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Original article

Analysis of the labour market in the tourism sector in Poland in statistical terms before, during and after the Covid 19 pandemic

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ABSTRACT

The article addresses the issue of changes in the labour market in the tourism services sector in the context of Covid 19 pandemic. It analyses the changes in the labour market in tourism services between 2011-2019, in the year of the announcement of the pandemic -2020 and in the post-pandemic period (in the year 2023), in relation to selected labour market measures in section I of the Polish Classification of Activity (PKD),usingthe statistical data of the Local Data Bank of the Central Statistical Office for individual voivodeships. In order to assess the statistical differences in the basic indicators and measures of the labor market in tourism services, the basic measures of variability of statistical data (mean average, standard deviation and coefficient of variation), Ward's cluster analysis and variability charts were used. The state of the Covid 19 pandemic and related sanitary and epidemiological restrictions in 2020 caused a collapse of the tourism services market in all Polish voivodeships. A greater sensitivity to the effects of the Covid 19 pandemic was noticeable in the mountain voivodeships, traditionally intensively visited by tourists and in the regions with large tourist and sightseeing centres. The coastal voivodeships were positively distinguished by the relatively smaller effects of the increase in the unemployment rate in the tourism services sector and by greater flexibility on the effects of the lockdown during the Covid 19 pandemic. After the pandemic period in the years 2021-2023 there was a systematic increase in the value of tourism traffic indicators and related labour market measures in tourism services in all Polish voivodeships.

KEY WORDS: epidemic, labour market measures, tourism services

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1. Introduction

Tourism services play an increasingly vital role in the economic system (Dritsakis, 2004; Semmerling, 2017). Their dynamic development is observed both on a global scale and on a smaller, regional and local scale. The effect is the growth of the tourism sector's share in the economy, the growing number of service facilities in the tourism sector and finally the growth in the number of domestic and international tourists and the number of trips. Worldwide, tourism services generate 7.6% of global GDP and global employment in tourism services exceeds 300 million people (Ciesielska, 2022). In Poland, the average annual revenues from tourism services are at the level of 6-7% (Szczukocka, 2023). At the same time, tourism services belong to those sectors of the economy that, by combining them with other types of services and being sensitive to various threats and crisis situations, are exposed to strong fluctuations in demand (Panasiuk, 2020).

This research addresses the issue of change in the labour market within the tourism services sector of Poland, in the context of contemporary threats, primarily the global economic crisis caused by the Covid 19 pandemic. The source material used herein consisted of statistical data on selected labour market measures in the tourism sector against the background of the general situation in the labour market in the pre-pandemic period of 2011-2019, in the year of the announcement of the Covid 19 pandemic and in the post-pandemic period, 2021-22. The source material used was the statistical data of the Local Data Bank of the Central Statistical Office for the years 2011-2023 regarding: the unemployment rate, the number of operating economic entities, newly registered and deregistered economic entities in the tourism services sector, the number of employees in the tourism services sector and wages in the tourism services sector.The analysis covered statistical data for all Polish voivodeships.

2. Literature review

The labour market of the tourism services has its own specificity distinguishing it from other types of economic activity. This is due to the nature of the tourism phenomenon, being closely related to other areas of the economy, especially the transport, trade, construction and catering industries (Panasiuk, 2019). As the research indicates, services related to the organization and service of tourist traffic creates jobs in other sectors of the economy through the multiplier effect of touris. As research shows, in the broadly understood tourism economy and its economic environment, it creates 3 times more jobs than tourism entities directly related to serving tourist (Dritsakis, 2004; Bednarska, 2012; Panasiuk, 2019). At the same time, the labour market in tourism services is characterized by high staff turnover, which results from a high degree of seasonality (Kachniewska, 2023). Monitoring the labour market in tourism services encounters problems in quantitative research. Employment in tourism services is often based on external resources (Kachniewska, 2023). Employment in tourism is related to work in small enterprises and often it is employment in the shadow economy (Bednarczyk, 2006; Bednarska, 2012; Dominiak, 2022). As indicated by numerous studies, the labour market in tourism services is one of the most sensitive to various natural, political and socio-economic turmoil such as natural disasters, economic crises and armed conflicts (Zdon-Korzeniowska, 2011; Podhorecka, 2022; Panasiuk, 2020).

In recent years, the most significant cause of socio-economic crises was the Covid-19 pandemic. Tourism services were among the sectors of the economy most severely affected by the effects of sanitary and epidemiological restrictions in connection with this pandemic (Jaipuria, 2021; Kowalczyk & Pawlusiński, 2021; Kreiner et al., 2021; Laskowicz, 2021; Mensah & Boyakye, 2021; Yeh, 2021; Borek & Puciato, 2023). The Covid 19 pandemic was one of the most dramatic global events of the 21st century (Adinolfi et al., 2020; Chang et al., 2020; Hall et al., 2020; Kock et al., 2020). Its effects have become visible in many dimensions: demographic, social, economic and even cultural (Stojczew, 2021; Dominiak, 2022; Sadecki, 2022; Matczak, 2023). The impact of the pandemic on the functioning of societies in the demographic dimension manifested itself in the deaths caused by Covid 19. According to the statistical portal Worldometer more than 7,01 million people have died of COVID-19 worldwide so far (https://www.worldometers.info/coronavirus/coronavirus-death-toll, the data of 20.04.2024). In Poland, the number of deaths in 2021 exceeded by almost 154 000 the average annual value from the last 50 years (519.5 thousand to 366 thousand), while the mortality rate per 100,000 people in a population reached a value almost 117 x higher than in 2020 (Central Statistical Office, 2022). In socio-economic terms, the effects of the pandemic were a consequence of subsequent lockdowns and accompanying sanitary and epidemic restrictions introduced administratively (Orzeszak, 2022). With the increasing number of infections, administrative restrictions on freedom of movement appeared. This directly translated into decreases in the number of business trips undertaken and, in particular, trips with a tourist and leisure character. As a result of travel restrictions and blockades, global tourism slowed significantly, and the number of international flights fell by more than half (Roman et al., 2022). According to the UNWTO, in global terms, in the first half of 2020 the number of foreign trips decreased by 65%, i.e. by about 440 million, with a simultaneous decrease of USD 460 billion in tourism sector revenues (Zawadka et al., 2023).

The results of numerous scientific studies on tourism activity during the Covid 19 pandemic indicate that a significant factor in the sharp decline in interest in tourism, apart from restrictions on freedom of movement, was the sense of the threat of infection (Hall at al., 2020; Niewiadomski, 2020; Panasiuk, 2020; Matczak, 2022). It is also noted that the decrease in tourism activity in this period was also the result of consciously undertaking savings in household budgets for fear of losing jobs due to the economic crisis (SZCZUKOCKA, 2023). In many enterprises, the revenues generated did not cover the costs related to running a business. This situation particularly affected small and medium-sized enterprises. Many of them decided to declare partial, or complete, bankruptcy (ZADEH, 2022). Some companies temporarily suspended their operations. For many small tourism enterprises, the temporary suspension of operations and the postponed resumption of business activity were associated with huge losses (SUN ET AL., 2022).

During the Covid 19 pandemic, there was a significant increase in unemployment in the tourism services sector as a result of dismissals of hotel staff and other people employed in other tourism enterprises and a decrease in the profitability of a significant part of tourism enterprises (BARTIK, 2020; FAIRLIE, 2020). Particularly negative effects of restrictions on the freedom of movement were revealed in regions for which revenues from tourist services constituted the basis of their socio-economic development.

Prolonged periods of lockdowns generated huge losses in the economy, including enterprises of the tourism services sector. In this context, crisis management in the economy, expressed in actions taken against the effects of the Covid-19 pandemic, played a particularly significant role. This assistance took various forms. The main support tool for the tourism industry during the Covid 19 pandemic was the introduction of an anti-crisis shield. For entrepreneurs, it was associated with exemption from mandatory social insurance and other contributions due for the period from July 1, 2020 to September 31, 2020 and exemption from paying due contributions to social security, health insurance, the Labour Fund, the Solidarity Fund, the Guaranteed Employee Benefits Fund or the Old-age Bridging Pensions Fund for July, August and September 2020 (STASZEWSKA, 2022). A crucial element of support for the tourism industry was also the introduction of a tourist voucher (BORZYSZKOWSKI, 2022). In addition, local tourist organizations, in order to stimulate more tourist activity, introduced discounted offers for the sale of tourism services, including accommodation (BORZYSZKOWSKI, 2022).

3. Research method

The study analysed changes in selected measures describing the labour market in tourism services in the period before the Covid 19 pandemic, in the year of its announcement and in the post-pandemic period. The following indicators were used for the analysis: number of unemployed, number of entities in section I of the Polish Classification of Activities, number of newly registered business entities in section I of the PKD, number of deregistered business entities in section I of the PKD, total number of employees in Poland, number of employees in section I of the PKD, wages and salaries in section I of PKD. The analysis of the dynamics of change based on relative increments with a constant (a) and a variable (b) basis were used to implement the research task.

$$y_t = \frac{x_t - x_a}{x_a} \; 2 \qquad \text{(a)}$$

y_t – relative growth in period t
x_a – value in period a

$$y_t = \frac{x_t - x_{t-1}}{x_{t-1}} \qquad \text{(b)}$$

y_t – relative growth in period

The following were adopted as reference points in the calculations: the period before the Covid 19 pandemic, i.e. 2011-19, the year of announcement of the state of sanitary-epidemic emergency - 2020 and the post-pandemic period (2021-2023). In order to assess the statistical differences in the obtained results and to illustrate the differences in the changes of particular measures in individual Polish voivodeships in the analysed period, the basic measures of variability (mean average, standard deviation and coefficient of variation), Ward's cluster analysis and variability charts were used.

4. Analysis of results

The period 2011-2019 was characterized by a high dynamic of economic development, accompanied by increases in most measures and indicators regarding the labour market in Poland. Statistical data on the number of registered unemployed in Poland in the years preceding the Covid 19 pandemic, 2011-19 indicate a significant decrease (Table 1a).

In 2011, the number of registered unemployed was 1982,676 people, while in 2019 - 866,374 people. On a national scale, the number of unemployed decreased by 56% in this period? In most voivodeships, the unemployment decreased by more than 50% compared to 2011. The largest decline was recorded in the following voivodeships: Lubuskie

(- 69%), Wielkopolskie (-66%) and Śląskie (-64%). Lower drops in the number of unemployed were noted in Lubelskie (-43%), Podkarpackie (-48%) and Świętokrzyskie (-49%) voivodeships. The decrease in unemployment in this period was accompanied by growth in the number of economically active people, which corresponded to an increase in the share of people with higher education in the entire population (KOWALIK & MAGDA, 2021). In 2011, there were 122,299 business entities related to Section I of the PKD in Poland, while in 2019 there were 142392. On average, on a national scale, the number of business entities related to the tourism services sector increased by 17% (Table 1b). The highest increase was recorded in Mazowieckie (27%), Małopolskie (24%), and Pomorskie (19%). The highest growth in the number of business entities in the tourism services sector was observed in the voivodeships with the highest rates of development and tourist traffic in the country. The lowest increases were recorded in the following voivodeships: Śląskie (9%), Opolskie (6%) Zachodniopomorskie (6% in each). Slightly larger disparities occurred in the number of newly registered business entities in individual voivodeships (Table 1c). The highest growth of newly registered business entities in the tourism sector was recorded in the Mazowieckie: 20% and Małopolskie voivodeships: 18%. In most of the other voivodeships, the dynamics of newly registered entities was negative. At the same time, high negative dynamics was observed in the number of deregistered entities, on average -44%, with the highest negative in the Lubuskie and Pomorskie (-52%) and in the Podkarpackie (-49%) voivodeships (Table 1d). The growing dynamics of the labour market was observed in the years 2011-2019 (Table 1e) and in the tourism services sector is also confirmed by the number of employees in Section I of the PKD in the analysed period (Table 1e, f). In 2019, Section I of the PKD recorded a 20% increase in the number of employees compared to 2011, from 173 722 to 208 257 people. Also, worth noting is the much higher employment dynamics in the tourism services sector in relation to the average employment growth rate in this period in Poland, which amounted to 20%. The highest increases in the number of employees in Section I of the PKD in the analysed period occurred in the following voivodeships: Pomorskie (43%), Dolnośląskie (33%) and Opolskie (32%).

In all voivodeships, there was a significant surplus of employment in the tourism services sector in relation to other sectors of the economy (Table 1 e, f). Similarly, the number of people working in Section I of the PKD increased in Poland by an average of 20%, with the highest increases recorded in the following voivodeships: Pomorskie (43%), Dolnośląskie (33%). The high dynamics of employment growth in the tourism services sector in this period was accompanied by a significant increase in wages and salaries. On average, in Poland, it amounted to 148%. In voivodeships, the dynamics of wage and salary growth exceeded 100%, with the highest in Pomorskie (202%), Dolnośląskie (167%), Mazowieckie and Opolskie (160%) and Zachodnio-pomorskie voivodeships (152%) (Table 1g). The lowest growth rate of wages and salaries in the tourism services sector was recorded in the following voivodeships: Lubelskie (108%), Śląskie (109%) and Warmińsko-Mazurskie (110%).

In Poland, the Covid 19 pandemic was announced on March 20, 2020, although already on March 15, 2020, the borders were closed to rail and air traffic. The administratively introduced restrictions were lifted gradually. As of May 4, 2020, as part of the second stage of lifting restrictions, the functioning of shopping centres, libraries, museums, art galleries and hotels was restored. The increase in infections in the autumn forced the reintroduction of sanitary and epidemic restrictions, including those that had a direct impact on the functioning of tourism enterprises. From November 4, the only hotels in operation were those for business travellers, and from November 28, the operation of hotel facilities was suspended. From February 12, 2021, hotel facilities reactivated their activities while providing for their functioning in the sanitary regime, which was often associated with significant restrictions on their availability to tourists.

Table 1. Dynamics of the changes in selected labour market measures in tourism services in the period 2011 - 2023 in individual voivodeships: a - number of unemployed, b - number of business entities in section I of the PKD, c - number of newly registered business entities in section I of the PKD, d - number of deregistered business entities in the section I PKD, e - total number of employees in Poland, f - number of employees in section I of the PKD, g - wages and salaries in section I of PKD

a

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	1982676	866374	1046432	895203	786179	-56	21	-17	-25
Dolnośląskie	143575	56022	68822	58738	55474	-61	23	-17	-23
Kujawsko-pomorskie	139622	64060	73482	61861	55333	-54	15	-19	-26
Lubelskie	122441	69379	76505	66244	55774	-43	10	-15	-25
Lubuskie	59134	18498	23674	18158	15926	-69	28	-30	-35
Łódzkie	138652	58722	67812	60902	53336	-58	15	-11	-22
Małopolskie	145094	62610	83050	69948	60654	-57	33	-19	-27
Mazowieckie	246739	123208	146375	129248	109020	-50	19	-13	-24
Opolskie	48029	20948	24976	21535	19997	-56	19	-16	-19
Podkarpackie	146208	75455	87326	77291	67336	-48	16	-13	-23
Podlaskie	65920	33277	37830	33374	30354	-50	14	-13	-18
Pomorskie	106667	41817	56216	47682	42924	-61	34	-18	-24
Śląskie	186187	66521	91032	76324	62583	-64	37	-19	-31
Świętokrzyskie	83217	42042	44881	38035	32289	-49	7	-18	-25
Warmińsko-mazurskie	107333	45731	51475	42567	38879	-57	13	-21	-24
Wielkopolskie	134954	46313	60958	49850	46625	-66	32	-22	-24
Zachodniopomorskie	108904	41771	52018	43446	39675	-62	25	-20	-24

b

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	122299	142392	149403	158725	164141	17	3	4	10
Dolnośląskie	9993	11598	12314	13131	13702	17	3	4	11
Kujawsko-pomorskie	4575	4865	5103	5340	5285	10	3	3	7
Lubelskie	4385	4731	5024	5344	5478	14	4	3	10
Lubuskie	3167	3198	3324	3468	3627	12	3	3	8
Łódzkie	5595	6229	6449	6772	6882	11	3	3	8
Małopolskie	12820	15839	16800	18129	18852	24	4	4	13
Mazowieckie	16399	22654	23920	25358	27027	27	4	4	14
Opolskie	2933	2971	3041	3150	3092	6	2	2	7
Podkarpackie	4314	4965	5261	5686	5991	20	4	4	11
Podlaskie	2116	2635	2740	2909	2997	15	4	3	10
Pomorskie	13198	16521	17155	18533	19443	19	4	4	12
Śląskie	14762	14647	15111	15841	15891	9	3	3	8
Świętokrzyskie	2868	3039	3275	3416	3428	10	3	3	8
Warmińsko-mazurskie	3349	3993	4346	4699	4880	13	3	3	8
Wielkopolskie	8953	10747	11266	11863	12201	19	3	3	9
Zachodniopomorskie	12872	13741	14254	15062	15331	6	3	2	7

c

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	14514	14234	11470	12802	12236	-2	-19	12	-4%
Dolnośląskie	1189	1105	910	1028	1051	-7	-18	13	2
Kujawsko-pomorskie	603	491	419	382	404	-19	-15	-9	6
Lubelskie	484	457	433	426	399	-6	-5	-2	-6
Lubuskie	364	305	226	216	277	-16	-26	-4	28
Łódzkie	655	623	476	505	480	-5	-24	6	-5
Małopolskie	1395	1653	1225	1481	1402	18	-26	21	-5
Mazowieckie	1912	2297	1903	1847	2359	20	-17	-3	28
Opolskie	251	195	149	151	137	-22	-24	1	-9
Podkarpackie	515	457	419	500	397	-11	-8	19	-21
Podlaskie	295	287	237	220	262	-3	-17	-7	19
Pomorskie	2141	1809	1597	2081	1531	-16	-12	30	-26
Śląskie	1471	1210	840	908	909	-18	-31	8	0
Świętokrzyskie	291	243	214	231	195	-16	-12	8	-16
Warmińsko-mazurskie	500	514	515	544	500	3	0	6	-8
Wielkopolskie	1058	1050	800	915	900	-1	-24	14	-2
Zachodniopomorskie	1390	1531	1103	1364	1029	10	-28	24	-25

d

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	16222	9157	7415	7381	8563	-44	-19	0	16
Dolnośląskie	1215	798	554	544	751	-34	-31	-2	38
Kujawsko-pomorskie	627	377	315	268	330	-40	-16	-15	23
Lubelskie	538	358	247	260	333	-33	-31	5	28
Lubuskie	487	233	172	155	192	-52	-26	-10	24
Łódzkie	718	442	365	344	410	-38	-17	-6	19
Małopolskie	1435	872	711	761	851	-39	-18	7	12
Mazowieckie	1968	1115	955	979	1303	-43	-14	3	33
Opolskie	319	169	123	109	159	-47	-27	-11	46
Podkarpackie	481	246	243	243	286	-49	-1	0	18
Podlaskie	272	181	168	129	174	-33	-7	-23	35
Pomorskie	2621	1263	1084	1080	991	-52	-14	0	-8
Śląskie	1766	978	657	618	786	-45	-33	-6	27
Świętokrzyskie	323	173	131	152	177	-46	-24	16	16
Warmińsko-mazurskie	512	326	292	307	359	-36	-10	5	17
Wielkopolskie	989	598	542	555	667	-40	-9	2	20
Zachodniopomorskie	1951	1027	854	877	792	-47	-17	3	-10

e

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	9801877	10799559	10700897	10874675	11041289	10	-1	2	2
Dolnośląskie	751935	810764	795353	809787	829354	8	-2	2	2
Kujawsko-pomorskie	447591	473841	464855	468459	464407	6	-2	1	-1
Lubelskie	400314	421106	416757	424170	426050	5	-1	2	0
Lubuskie	220675	231503	226363	229772	226810	5	-2	2	-1
Łódzkie	591155	624088	613738	619523	616351	6	-2	1	-1
Małopolskie	797897	910572	897754	917774	948261	14	-1	2	3
Mazowieckie	2166898	2467224	2485498	2525179	2600615	14	1	2	3
Opolskie	194877	209119	204150	206603	209600	7	-2	1	1
Podkarpackie	423484	450605	441745	451574	455663	6	-2	2	1
Podlaskie	211008	233921	233847	237788	242532	11	0	2	2
Pomorskie	530996	612624	607177	616813	628298	15	-1	2	2
Śląskie	1225549	1263972	1234685	1249775	1256269	3	-2	1	1
Świętokrzyskie	240010	244531	242518	244192	243027	2	-1	1	0
Warmińsko-mazurskie	272668	285378	270306	271705	266066	5	-5	1	-2
Wielkopolskie	978477	1187893	1198232	1230972	1257168	21	1	3	2
Zachodniopomorskie	348343	372418	367919	370587	370818	7	-1	1	0

f

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	173722	208257	195539	198693	218835	20	-6	2	10
Dolnośląskie	18329	24394	23135	22812	24785	33	-5	-1	9
Kujawsko-pomorskie	6082	7240	6914	7065	7443	19	-5	2	5
Lubelskie	4953	5853	5605	5770	6637	18	-4	3	15
Lubuskie	3343	3859	3679	3786	4190	15	-5	3	11
Łódzkie	9014	9896	9123	9226	10283	10	-8	1	11
Małopolskie	19342	23184	21740	21691	24821	20	-6	0	14
Mazowieckie	42654	48855	45387	44285	50143	15	-7	-2	13
Opolskie	2740	3610	3359	3434	3580	32	-7	2	4
Podkarpackie	5656	7000	6302	6689	7206	24	-10	6	8
Podlaskie	3128	3742	3667	3764	4194	20	-2	3	11
Pomorskie	10303	14740	14210	15110	16418	43	-4	6	9
Śląskie	17675	19683	17696	19041	20638	11	-10	8	8
Świętokrzyskie	3634	4200	4220	4313	4788	16	0	2	11
Warmińsko-mazurskie	4641	5633	5467	5716	6016	21	-3	5	5
Wielkopolskie	11882	13976	13193	13616	14640	18	-6	3	8
Zachodniopomorskie	10346	12392	11843	12377	13051	20	-4	5	5

g

Voivodeships	Years					Changes indexes values [%]			
	2011	2019	2020	2021	2023	2019/ 2011	2020/ 2019	2021/ 2020	2023/ 2020
Polska	3993014	9889224	8916234	10469221	218835	148	-10	17	51
Dolnośląskie	386407	1029996	971469	1092764	24785	167	-6	12	47
Kujawsko-pomorskie	133688	314485	308997	367772	7443	135	-2	19	46
Lubelskie	102433	213022	204953	248591	6637	108	-4	21	60
Lubuskie	73562	161060	157166	743173	4190	119	-2	373	50
Łódzkie	201118	456270	416501	495051	10283	127	-9	19	48
Małopolskie	480882	1221432	1037416	1246143	24821	154	-15	20	60
Mazowieckie	908014	2362086	1995648	2251967	50143	160	-16	13	48
Opolskie	60154	156426	147348	166069	3580	160	-6	13	48
Podkarpackie	115805	272958	240065	290576	7206	136	-12	21	58
Podlaskie	73557	180824	174988	192302	4194	146	-3	10	39
Pomorskie	276580	836184	755746	329353	16418	202	-10	-56	63
Śląskie	413626	864193	776875	929270	20638	109	-10	20	56
Świętokrzyskie	73435	170164	156332	189323	4788	132	-8	21	46
Warmińsko-mazurskie	135220	284021	276710	956696	6016	110	-3	246	48
Wielkopolskie	294550	697333	654028	788717	14640	137	-6	21	41
Zachodniopomorskie	263983	668770	641992	181454	13051	153	-4	-72	52

The end of the Covid 19 epidemic was administratively announced by the Regulation of the Minister of Health of May 16, 2022, replacing it with an epidemic emergency status. The above-mentioned circumstances accompanying the Covid 19 epidemic significantly determined the functioning of enterprises in the tourism services sector. In the year of the announcement of the Covid 19 pandemic, there was a significant increase in unemployment in Poland (Table 1a). On average, the number of people unemployed increased by 21%, with the highest growth in the following voivodeships: Śląskie (37%), Pomorskie (34%), Małopolskie (33%), and the lowest in Lubelskie (10%) and Świętokrzyskie (7%). In 2020, due to restrictions related to the introduced state of sanitary-epidemic emergency, a decrease in the value of most labour market indicators in the tourism services sector was also recorded (Table 1 c-g). The exception was the number of business entities in the tourism services sector (Table 1b).

In the following years 2021-2023 the majority of the tourism market measures returned to the values observed before the pandemic (Table 1a-g). This applied to a decrease in the number of unemployed in the country, growth in the number of tourism entities in the tourism sector in total, a growing number of newly registered entities and a decrease in the number of entities deregistered in Section I of the PKD. In addition, it is noticeable that the number of people employed and actually working in the tourism sector returned to the levels of those before the pandemic. The high dynamics of wage and salary growth in the tourism sector is also characteristic and should be associated, on the one hand, with the return of the situation in enterprises to equilibrium before the pandemic and, on the other, with increasing inflationary pressures on the economy.

Overall, in the period 2011-23, there was a systematic increase in the value of tourism traffic indicators and related labour market measures in tourism services with a short decline caused by the effects of lockdowns in connection with the Covid 19 pandemic (Table 1 a-g).

Table 2. Variability of selected labour market measures in tourism services in individual voivodeships in the period 2011-2023

Voivodeships	Variablity measures							
		A	B	C	D	E	F	G
Dolnośląskie	Average	91089.2	11403.2	1060.5	832.0	788375.0	21408.8	25017.1
	Std.dev.	38211.8	1267.8	83.7	166.4	28763.0	2454.8	2584.9
	Coef.Var.	42%	11%	8%	20%	4%	11%	10%
Kujawsko-pomorskie	Average	95073.5	4845.8	465.5	418.3	455887.7	6558.2	10889.2
	Std.dev.	34481.9	285.4	65.8	90.8	13190.8	655.2	1002.5
	Coef.Var.	36%	6%	14%	22%	3%	10%	9%
Lubelskie	Average	91877.4	4783.8	458.5	386.4	406765.5	5399.4	9079.6
	Std.dev.	26445.4	382.0	36.5	76.9	14626.8	593.1	719.3
	Coef.Var.	29%	8%	8%	20%	4%	11%	8%
Lubuskie	Average	33586.4	3008.4	261.6	254.0	206866.5	3237.0	5988.2
	Std.dev.	16900.3	884.4	85.0	113.9	59983.9	1013.1	473.2
	Coef.Var.	50%	29%	32%	45%	29%	31%	8%
Łódzkie	Average	92439.3	5715.8	547.1	464.4	556385.9	8430.3	13467.5
	Std.dev.	36499.7	1699.7	174.2	170.5	161533.2	2519.1	672.2
	Coef.Var.	39%	30%	32%	37%	29%	30%	5%
Małopolskie	Average	101361.6	14203.8	1318.5	940.8	797674.2	19721.5	33523.3
	Std.dev.	37662.0	4558.5	399.9	334.4	236730.7	5973.5	3657.9
	Coef.Var.	37%	32%	30%	36%	30%	30%	11%
Mazowieckie	Average	182582.0	19924.2	1979.6	1300.2	2189024.8	41663.5	49651.7
	Std.dev.	60826.8	6578.6	596.8	468.6	649826.7	12348.9	5017.0
	Coef.Var.	33%	33%	30%	36%	30%	30%	10%
Opolskie	Average	32264.9	2764.6	182.5	181.3	184741.2	2901.2	5258.5
	Std.dev.	11863.3	801.9	66.7	75.9	53826.0	903.2	409.4
	Coef.Var.	37%	29%	37%	42%	29%	31%	8%
Podkarpackie	Average	105686.2	4606.2	422.2	313.6	400397.1	5814.8	10104.9
	Std.dev.	31930.8	1430.5	127.7	118.1	121371.4	1781.1	931.0
	Coef.Var.	30%	31%	30%	38%	30%	31%	9%
Podlaskie	Average	47133.0	2359.8	241.9	182.0	206756.5	3312.2	5621.6
	Std.dev.	14578.4	731.8	74.1	62.1	61051.8	1005.9	512.6
	Coef.Var.	31%	31%	31%	34%	30%	30%	9%
Pomorskie	Average	69281.8	14767.6	1722.6	1364.4	535460.4	12387.2	21098.1
	Std.dev.	27815.8	4699.8	535.5	585.4	158935.8	4115.9	2997.0
	Coef.Var.	40%	32%	31%	43%	30%	33%	14%
Śląskie	Average	121545.9	13792.5	1068.3	1032.8	1135860.2	16921.3	30530.1
	Std.dev.	53745.1	4017.7	361.0	431.6	328864.2	5052.7	1609.8
	Coef.Var.	44%	29%	34%	42%	29%	30%	5%
Świętokrzyskie	Average	57087.6	2840.9	224.6	196.4	220211.8	3726.2	5989.0
	Std.dev.	19931.9	849.0	70.1	75.3	63878.7	1131.8	564.1
	Coef.Var.	35%	30%	31%	38%	29%	30%	9%
Warminsko-mazurskie	Average	71112.3	3679.8	449.3	353.1	252198.3	4812.9	8822.3
	Std.dev.	27985.4	1174.4	134.8	122.0	73048.4	1486.0	798.3
	Coef.Var.	39%	32%	30%	35%	29%	31%	9%
Wielkopolskie	Average	82674.7	9641.9	890.7	681.3	1038868.0	11958.0	22470.1
	Std.dev.	38438.5	2977.7	270.1	236.2	314950.9	3585.9	1653.5
	Coef.Var.	46%	31%	30%	35%	30%	30%	7%
Zachodniopomorskie	Average	68298.2	12615.4	1179.9	1071.9	332170.1	10759.3	18916.2
	Std.dev.	27993.3	3757.5	373.7	436.2	96609.3	3260.9	2219.9
	Coef.Var.	41%	30%	32%	41%	29%	30%	12%

Analysis of the variability charts (mean average, standard deviation and coefficient of variation) made to assess changes in selected labour market measures in the tourism services sector indicates the highest level of variability in the total number of unemployed in the analysed period 2011-2023 (Table 2). The values of measures describing the labour market in tourism services are characterized by a much lower level of variability. Higher variability values are characteristic for the number of deregistered economic entities in the tourism services sector (Table 2). The highest level of variability in this group was recorded in the voivodeships most strongly related to the tourism economy: Małopolskie, Mazowieckie, Pomorskie, Zachodniopomorskie, Dolnośląskie and Śląskie. A slightly higher level of variability is also characteristic for the value of wages and salaries in the analysed period. This applies mainly to voivodeships traditionally strongly related to the tourist function: Mazowieckie, Małopolskie, Dolnośląskie, Pomorskie, Zachodniopomorskie, Wielkopolskie and Śląskie (Table 2).

A cluster analysis was performed to determine the degree of similarity of changes in the labour market in tourism services in individual voivodeships in 2011-2023 (Fig. 1). The cluster analysis performed using Ward's method indicates the presence of one clear cluster formed by the Pomorskie voivodeship and a second cluster consisting of several smaller sub-groups.

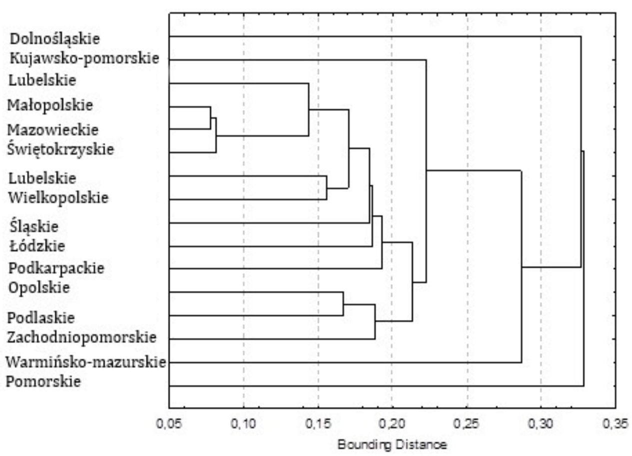

Fig. 1. Analysis of Ward's clusters for selected labour market variables in tourism services in individual voivodeships in the period 2011 - 2023

The Pomorskie Voivodeship is distinguished by a uniformly high increase in the value of most selected labour market measures in the tourism sector throughout the analysed period and a relatively high flexibility to the effects of sanitary and epidemiological restrictions in the tourism sector related to the Covid 19 pandemic. Dolnośląskie Voivodeship is distinguished by its high sensitivity to the effects of lockdowns during the Covid 19 pandemic, expressed in large decreases in the number of newly registered entities during the pandemic and a large number of business entities deregistered during this period, as well as the relatively low variability in the number employed in the tourism sector. This can be associated with the high share of the tourism services sector in the economy of the area and its high sensitivity to unfavourable circumstances for the functioning of tourism. The remaining voivodeships are grouped within one larger concentration and are characterized by asimilarity in the high increases in labour market measures in tourism services in the pre-pandemic period, high declines in the Covid 19 pandemic period and a significant rebound in the declines of most measures in the post-pandemic period.

5. Discussion

The period 2011-2019 was characterized by a strong increase in the value of most measures of the tourism services market in Poland. Among the factors of high dynamics in the development of new enterprises, attention should be undoubtedly paid to the growing number of people from Generation Z in the labour market and the progressive technological development, and in relation to employment in tourism-related services and also the development of flexible forms of employment (Adamowicz, 2022). The increase in the number of emerging entities in the tourism services market and total employment in sections directly and indirectly related to tourism was connected with the general increase in tourism activity (Ślusarz et al., 2019). The state of the Covid 19 pandemic and related sanitary and epidemiological restrictions in 2020 caused a decrease in tourist immigrations (Deb & Nafi, 2020; Fairlie, 2020; Laskowicz, 2021; Dominiak, 2022; Orzeszak, 2022, Sun et al., 2022). Undoubtedly, the main factor of low tourist activity was the decrease in the sense of security resulting from the sanitary and epidemic restrictions introduced administratively.

In 2020, due to restrictions related to the introduced state of sanitary-epidemic emergency, a decrease in the value of most labour market indicators in the tourism services sector was also recorded

(Table 1 c-g). The exception was the number of business entities in the tourism services sector (Table 1b). Restrictions and limitations resulting from the lockdown introduced in 2020 resulted in a decrease in the value of the basic measures of the tourism market in Poland. At the same time, it is worth noting that the scale of this decline was relatively small, and it concerned, to a lesser extent, the provinces traditionally strongly related to the tourism and service sector.

In addition, it is also noted that the effects of the pandemic caused not only a quantitative decrease in selected indicators characterizing the tourism services market, but also a change in the nature of the activity undertaken in terms of destinations, forms of activity, means of transport or choice of accommodation (Kowalska & Niezgoda, 2020; Kowalczyk-Anioł & Pawlusiński, 2021; Stecuła & Wolniak, 2022). At the same time, the effects of the pandemic on the functioning of the tourism sector varied regionally. There is a varying degree of resilience to the effects of lockdowns and related restrictions determining the functioning of the tourism services sector.

Some researchers point out that the impact of the Covid 19 pandemic on the functioning of the tourism services market was the highest during the first two waves of the pandemic and decreased in subsequent waves due to the increasing level of adaptation of tourism entrepreneurs and tourists themselves to hygiene and sanitary recommendations (Deb & Nafi, 2020; Hall et al., 2020; Podhorecka et al., 2022; Borek & Puciato, 2023). As part of this, for example, some entrepreneurs adapted their facilities to receive tourists in conditions of increased isolation with tourists staying in accordance with the recommendations of the implemented sanitary and epidemic restrictions. This could also have contributed to the varied impact of the Covid 19 pandemic on the attendance of tourists in individual voivodeships due to the diverse structure of the type and capacity of accommodation facilities in individual voivodeships (Podhorecka et al., 2022).

One of the factors differentiating the impact of lockdowns on the functioning of the labour market in tourism services was the use by tourism entrepreneurs of the PFR Financial Shield for Small and Medium-Sized Enterprises, the task of which was to provide financial support to enterprises in the form of financial subsidies, providing a mechanism for compensating damage related to COVID-19 (Kraś, 2024).

A greater sensitivity to the effects of the Covid 19 pandemic was noticeable in the mountainous voivodeships, traditionally intensively visited by tourists and in the regions with large tourist and sightseeing centres (Matczak, 2022). In comparison to other regions of the country, coastal voivodeships were positively distinguished by the relatively smaller effects of the increase in the unemployment rate in the tourism services sector and greater flexibility in the effects of the lockdown during the Covid 19 pandemic, which should be associated with the high number of tourists compared to other regions of the country, during the period when the restrictions were lifted in the 2021 tourist season (Podhorecka, 2022). The high degree of use of financial security in the form of the introduced protective shields was of great importance for the resilience of the coastal voivodeships to fluctuations related to the effects of the Covid 19 pandemic compared to other voivodeships.

The Covid 19 pandemic confirmed the sensitivity of the tourism sector to various types of fluctuations of a natural, social and economic nature, which may periodically affect significant fluctuations in the quantitative and spatial distribution and the structure of tourism (Espiner et al., 2017). It is worth noting that in the post-pandemic period, most indicators related to the tourism services market recorded significant increases, reaching values even higher in the period 2021-23 compared to results of the year preceeding the introduction of the pandemic. The exception in this group are the indicators of the number of newly registered and deregistered entities in section I of the PKD. The decrease in the number of newly registered entities and the increase in the number of deregistered entities in section I of the PKD indicate an increase in the fear of some entrepreneurs about the risk of possible further fluctuations in the tourist services market. The return of most tourism services market indicators to the growth path and even the achievement of higher values by most of them compared to the time before the period of the pandemic shows the rapid ability of the tourism services market to regenerate. In the post-pandemic period, an important factor influencing the improvement of indicators characterizing the labor market in tourism services in most voivodeships in Poland were probably new legal regulations regarding the employment of Ukrainian citizens, which contributed to a significant increase in the employment of refugees from Ukraine in the tourism services market in Poland.

6. Conclusions

The tourism sector is one of the most sensitive sectors of the economy. This is due to its strong links with the socio-economic environment and, at the same time, the need to adapt to changing circumstances that determine the behaviour of the consumers of tourist services. The period of the Covid 19 pandemic caused a huge crisis in the global economy.

The tourism sector was one of the most affected during thise pandemic. The collapse of the tourism services market, caused by restrictions on spatial mobility, prompted state institutions to provide support to tourism entrepreneurs. The most common forms of state interventionism in the tourism economy in Poland and other countries of the world included: tax relief, assistance in the form of grants or repayable assistance under operational programs, the introduction of guarantee instruments and credit preferences allowing enterprises to maintain financial liquidity and indirectly support the financial sector, subsidies for interest rates on bank loans, and subsidies for wages and social security contributions (NIEMCZYK & ZAMORA, 2021).

The new difficult situation of the tourism services sector has also triggered some bottom-up initiatives taken by entrepreneurs themselves aimed at using Internet technology, social networks and the e-commerce market to strengthen contacts with customers and offer recipients new tourist products delivered at a distance and innovations in the field of services provided so far. The proposals that have become an alternative to the tourism sector for the period of the Covid 19 pandemic included the development of a tourist offer delivered "at a distance" (e.g. virtualvisiting attractive places in the world in real time with a guide), the offer of services for VFR (visiting friends and family) and FIT (free independent travel), where destinations with low tourist density were of great interest, and other services (virtual routes and tours, exhibitions, audio guides) (PLUTA-OLEARNIK, 2021). The introduction of the above-mentioned solutions with the simultaneous support of the state for the tourism services sector resulted in the gradual return of consumers to the tourism services market. According to PANASIUK (2020), a full recovery may last several years. At the same time, there is hope that the Covid 19 pandemic experience and the implemented solutions to support the tourism economy can significantly accelerate the period of the tourism industry's return to prosperity similar to that before the pandemic (PANASIUK, 2020).

References:

Adinolfi M.C., Harilal V., Giddy J.K. 2020. Travel stokvels, leisure on lay-by, and pay at your pace options: The post COVID-19 domestic tourism landscape in South Africa. *African Journal ofHospitality, Tourism and Leisure,* 10, 1: 302–317.

Bartik A.W., Bertrand M., Cullen Z., Glaeser E.L., Luca M., Stanton C. 2020. The impact of covid-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, 117, 30: 17656–17666.

Bednarczyk M. (ed.) 2006. *Konkurencyjność małych i średnich przedsiębiorstw na polskim rynku turystycznym*. Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków.

Bednarska M. 2012. Cechy rynku pracy w turystyce jako bariery rozwoju gospodarki turystycznej. [in:] Bednarska M., Gołembski G. (eds), *Współczesne wyzwania dla gospodarki turystycznej.* Zeszyty Naukowe UE w Poznaniu 225: 47–60.

Borek D. Puciato D. 2023. Extraordinary and Unavoidable Circumstances in Tourism under COVID-19 and Post Pandemic Times—Casus Poland as Example of Sustainability Management. *Sustainability*, 15: 2416.

Borzyszkowski J. 2022. Wsparcie turystyki w dobie pandemii COVID-19. Przegląd wybranych działań podejmowanych przez lokalne organizacje turystyczne. *MAZOWSZE Studia Regionalne*: 25–36.

Chang C.L., McAleer M., Ramos V.A. 2020. Charter for sustainable tourism after COVID-19. *Sustainability,* 12: 3671.

Central Statistical Office. 2022. Mortality in 2021. Deaths by cause – preliminary data 16.05.2022.

Ciesielska M. 2022. Zmiany na rynku pracy wywołane pandemią Covid-19. *Zeszyty Naukowe Wydziały Nauk Ekonomicznych*, 26/22: 53–65.

Deb S.K., Nafi S.M. 2020. Impact of COVID-19 pandemic on tourism: Recovery proposal for futurtourism. *GeoJournal of Tourism and Geosites*, 33, 4 Supplement: 1486–1492.

Dominiak J. 2022. Sektor usług w aglomeracji poznańskiej – zmiany w obliczu pandemii COVID- 19. *Rozwój Regionalny i Polityka Regionalna*, 62: 31–45.

Dritsakis N. 2004. Tourism as a Long-Run Economic Growth Factor: An Empirical Investigationfor Greece Using Causality Analysis causality analysis. *Tourism Economics*, 10, 3: 305–316.

Espiner S., Orchiston C., Higham J. 2017. Resilience and sustainability: A complementary relationship? Towards a practical conceptual model for the sustainability–resilience nexus in tourism. *Journal of Sustainable Tourism*, 25, 10: 1385–1400.

Fairlie R. 2020. The Impact of Covid-19 on Small Business Owners: Evidence of Early-Stage Losses from the April 2020 Current Population Survey. *IZA Discussion Paper No. 13311*.

Hall C.M., Scott D., Gössling S. 2020. Pandemics, transformations and tourism: be careful what you wish for. *Tourism Geographies*, 22, 3: 577–598.

Jaipuria S. 2021. The impact of COVID-19 on tourism sector in India.*Tourism Recreation Research*, 46: 245–260.

Kachniewska M. 2023. *Metodologia badania rynku pracy w turystyce*. SGH w Warszawie, Warszawa,

Kock F., Nørfelt A., Josiassen A., Assaf A.G., Tsionas M.G. 2020. Understanding the COVID-19 tourist psyche: The Evolutionary Tourism Paradigm.*Annals of Tourism Research*, 85: 103053.

Kowalczyk-Anioł J., Pawlusiński R. 2021. Miasto turystyczne wobec pandemii COVID-19. Pierwsze doświadczenia w świetle literatury przedmiotu. *Annales Universitatis Mariae Curie-Skłodowska* Lublin-Polonia, LXXVI, Sectio B, 208: 203–222.

Kowalik Z., Magda I. 2021. Rynek pracy w Polsce, przemiany i wyzwania, Ubezpieczenia Społeczne. *Teoria i Praktyka* 3/202: 5–22.

Kowalska K., Niezgoda A. 2020. COVID-19 as a tourist activity inhibitor as evidenced by Poles'holiday plans. *Studia Periegetica*, 4, 32: 9–24.

Kraś J. 2023. Wpływ działań podejmowanych przez państwo na sektor turystyki po wybuchu pandemii COVID-19. *Cywilizacja i Polityka,* 20: 309–321.

Kreiner N.C., Ram Y. 2021. National tourism strategies during the Covid-19 pandemic. *Annals of Tourism Research*, 89: 103076.

Laskowicz P. 2021. Sektor turystyczny w obliczu kryzysu spowodowanego wybuchem pandemii COVID-19. Progress. *Journal of Young Researchers*, 9–10: 179.

Local Data Bank. 15.11.2024. www.stat.gov.pl

Matczak A. 2022. Wpływ pandemii Covid 19 na mobilność turystyczna mieszkańców dużego miasta na przykładzie osiedla Retkinia w Łodzi, *Warsztaty z Geografii Turyzmu*, 13: 123–148.

Mensah E.A., Boakye K.A. 2021. Conceptualizing post-COVID 19 tourism recovery: A three-step framework. *Tourism Planning & Development*, 20, 1: 37–61.

Niemczyk A., Zamora P. 2021. Interwencjonizm państwowy na rynku usług turystycznych w warunkach pandemii COVID-19. *Acta Universitatis Wratislaviensis Ekonomia - Wroclaw Economic Review*, 27/3: 21–34.

Niewiadomski P. 2020. COVID-19: From temporary de-globalisation to a re-discoveryof tourism? *Tourism Geographies: An International Journal of Tourism Space, Place and Environment*, 22, 3: 651–656.

Orzeszak K. 2022. Wpływ polityki lockdownów na funkcjonowanie branży zakwaterowanie i gastronomia w Polsce. *Współczesna Gospodarka*, 13, 1: 39–57.

Panasiuk A. 2019. *Rynek turystyczny. Struktura, procesy, tendencje*. Wydawnictwo Difin, Warszawa

Panasiuk A. 2020. Przyczynek do badań nad wpływem pandemii na stan gospodarki i turystycznej. [in:] Nessel K. (ed.), *Turystyka w Naukach Społecznych. Ekonomia i Finanse*. T. 3*: Ekonomia i finanse.* Uniwersytet Jagielloński. Instytut Przedsiębiorczości., Kraków: 53–70.

Podhorecka K., Bąk Filipek E. 2022. Zmiany na rynku pracy w sektorze turystycznym w Polsce w dobie pandemii Covid 19, *Rynek Pracy*, 182, 3: 6–18.

Roman M. Roman A., Niedziółka M. 2022. *Turystyka w czasach pandemii COVID-19 a zmiany w popycie na usługi agroturystyczne.* Tyniec Wydawnictwo Benedyktynów.

Sadecki W. 2022. Wpływ pandemii COVID-19 na podróże służbowe w branży małych i średnichprzedsiębiorstw. *Studia Periegetica*, 2, 38: 47–62.

Semmerling A. 2017. Udział turystyki zagranicznej w rozwoju gospodarczym wybranych krajów Europy Wschodniej. *Zeszyty Naukowe. Turystyka i Rekreacja*: 7–25.

Ślusarz G., Cierpiał Wolan M., Gierczak Korzeniowska B., Uchman J., Żegleń P. 2019. *Potencjał turystyczny i jego wykorzystanie w latach 2014–2018 – ujęcie regionalne*. Urząd Statystyczny w Rzeszowie, Rzeszów.

Ślusarz G., Cierpiał Wolan M., Gierczak Korzeniowska B., Uchman J., Żegleń P. 2019. *Potencjał turystyczny i jego wykorzystanie w latach 2014–2018 – ujęcie regionalne*, Urząd Statystyczny w Rzeszowie, Rzeszów.

Staszewska A. 2022. Zarządzanie kryzysem w turystyce podczas pandemii COVID-19. *Zeszyty Naukowe Wydziału Zarządzania GWSH*, 17: 100–109.

Stecuła K., Wolniak R. 2022. Influence of COVID-19 Pandemic on Dissemination of Innovative E-Learning Tools in Higher Education in Poland. *Journal of Open Innovation: Technology, Market, and Complexity*, 8 , 89: 1–22.

Stojczew K. 2021. Ocena wpływu pandemii koronawirusa na branżę turystyczną w Polsce. *Prace Naukowe Uniwersytetu Ekonomicznego we* Wrocławiu, 65, 1: 157–172.

Sun Y., Zeng X., Zhao H., Simkins B., Cui X. 2022. The impact of COVID-19 on SMEs in China: Textual analysis and empirical evidence. *Finance Research Letters*, 45: 102211.

Szczukocka A. 2023. Wpływ pandemii Covid 19 na branżę turystyczna w Polsce. *Nierówności Społeczne a Wzrost Gospodarczy*, 74 (2/2023).

Yeh S.S. 2021. Tourism recovery strategy against COVID-19 pandemic. *Tourism Recreation Research*, 46, 2: 188–194.

Zadeh F.G. 2022. Entrepreneurship and SMEs under COVID-19 crisis: A literature review. *International Entrepreneurship Review*, 8, 3: 23–35.

Zawadka J., Jęczmyk A., Uglis J., Wojcieszak Zbierska M.M. 2021. Plany turystyczne mieszkańcówmiast w dobie pandemii Covid 19. *Warsztaty z geografii turyzmu*, t. 11, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Zdon-Korzeniowska M., Rachwał T. 2011. Turystyka w warunkach światowego kryzysu gospodarczego. *Prace Komisji Geografii i Przemysłu*, 18, Warszawa – Kraków: 116–128.