. DOI: <https://doi.org/10.32702/2307-2105-2020.1.78>
- [15] Ryabova, T. A. 2018. State and prospects of development of tourism in Ukraine. *Efektivna ekonomika* 4. Available at: <http://www.economy.nayka.com.ua/?op=1&z=624>
- [16] Sakhno, A., Hryvkiivska, O., Salkova, I. and Kucher, L. 2019a. Evaluation of the efficiency of enterprises by the method of analysis of functioning environment. *Journal of Environmental Management and Tourism*, 3(35): 499–507. DOI: [https://doi.org/10.14505/jemt.v10.3\(35\).04](https://doi.org/10.14505/jemt.v10.3(35).04)
- [17] Sakhno, A., Polishchuk, N., Salkova, I. and Kucher, A. 2019b. Impact of credit and investment resources on the productivity of agricultural sector. *European Journal of Sustainable Development*, 8(2): 335–345. DOI: <https://doi.org/10.14207/ejsd.2019.v8n2p335>
- [18] Sakhno, A., Salkova, I., Broyaka, A. and Priamukhina, N. 2019c. Methodology for the impact assessment of the digital economy on agriculture development. *International Journal of Recent Technology and Engineering*, 8(3C): 160–164. DOI: <https://doi.org/10.35940/ijrte.C1027.1183C19>
- [19] Shcherbakova, N. A. 2019. State and trends of sustainable development of tourism in Ukraine and the world. *Journal of Environmental Management and Tourism*, 9(8): 1712–1724. DOI: [https://doi.org/10.14505/jemt.v9.8\(32\).10](https://doi.org/10.14505/jemt.v9.8(32).10)
- [20] Official site of the State Statistics Service of Ukraine. Available at: <http://www.ukrstat.gov.ua>

ASERS



The logo for ASERS Publishing, featuring the word "ASERS" in a bold, orange, sans-serif font with a stylized fan-like graphic to the left, and the word "Publishing" in a smaller, orange, sans-serif font below it.

Web: www.aserspublishing.eu

URL: <http://www.journals.aserspublishing.eu/jemt>

E-mail: jemt@aserspublishing.eu

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

Journal's Issue DOI: [https://doi.org/10.14505/jemt.v11.4\(44\).00](https://doi.org/10.14505/jemt.v11.4(44).00)