

UDC 338.486.41(045)

Gorina Ganna

gorina@donnuet.edu.ua, ORCID ID: 0000-0003-0900-0640

Researcher ID: AAI-2835-2020

*Doctor of Economics, Professor, Head of the Economics and Tourism Department,
Donetsk National University of Economics and Trade
named after Mykhailo Tugan-Baranovsky, Kryvyi Rih*

INTEGRAL ASSESSMENT OF TOURISM DEVELOPMENT IN ŁÓDŹ AND ŁÓDŹ VOIVODESHIP IN 2004–2021

Abstract. *The main aim of the article is to present an assessment of the dynamics and determine the trends in the tourism development in Łódź and Łódź Voivodeship in 2004–2021, as well as to compare them. Comparison of the tourism development in Łódź and Łódź Voivodeship was carried out on the calculation and analysis of integral indicators. The integral indicator was calculated based on 14 indicators grouped into three groups: 1) tourist accommodation establishments (9 indicators); 2) museums, including branches (3 indicators); 3) organization of mass events (2 indicators). Data collection by groups of indicators was carried out by the statistical observation method. As an information base, it is advisable to use official sources of information, namely data from the official website of Central Statistical Office of Poland and Regional Statistical Office in Łódź. To bring a significant number of different-quality and different-sized analytical indicators of tourism development, which were used to calculate the integral indicator, into a comparable form, they were normalized. Determination of weighting coefficients was carried out by an expert method (ranking method). The analysis allows come to conclusion about presence of common upward trend in the tourism development in Łódź and Łódź Voivodeship with elements of fluctuation in the period of 2004–2019 as well as general dramatic decline in 2020. However, compound annual growth rate of the tourism development in Łódź and Łódź Voivodeship for the analyzed period differs and equals 9,04% and 7,18% respectively. With continued investment in infrastructure, cultural and tourist projects, the region is likely to continue to grow as a popular tourist destination in the coming years. The development of tourism in Łódź and Łódź Voivodeship has been driven by a combination of the following factors: converting a rich history and cultural heritage into cultural and entertainment centers both for tourists and for the locals; significant investment in tourism infrastructure; investing in marketing, advertising and destination management; development of the entertainment industry, etc.*

Key words: Łódź, Łódź Voivodeship, urban tourism, post-industrial cities, integral assessment.

Горіна Г.О.

gorina@donnuet.edu.ua, ORCID ID: 0000-0003-0900-0640

Researcher ID: AAI-2835-2020

*д.е.н., проф., завідувач кафедри економіки та туризму,
Донецький національний університет економіки і торгівлі
імені Михайла Туган-Барановського, м. Кривий Ріг*

ІНТЕГРАЛЬНА ОЦІНКА РОЗВИТКУ ТУРИЗМУ В М. ЛОДЗЬ ТА ЛОДЗЬКОМУ ВОЄВОДСТВІ У 2004–2021 РР.

Анотація. *Головною метою статті є оцінка динаміки та визначення тенденцій розвитку туризму в м. Лодзь та Лодзькому воєводстві у 2004–2021 рр., а також їх порівняння. Порівняння розвитку туризму в м. Лодзь та Лодзькому воєводстві було проведено на основі розрахунку та аналізу інтегральних показників. Інтегральний показник розраховувався на основі 14 показників, згрупованих у три групи: 1) заклади розміщення туристів (9 показників); 2) музеї, включаючи філії (3 показники); 3) організація масових заходів (2 показники). Збір*

даних за групами показників здійснювався методом статистичного спостереження. У якості інформаційної бази було використано офіційні джерела інформації, а саме дані офіційного веб-сайту Головного статистичного управління Польщі та Регіонального статистичного управління м. Лодзь. Для приведення у порівнянний вигляд значної кількості різноякісних та різномасштабних аналітичних показників розвитку туризму, які використовувалися для розрахунку інтегрального показника, їх було нормалізовано. Визначення вагових коефіцієнтів проводилось експертним методом (методом ранжування). Проведений аналіз дозволяє дійти висновку про наявність загальної висхідної тенденції розвитку туризму в м. Лодзь та Лодзькому воєводстві з коливаннями у період 2004–2019 рр., а також загальним спадом у 2020 р. Проте, сукупний річний темп зростання туристичної галузі у м. Лодзь та Лодзькому воєводстві за аналізований період відрізняється і становить 9,04% та 7,18% відповідно. Завдяки постійним інвестиціям в інфраструктуру, культурні та туристичні проєкти, використовуючи сучасні маркетингові інструменти, регіон, з великою ймовірністю, продовжуватиме зростати як популярна туристична дестинація. В цілому розвиток туризму в м. Лодзь та Лодзькому воєводстві був зумовлений поєднанням таких факторів як: перетворення історичної та культурної спадщини на культурно-розважальні центри як для туристів, так і для місцевих жителів; значні інвестиції в інфраструктуру туризму; інвестування в маркетинг, рекламу та управління дестинаціями; розвиток індустрії розваг тощо.

Ключові слова: м. Лодзь, Лодзьке воєводство, міський туризм, постіндустріальні міста, інтегральна оцінка.

JEL Classification: L83, Z10, R10, O18

DOI: <https://doi.org/10.32782/tourismhospcee-11-1>

Statement of the problem. Łódź is a post-industrial city that today seeks to develop modern services, science and the creative sector. For ten years the city has been developing rapidly. New hotels are opening, entire quarters of the historical center are being revived, and in the very center of the city, on an area of 100 hectares, the New Center of Łódź is growing. The city combines history and modernity in an amazing way, and its tourism potential is revealed through a rich variety of tourist attractions. Additionally, the Łódź Voivodeship has plenty of natural attractions, including forests, lakes, and rivers, which make it a popular destination for outdoor enthusiasts. But 15 years ago, Łódź was difficult to call a tourist city. Before 1990, the economy of Łódź was heavily reliant on the textile industry, which declined dramatically in 1990 and 1991. At the same time the economic crisis of the 1990s also had many positive consequences. It caused an increase in the importance of the services sector, including the tourism sector, not only within the city, but also in the Łódź Voivodeship as a whole.

Nowadays Łódź as the post-industrial city offers many tourist attractions based on 19th century revitalized textile industry heritage, over 30 annual international festivals, 20 museums, 19 theatres, 12 galleries and 5 major cultural institutions [11].

Considering the roots of the changes that took place in the economy of Łódź and Łódź Voivodeship at the turn of the 20th and 21st centuries, the

transition from the industrial economy model to the dynamic development of the service sector, including tourism, antimealy scientific and practical task is to study this case for its further dissemination and implementation.

Analysis of recent research and publications.

The most thorough contribution to the study of tourism development in Łódź and Łódź Voivodeship was made by the scientific community of the Institute of Urban Geography, Tourism Studies and Geoinformation (University of Łódź, Poland). A thorough review of scientific publications and research papers on tourism in Łódź and around the city was done in the study Liszewski S. [9]. The author gathered around 100 articles which have been divided into eight thematic groups and analyzed for merit, namely: the city's tourism resources, land use planning, tourism space, the tourism activity of the citizens of Łódź, the tourism product – tourism development strategies, and tourism research of surrounding areas in the metropolitan area of Łódź. Włodarczyk B. [25] presents the most important aspects of tourism development in the Łódź region against the background of the most important periods in the development of this phenomenon in Poland. The researcher focused the particular attention on the last one hundred years, during which the Łódź Voivodeship has existed within the administrative division of the country. Kowalczyk-Anioł J. [8] conducts a comprehensive study of the tourism development in Łódź, between 2000

and 2014. The author analyses both the overall changes in numbers of registered tourists during the studied period, its distribution within the city, and the number and specificity of foreign arrivals (non-residents).

Various aspects of the tourism development in Łódź and Łódź Voivodeship are also widely reflected in the works of scientists, mainly from the Institute of Urban Geography, Tourism Studies and Geoinformation (University of Łódź, Poland). Liszewski S. [10] present a definition of urban 'tourism exploration space' and identify it within the 'urban space' of Łódź through the giving three case studies: Bidermann family properties, Piotrkowska courtyards and the 'Green Ring of Tradition and Culture'. Włodarczyk B. [24] explores Łódź as an important national centre of sports tourism and in addition the research presents the infrastructural potential of the city related to sports development, as well as the most important sports events which been organized there in the last 10 years. Łuc B. [12] study the importance of the largest sports and recreational facilities located in the tourism space of Łódź. Researcher comes to the conclusion that the largest sports and recreation facilities play a role in the tourism space of Łódź but it is not as significant played by Piotrkowska Street or the Manufaktura shopping and service center. Stasiak A. [16] describe the potential of gastronomic resources in Łódź as a possible basis for creating a new tourism product for the city. Author present a historical outline of Łódź gastronomy, the specificity of the local cuisine and its delicacies, the major culinary events, and the structure and location of gastronomic establishments at the beginning of the 21st c., as well as other elements which may be used to create an attractive offer for tourists. Cudny W., Rouba R. [3] characterize Łódź festivals and the role they play in promoting adventure tourism and in developing tourism product of postindustrial city such as Łódź. The authors come to the conclusion that the Explorers Festival and the Wreck Diving Festival constitute an element of functional changes in Łódź, influencing, among other things, the development of Łódź's tourism offer. Sylla M., Chruściński J., Drużyńska P., Płóciennik P., Osak W. [22] analyze the opportunities and limitations for MICE tourism development in Łódź compared to the city's potential based on such factors as the accommodation services, congress locations, accessibility by different means of transportation, and its image. Bończak B. [2] explores the potential of the metropolitan tourism region of Łódź for the development of military heritage tourism.

Jaskulski M., Szmidt A. [7] investigate the attractiveness of the recreational area of Łagiewnicki Forest in Łódź as regards the diversity of its relief.

Setting the task. The main aim of the article is to present an assessment of the dynamics and determine the trends in the tourism development in Łódź and Łódź Voivodeship in 2004–2021, as well as to compare them based on the calculation and analysis of integral indicators.

Summary of the main research material. In the opinion of the author achievement of the goal set in the article due to simple quantitative observation of indicators is not sufficient and optimal.

The assessment of the dynamics and determine the trends in tourism development in Łódź and Łódź Voivodeship is proposed to implement through the normalization of a set of different-quality and different-sized analytical indicators of tourism development, their interpretation and visualization.

The comparison of the tourism development in Łódź and Łódź Voivodeship is proposed to carry out on the calculation and analysis of integral indicators.

It is proposed to achieve the goal of the article through an algorithm of sequential actions, which consists of 6 stages.

1. Determination of indicators for calculation the integral indicators of tourism development in Łódź and Łódź Voivodeship.

The calculation of the integral indicator of tourism development in Łódź and Łódź Voivodeship was carried out on the basis of 14 indicators grouped into three groups: 1) tourist accommodation establishments (9 indicators); 2) museums, including branches (3 indicators); 3) organization of mass events (2 indicators) which used by the national statistical accounting system of Poland (Figure 1).

2. Identification of information sources and data collection on selected indicators for the selected period.

Data collection by groups of indicators was carried out by the statistical observation method. As an information base, it is advisable to use official sources of information, namely data from the official website of Central Statistical Office of Poland and Regional Statistical Office in Łódź [15].

This stage provides for the generalization and preliminary analysis of the consolidated material, which makes it possible to identify certain patterns and trends in the development of tourism in Łódź and Łódź Voivodeship in three separate directions: tourist accommodation establishments, museums, mass events. At the same time, such an analysis

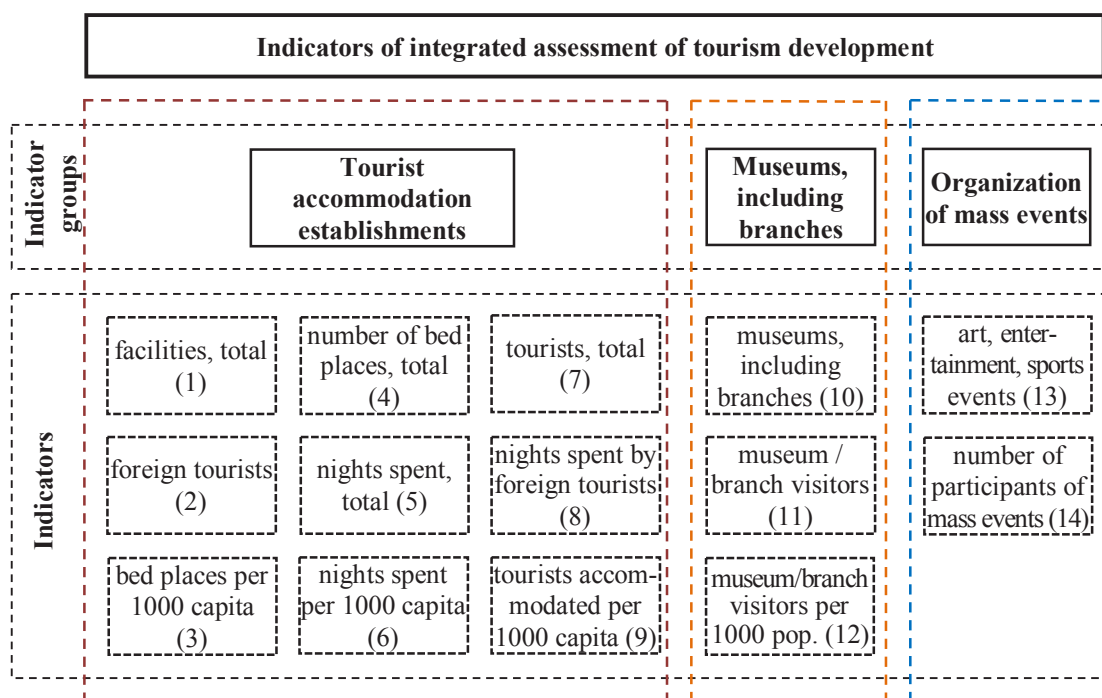


Figure 1. Indicators of integrated assessment of tourism development in Łódź and Łódź Voivodeship

Source: the authors' own study

does not provide a comprehensive, generalized assessment of the tourism development, which can be carried out by calculating the integral indicator [3; 21].

Retrospective analysis of the identified indicators as well as visual representation of data using sparklines (Table 1, 2, 3) allows to assert the existence of two distinct phases of tourism development in Łódź and Łódź Voivodeship. First, there is a wave-like increase in all studied parameters in the period 2004–2019 and a sharp reduction in the analyzed indicators in 2020, caused by “global COVID-19 pandemic situation which has had a negative impact both on the economy as a whole and on the budget and well-being of households” [13, p.18].

Calculation of absolute and relative deviation of indicators of tourist accommodation establishments in Łódź Voivodeship confirms the mentioned conclusions. For the period 2004–2019 the number of facilities increased by 43% (99 units), the number of bed places increased by 54% (8447 units), the number of tourists increased by 141% (833742 units), the number of foreign tourists increased by 108% (100347 units), the number of nights spent increased by 108% (1418317 units), the number of nights spent by foreign tourists increased by 188% (331881 units), the number of bed places

per 1000 capita increased by 62% (4 units), the number of nights spent per 1000 capita increased by 120% (604 units) (Table 1).

Rapid reduction of indicators of tourist accommodation establishments in Łódź Voivodeship in 2020 was caused by a decrease in consumption and consumers of hotel and tourist services as a result of “an unprecedented health, social and economic emergency with the outbreak of the COVID-19 pandemic and quarantine restrictions” [4, p. 1091].

In 2020 compared to 2019 the number of facilities decreased by 16% (52 units), the number of bed places decreased by 10% (2332 units), the number of tourists decreased by 57% (813329 units), the number of foreign tourists decreased by 67% (128664 units), the number of nights spent decreased by 50% (1374794 units), the number of nights spent by foreign tourists decreased by 50% (256243 units), the number of bed places per 1000 capita decreased by 8% (1 units), the number of nights spent per 1000 capita decreased by 50% (551 units), the number of tourists accommodated per 1000 capita decreased by 57% (327 units). The unprecedented decline in all analyzed indicators once again confirms the thesis that “the tourism sector is one of the most affected sectors of the economy due to COVID-19” [6].

Table 1

Indicators of tourist accommodation establishments in Łódź Voivodeship

Study period	Tourist accommodation establishments								
	facilities, total	number of bed places, total	tourists, total	foreign tourists	nights spent, total	nights spent by foreign tourists	bed places per 1000 capita	nights spent per 1000 capita	tourists accommodated per 1000 capita
2004	230	15 706	589 825	92 552	1 308 377	176 069	6,06	504,66	227,51
2005	224	15 358	618 479	96 366	1 367 326	196 572	5,95	529,53	239,52
2006	229	15 821	723 515	109 336	1 483 911	212 654	6,15	577,05	281,36
2007	219	16 099	816 077	121 933	1 718 950	258 765	6,29	671,23	318,67
2008	216	16 301	891 886	115 359	1 864 377	262 595	6,39	730,66	349,54
2009	241	18 094	923 682	115 503	1 941 237	291 293	7,11	762,62	362,87
2010	289	19 981	993 675	113 670	1 959 656	271 843	7,85	769,54	390,21
2011	296	20 245	1 048 186	126 630	1 980 927	267 350	7,98	780,64	413,07
2012	373	23 237	1 129 924	155 397	2 137 220	323 135	9,19	845,21	446,85
2013	357	23 549	1 126 141	148 488	2 035 643	301 942	9,35	808,5	447,27
2014	362	23 231	1 192 931	169 951	2 138 266	329 377	9,26	852,42	475,56
2015	352	23 128	1 281 092	199 712	2 302 010	367 598	9,26	921,45	512,8
2016	357	23 186	1 264 278	175 063	2 327 067	344 725	9,32	935,16	508,07
2017	337	22 210	1 307 739	189 561	2 342 874	364 930	8,96	944,72	527,32
2018	340	23 369	1 351 302	194 876	2 560 848	531 483	9,46	1036,52	546,95
2019	329	24 153	1 423 567	192 899	2 726 694	507 950	9,82	1108,34	578,65
2020	277	21 821	610 328	64 235	1 351 900	251 707	8,99	557,13	251,52
2021	271	21 781	752 494	63 596	1 594 579	251 506	9,06	663,07	312,91

Source: the authors' own study based on [15; 17–20]

Visual representation of data on tourist accommodation establishments in Łódź using sparklines allows to preliminarily confirming the presence of the trends similar to Łódź Voivodeship (table 2).

All studied indicators increase significantly from 2004 to 2019. We can see that the number of facilities rose by 97% (from 34 to 67 units), the number of bed places rose by 128% (from 3466 to 7899 units), the number of tourists rose by 183% (from 228974 to 647272 units), the number of foreign tourists rose by 134% (from 54231 to 126773 units), the number of nights spent rose by 176% (from 443871 to 1223062 units), the number of nights spent by foreign tourists rose by 248% (from 106293 to 370352 units).

The table 2 shows a dramatic decline in the number of the analyzed indicators in 2020. As mentioned in [26] cities “were the first, but also among the most to be affected by the pandemic,

that resulted in restrictions and shutdowns in urban tourism”. In 2020 in Łódź were a drop of the number of facilities by 18% (12 units), the number of bed places by 14% (1141 units), the number of tourists by 62% (400865 units), the number of foreign tourists by 68% (85980 units), the number of nights spent by 55% (670233 units), the number of nights spent by foreign tourists by 47% (172308 units), the number of bed places per 1000 capita by 14% (2 units), the number of nights spent per 1000 capita by 54% (976 units), the number of tourists accommodated per 1000 capita by 62% (585 units).

The relationship between culture and tourism has been one of the major sources of tourism growth in recent decades. The creative industries offered interesting opportunities for the growth and development of tourism, including the potential to generate tourism demand, develop new creative tourism products and enhance place quality and

Table 2

Indicators of tourist accommodation establishments in Łódź

Study period	Tourist accommodation establishments								
	facilities, total	number of bed places, total	tourists, total	foreign tourists	nights spent, total	nights spent by foreign tourists	bed places per 1000 capita	nights spent per 1000 capita	tourists accommodated per 1000 capita
2004	34	3 466	228 974	54 231	443 871	106 293	4,46	571,78	294,96
2005	34	3 526	258 423	57 970	500 835	119 826	4,57	649,80	335,29
2006	34	3 558	283 554	63 939	519 013	129 482	4,66	679,19	371,06
2007	33	3 829	306 398	69 872	605 754	150 239	5,06	800,56	404,93
2008	37	4 142	329 433	63 704	651 869	139 194	5,52	869,01	439,17
2009	41	4 812	330 572	63 609	625 520	140 355	6,46	840,14	443,99
2010	49	5 016	334 130	57 274	619 394	127 864	6,84	844,59	455,61
2011	51	5 343	360 240	66 887	637 590	152 274	7,34	875,95	494,91
2012	68	6 544	418 960	83 767	733 366	192 286	9,06	1 015,71	580,26
2013	67	7 294	442 862	78 479	725 275	177 062	10,20	1 013,86	619,08
2014	66	7 229	502 937	101 118	804 619	193 171	10,20	1 135,58	709,81
2015	65	6 974	559628	132997	904788	238053	9,92	1 286,70	795,85
2016	69	6 763	538982	102492	909112	208519	9,68	1 301,17	771,42
2017	67	7 113	592228	120579	1002730	237814	10,25	1 445,28	853,60
2018	70	8 235	618726	126995	1166333	393114	11,97	1 695,99	899,70
2019	67	7 899	647272	126773	1223062	370352	11,57	1 791,56	948,14
2020	55	6 758	246407	40793	552829	198044	9,97	815,26	363,38
2021	55	6 581	323417	38148	654152	187990	9,84	978,23	483,64

Source: the authors' own study based on [15; 17–20]

attractiveness, as well as support the creative industries and stimulate creative exports [14]. At the same time, the decrease in tourist activity is directly reflected in the reduction of cultural and creative industries development indicators.

The table 3 illustrates a sharp reduction of the museums and mass events activities both in Łódź and Łódź Voivodeship in 2020 compared to 2019. According to Regional Statistical Office in Łódź Voivodeship the number of museums in Łódź Voivodeship go down by 11% (from 44 to 41 units), the number of museum/branch visitors by 64% (from 1014787 to 361079 units), the number of art, entertainment and sports events by 80% (from 338 to 69 units), the number of participants of mass events by 86% (table 3).

According to the table 3 due to corona virus and quarantine restrictions the number of museums in Łódź drops to 5 units (from 17 in 2019 to 12 museums in 2020), the number of museum/branch to 455307 units (from 569527 to 114220 visitors), the

number of art, entertainment and sports events to 140 units (from 193 to 53 events), the number of participants of mass events to 1124974 units (from 1354014 to 229040 participants).

3. Normalization of tourism development indicators in Łódź and Łódź Voivodeship.

To bring a significant number of different-quality and different-sized analytical indicators of tourism development, which are used to calculate the integral indicator into a comparable form, they were normalized from absolute values to normalized ones according to the formula:

$$P_i = \frac{P_i - P_{i(\min)}}{P_{i(\max)} - P_{i(\min)}} \quad (1)$$

P_i – the normalized value of the analytical indicator being analyzed; p_i – the value of the analytical indicator being analyzed; $p_{i(\max)}$ & $p_{i(\min)}$ – the maximum and minimum value of the analytical indicator being analyzed.

Table 3

Indicators of Museums, including branches and Organization of mass events in Łódź and Łódź Voivodeship

Study period	Łódź Voivodeship					Łódź				
	Museums, including branches			Organization of mass events		Museums, including branches			Organization of mass events	
	museums, including branches	museum/branch visitors	museum/branch visitors per 1000	art, entertainment and sports	number of participants of mass events	museums, including branches	museum/branch visitors	museum/branch visitors per 1000	art and entertainment events and sports	number of participants of mass events
2004	41	600 751	231,7			11	269 140	346,7		
2005	41	549 139	212,7			12	225 852	293,0		
2006	40	541 630	210,6			11	223 889	293,0		
2007	42	529 870	206,9			11	209 268	276,6		
2008	41	569 128	223,0			11	218 226	290,9		
2009	46	701 030	275,4			17	323 167	434,0		
2010	46	709 881	278,8			18	352 499	480,7		
2011	48	792 436	312,3			18	398 796	547,9		
2012	45	723 986	286,3			18	389 213	539,1		
2013	47	906 415	360,0	221	990 943	19	488 123	682,3	101	532 725
2014	50	1 123 466	447,9	270	1 053 054	19	585 056	825,7	130	720 045
2015	51	1 114 978	446,3	251	795 601	22	585 502	832,6	106	441 399
2016	49	996 860	400,6	267	919 076	21	538 372	770,5	131	585 781
2017	51	988 873	398,7	268	1 313 463	20	508 415	732,8	149	1 001 059
2018	49	939 997	380,5	327	1 493 690	19	492 693	716,4	186	1 122 937
2019	46	1 014 787	412,5	338	1 780 652	17	569 527	834,3	193	1 354 014
2020	41	361 079	148,8	69	255 636	12	114 220	168,4	53	229 040
2021	45	654 695	272,2	97	493 575	14	299 408	447,7	75	444 875

Source: the authors' own study based on [15; 17–20]

4. Determination of weighting coefficients of indicators.

Determination of weighting coefficients was carried out by an expert method (ranking method), which involves determining the degree of indicators weighting by assigning them different ranks. Five people acted as experts and were asked to rate 14 indicators on a five-point scale.

The obtained results were used to determine the arithmetic mean of the significance degree of each indicator according to the formula:

$$\bar{A} = \frac{1}{N} \sum_{j=1}^N a_{ij}, i=1, \dots, n \tag{2}$$

n – the number of indicators; N – the number of experts; a_{ij} – weight parameters of the i -th indicator determined by the j -th expert.

The weight coefficients were calculated according to the formula:

$$q_i = \frac{\bar{A}}{\sum_{i=1}^n \bar{A}_i} \tag{3}$$

At the same time, the requirement is satisfied: $\sum_{i=1}^n q_i = 1, q_i > 0$

The results of the ranking of indicators by experts and the calculated weighting factors are given in the table. 4.

5. Calculation of integral indicators of tourism development. The integral indicator was determined by the formula:

$$I = \sum_{i=1}^m P_i * q_i \tag{4}$$

m – the number of analyzed analytical indicators; P_i – normalized value of the i -th analyzed analytical indicator; q_i – the weight coefficient of the i -th analytical indicator.

6. Data presentation and interpretation. Among all possible methods of data presentation, a combined method was used, which involves the use of graphs, tables and sparklines.

Normalization of tourism development indicators was made data with different units of measurement comparable and meaningful.

Table 4

The results of indicators ranking by experts and weighting factors for tourism development indicators

	Indicators													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Expert evaluations													
Expert 1	3	4	5	5	5	5	4	5	3	3	5	4	4	5
Expert 2	4	4	5	5	5	5	4	5	4	4	5	4	4	5
Expert 3	3	4	5	5	5	5	4	5	3	3	5	4	4	5
Expert 4	4	4	5	5	4	4	4	5	4	4	5	3	4	5
Expert 5	3	4	5	5	5	5	4	5	4	3	5	4	4	5
Average value	3,4	4	5	5	4,8	4,8	4	5	3,6	3,4	5	3,8	4	5
Weighting factor 2004–2012	0,066	0,077	0,097	0,097	0,093	0,093	0,077	0,097	0,069	0,066	0,097	0,073		
Weighting factor 2013–2021	0,056	0,066	0,082	0,082	0,079	0,079	0,066	0,082	0,059	0,056	0,082	0,063	0,066	0,082

Source: the authors' own study

Transformation raw data into a common scale and its visualization (Figure 2, 3) makes it easier to compare and analyze them. The normalized data ranges from a low of 0 to a highpoint of 1.

According to the Figure 2–3 tourism development in Łódź and Łódź Voivodeship has been steadily growing since 2004. This growth was facilitated by a combination of factors and undergone significant

changes in recent years, with a focus on revitalizing its historic buildings and cultural institutions, which has helped attract more visitors to the area.

In recent years, Łódź has invested in infrastructure improvements to make the city more accessible to tourists. This includes the development of a new airport, expansion of public transportation, and renovation of historic buildings.

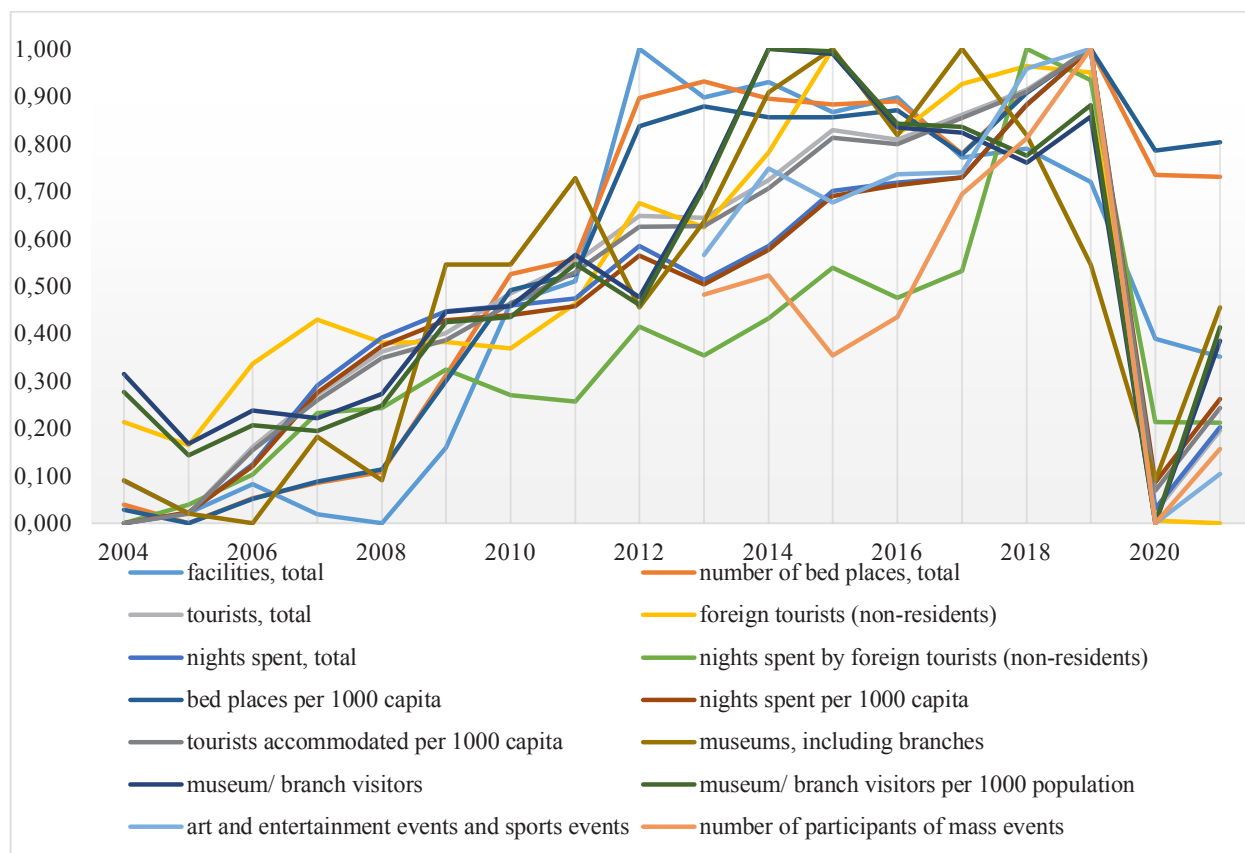


Figure 2. The normalized value of indicators of the tourism development in Łódź Voivodeship
Source: Author's own study based on the data [15]

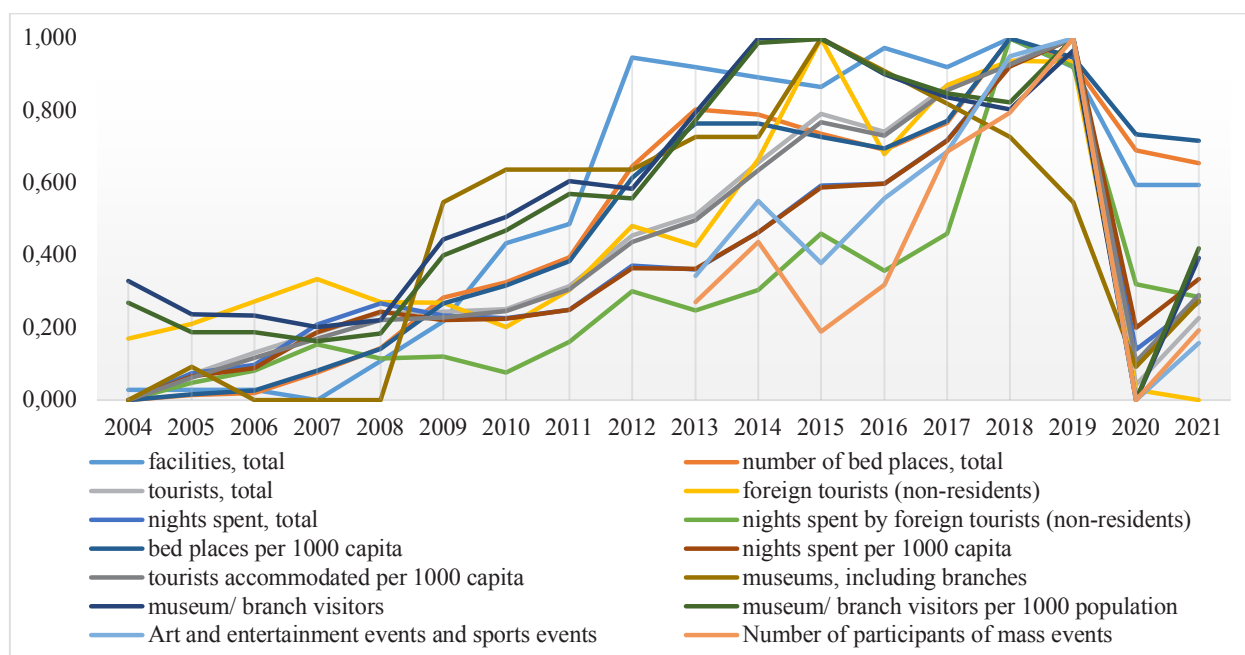


Figure 3. The normalized value of indicators of the tourism development in Łódź

Source: Author's own study based on the data [15]

Łódź has become known for its vibrant cultural scene, with museums, theaters, and art galleries attracting visitors from all over the world. Many of Łódź's museums have undergone significant expansion and renovation in recent years. For example, the Museum of Art has expanded its exhibition space and added new galleries, while the Central Museum of Textiles has undergone extensive renovations to its historic buildings. In addition to existing museums, several new cultural institutions have been established in Łódź in recent years. The Museum of the Factory, for example, was opened in 2006 to showcase the city's industrial heritage, while the Museum of the City of Łódź, opened in 2016, highlights the city's rich history and culture. In terms of tourism development, the Łódź Voivodeship has launched several initiatives to promote the region's cultural and natural attractions. One of the most significant projects is the Łódź Voivodeship Cultural Route, which showcases the region's cultural heritage through a network of museums, historic sites, and cultural events.

Figure 2 reveals that the number of museums, including branches in Łódź Voivodeship reached a peak in 2015 and 2017, the number of museum/branch visitors – in 2014, whereas the lowest point of the museums number was in 2006, despite this the lowest amount of the number of museum/branch visitors was in 2020. The Figure 3 illustrates that a peak of the number of museums, including

branches as well as its visitors in Łódź was in 2015. During 2006–2008, the lowest number of museums, including branches in Łódź was recorded. The lowest amount of the number of museum/branch visitors in Łódź was in 2020 similarly with Łódź Voivodeship which is explained by the beginning of quarantine restrictions due to the COVID-19 pandemic. However, many museums and cultural institutions in Łódź and Łódź Voivodeship have embraced digitalization and made their collections and exhibitions accessible online, allowing people from around the world to experience the city's culture and history despite quarantine restrictions.

The city also hosts numerous festivals and events throughout the year, including Łódź Design Festival, Łódź Jazz Festival, Transatlantyk Festival, Light Move Festival, Łódź Biennale, Open City Festival. These are just a few of the festivals held in Łódź. There are many others, including literary festivals, street art festivals, cultural events celebrating the city's rich history and heritage and also attracting visitors from all over Poland and beyond. From the information given in the Figure 2, 3 we can state that the number of art, entertainment and sports events also as the number of mass events participants both in Łódź and Łódź Voivodeship reached a peak in the pre-coronavirus 2019 and hit its lowest point in 2020.

The hotel industry development in Łódź and Łódź Voivodeship in the period between 2004 and 2021 reflects the growth of tourism and the economy

in the region. In response to the increasing number of tourists visiting the region, numerous hotels have been built in Łódź and the surrounding areas, providing visitors with a range of accommodations to suit all budgets. One of the main drivers of this development has been the transformation of Łódź from an industrial city to a cultural and business hub. The growth of the business sector in Łódź has led to an increase in the number of business travelers visiting the region. According to the Figures 2 the number of facilities in Łódź Voivodeship rose to a high point and peaked in 2012. Although the number of bed places peaked in 2019. However, a more informative indicator is the number of tourists, which reflect the economic and social impact of tourism in a particular destination, promotes tourism growth tracking, plan for future development, and make decisions about resource allocation. Figures 2 shows that the indicators of tourists number and total nights spent in accommodation establishments reached a peak in 2019. By contrast, the number of foreign tourists (non-residents) and nights they spent in accommodation establishments rose to a high point in 2015 and 2018 respectively.

Figures 3 gives information that the number of facilities and bed places number in Łódź in contrast to the Voivodeship reached a peak in 2018. Comparing the highest peak normalized values of the indicators of the total tourists number and the number of foreign tourists (non-residents) for the analyzed period in Łódź we conclude that the maximum value of these indicators was achieved in 2019 and 2015, respectively. The number of total nights spent in accommodation establishments

reached a peak in 2019. By contrast, nights spent by foreign tourists (non-residents) in accommodation establishments rose to a high point in 2018.

Figure 4 present information on the aggregating data and integral assessment of tourism development in Łódź and Łódź Voivodeship which makes it possible: 1) to provide a holistic view of tourism development in Łódź and Łódź Voivodeship in 2004–2021; 2) to assess the general dynamics and determine the trends in the tourism development in Łódź and Łódź Voivodeship in 2004–2021; 3) to compare tourism development in Łódź and Łódź Voivodeship in 2004–2021.

The graph in Figure 4 compares the integral indicators of the tourism development in Łódź and Łódź Voivodeship which makes it possible to come to conclusion about the presence of common upward trend in the tourism development with elements of fluctuation in the period of 2004–2019 as well as general dramatic decline in 2020. However, compound annual growth rate of the tourism development in Łódź and Łódź Voivodeship for the analyzed period differs and equals 9,04% and 7,18% respectively. Both lines of the graph show the decline in 2016, which was caused by the decline in the number of total and foreign tourists; nights spent by foreign tourists; museums, including branches; museum/branch visitors. Enormous reduce in tourist activity in 2020 was caused by the COVID-19 pandemic and quarantine restrictions which highlighted how important and critical health and security factors in determining the success of the tourism and travel sector [5].

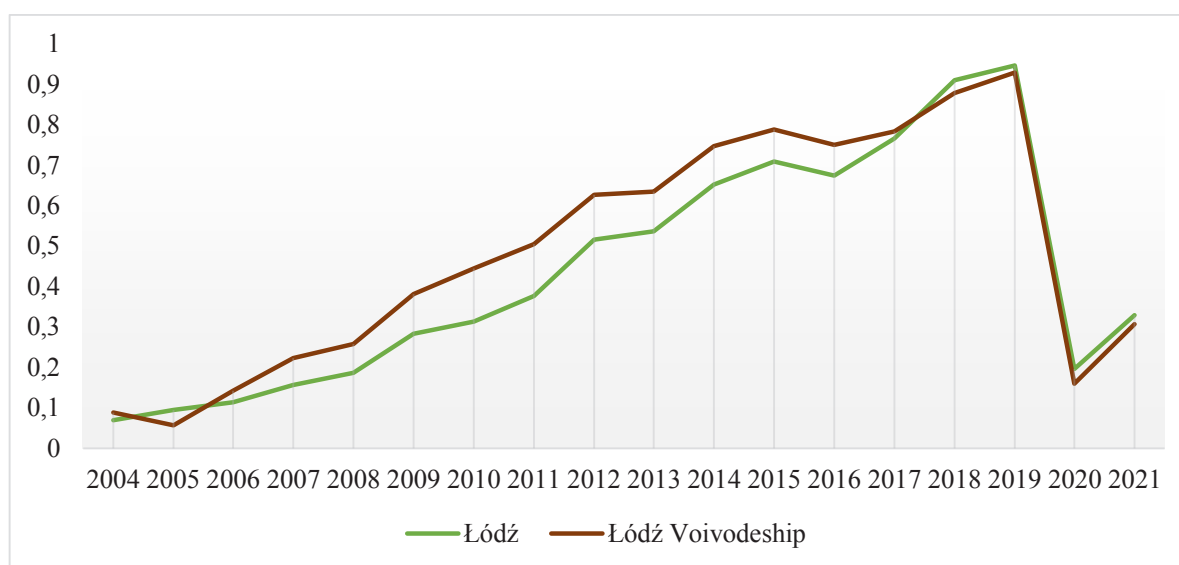


Figure 4. The integral indicators of the tourism development in Łódź and Łódź Voivodeship

Source: Author's own study based on the data [15]

Overall, tourism development in Łódź and Łódź Voivodeship has been successful, with the region becoming a popular destination for visitors from all over the world. With continued investment in infrastructure, cultural offerings, and eco-tourism, using common marketing tools [23] the region is likely to continue to grow as a popular tourist destination in the coming years.

Conclusions and prospects for further research. At the turn of the 20th and 21st centuries, Łódź began to develop again, not as a “textile center”. The industries that began to develop rapidly were the tourism and hospitality. Calculation and analysis of the integral indicators of the tourism development in Łódź and Łódź Voivodeship makes it possible to come to conclusion about the presence of common upward trend in the tourism development with elements of fluctuation in the period of 2004–2019 as well as enormous fall in 2020. Compound annual growth rate of the tourism development in Łódź and Łódź Voivodeship for the analyzed period equals 9,04% and 7,18% respectively. The conducted empirical research allows to conclude that there are several factors that have contributed to the development of tourism in Łódź and Łódź Voivodeship:

- cultural heritage: Łódź has a rich history and cultural heritage, with many historic buildings, museums, and art galleries which have been converted into cultural and entertainment centers;

- location: Łódź is located in the heart of Poland, which makes it easily accessible to tourists from other parts of the country and from neighboring countries in Europe;

- infrastructure: in recent years, there has been significant investment in tourism infrastructure in Łódź, including the development of new hotels, restaurants, and other amenities;

- events and festivals: Łódź hosts many events and festivals throughout the year which attract visitors from all over the world and have contributed to the city's reputation as a cultural hub;

- marketing and promotion: Łódź has invested in marketing and promotion efforts to attract tourists. This includes advertising campaigns, destination branding, participation in tourism fairs and exhibitions, and the development of a comprehensive tourism website.

REFERENCES

1. Boiko, M., Bosovska, M., Vedmid, N., Melnychenko, S. & Okhrimenko, A. (2017),

“Development of the tourism cluster”, *Problems and Perspectives in Management*, no. 15(4), pp. 134–149 DOI: [http://dx.doi.org/10.21511/ppm.15\(4\).2017.12](http://dx.doi.org/10.21511/ppm.15(4).2017.12)

2. Bończak, B. (2013), “The Battle of Łódź 1914: a chance to develop military heritage tourism in the metropolitan tourism region of Łódź”, *Tourism*, no. 23(1), pp. 17–26, DOI: <https://doi.org/10.2478/tour-2013-0002>

3. Cudny, W., Rouba, R. (2012), “The Role of Lodz Festivals in Promoting Adventure Tourism”, *Polish Journal of Sport and Tourism*, no. 18(4), pp. 264–268, DOI: <https://doi.org/10.2478/v10197-011-0021-7>

4. Gorina G., Bocharova Y., Kozhukhova T., Ivanova N. & Bohatyryova G. (2022), “The impact of Covid-19 on international trade in tourism services in Europe”, *GeoJournal of Tourism and Geosites*, no. 43(3), pp. 1091–1098, DOI: <https://doi.org/10.30892/gtg.43330-924>

5. Gorina G., Bohatyryova G., Nikolaichuk O., Romanykha O., Chernega O., Bocharova Yu. (Eds.) (2022), “Assessing security and protection in global tourism”, *Challenges and paradigm of national and international security of the XXI century: economic and technogenic discourse*, PC TECHNOLOGY CENTER, Kharkiv, Ukraine, pp. 130–148. DOI: <https://doi:10.15587/978-617-7319-59-6.ch7>

6. Ilieva L., Bozhinova M., & Todorova L. (2021), “A study of the impact of Covid-19 on tourism demand”, *International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management*, SGEM, no. 21(5.1), pp. 321–332, DOI: <https://doi:10.5593/sgem2021/5.1/s21.074>

7. Jaskulski M., & Szmidi A. (2015), “The tourism attractiveness of landforms in Łagiewnicki Forest, Łódź”, *Tourism*, no. 25(2), pp. 27–35, DOI: <https://doi.org/10.1515/tour-2015-0003>

8. Kowalczyk-Anioł J. (2015), “Tourism development in Łódź in 2000–2014: directions and character of change”, *Tourism*, no. 25(2), pp. 107–115, DOI: <https://doi.org/10.1515/tour-2015-0010>

9. Liszewski, S. (2015), “Tourism studies on Łódź and its metropolitan area”, *Tourism*, no. 25(2), pp. 11–19, DOI: <https://doi.org/10.1515/tour-2015-0001>

10. Liszewski S. (2009), “Urban ‘tourism exploration space’: the example of Łódź”, *Tourism*, no. 19(1–2), pp. 57–62, DOI: <https://doi.org/10.2478/V10106-009-0007-8>

11. Łódzka Organizacja Turystyczna (2023), available at: <https://lodz.travel/en/>

12. Łuć B. (2021), “Large sports and recreation facilities in the tourism space of Łódź”, *Studia Periegetica*, no. 1(33), pp. 25–40, DOI: <https://doi.org/10.5604/01.3001.0014.8876>

13. Naydenov, L. (2022), “Household expenditure during a pandemic: Covid-19 and the case of Bulgaria” *Business Management*, no. 4, pp. 18–34.

14. OECD (2014), “Tourism and the Creative Economy, OECD Studies on Tourism, OECD Publishing”, available at: <http://surl.li/gnlja>

15. Regional Statistical Office in Łódź (2023), available at: <https://lodz.stat.gov.pl/en/>
16. Stasiak A. (2015), "Gastronomy as a tourism attraction for Łódź", *Tourism*, no. 25(2), pp. 73–85, DOI: <https://doi.org/10.1515/tour-2015-0007>
17. Statistics of Łódź 2016 (2016), available at: <http://surl.li/gnlhl>
18. Statistics of Łódź 2018 (2018), available at: <http://surl.li/gnlhq>
19. Statistics of Łódź 2020 (2020), available at: <http://surl.li/gnlht>
20. Statistics of Łódź 2022 (2022), available at: <http://surl.li/gnlhy>
21. Sushchenko O., Prokopishyna O., & Kozubova N. (2018), "Eco-friendly behavior of local population, tourists and companies as a factor of sustainable tourism development", *International Journal of Engineering and Technology* (UAE), no. 7 (4.3 Special Issue 3), pp. 514–518.
22. Sylla M., Chruściński J., Drużyńska P., Płóciennik P., & Osak W. (2015), "Opportunities and limitations for MICE tourism development in Łódź", *Tourism*, no. 25(2), pp. 117–124, DOI: <https://doi.org/10.1515/tour-2015-0011>
23. Trunina I., Moroz O., & Herasymchuk V. (2021), "Implementation of marketing tools in the development of industry 4.0", *Proceedings of the 20th IEEE International Conference on Modern Electrical and Energy Systems*, MEES 2021, DOI: <https://doi.org/10.1109/MEES52427.2021.9598551>
24. Włodarczyk B. (2016), "Łódź as an arena of grand sport events: selected examples", *Tourism*, no. 26(1), pp. 49–59, DOI: <https://doi.org/10.1515/tour-2016-0004>
25. Włodarczyk B. (2019), "Zarys rozwoju turystyki w regionie łódzkim", *Acta Geographica Lodziensia*, no. 109, pp. 145–161, DOI: <https://doi.org/10.26485/AGL/2019/109/8>
26. UNWTO (2021), "UNWTO Inclusive Recovery Guide – Sociocultural Impacts of Covid-19", Issue 2: Cultural Tourism, UNWTO, Madrid, Spain. DOI: <https://doi.org/10.18111/9789284422579>

Стаття надійшла до редакції
9 липня 2024 р.