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DEVELOPMENT BACKGROUND OF HEALTH RESORTS IN THE DOLNOŚLĄSKIE VOIVODESHIP. SELECTED ECONOMIC ASPECTS

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Purpose: the main purpose of the paper is to support the sustainable development of the health resort areas by protecting their unique resources.
Design/methodology/approach: the research is based on the descriptive and comparative statistical method and literature review, critical literature analysis, documentary research and comparative analysis.
Findings: on the basis of the conducted analyses and research it can be concluded that a systematic increase in the living standard of the residents of the researched health resort areas is clearly visible. The key factor that may determine further increase in the living standard of the residents of the areas appears to be the development of knowledge-based economies together with the development of innovative technologies and products as well as efficient management.
Originality/value: it should be assumed that the research into health resort area will be based to a large extent on its endogenous conditions and its strategic advantages. The key potential in this area is people and their knowledge, as well as skills, competencies and talents which shape social attitudes and influence behaviour towards the changes taking place, thus influencing acceptability or resistance to them.

Keywords: being, work, economy.

Category of the paper: research paper.

1. Introduction

The article is a result of research tasks assigned to the scope of project entitled "Enhancing environmental management capacities for sustainable use of the natural heritage of Central European SPA towns and regions as the driver for local and regional development",

implemented in Central Mining Institute[1]. The project is implemented within the Interreg CENTRAL EUROPE Programme funded under the European Regional Development Fund. It aims to build a sustainable development of the health resorts through the protection of their unique resources. The project will be implemented until 2022 in an international partnership of local and regional government units, development agencies and scientific units from Poland, Austria, Croatia, Czech Republic, Slovenia, Hungary and Italy. Thanks to the project, the partners will increase their knowledge and awareness of impact of various factors on underground thermal water deposits, building multi-level and territorial models of managing natural resources of health resorts. A key element of the project is to build a common, innovative and web-based tool for assessing risks and pressures on thermal water deposits.

An important part of the project work is social and economic analysis which makes possible to indicate development conditions in examined administrative areas of the Poviatries from which the project partners come. Therefore, the administrative area of the research – in the case of Poland it is 11 administrative units from the Dolnośląskie Voivodeship (Lower Silesian Voivodeship – further referred to as DLŚ), common methodology and subject matter of results presented in the article were determined by the project partnership – in the area of Poland, in particular by the Institute of Regional Development from Wrocław.

In the light of the project objectives focusing on economic research, it is now assumed that knowledge is determining factor for competitive advantages in a globalised world economy (Tusińska, 2014). In earlier periods this factor was labour, capital and land. The end of the twentieth century introduced a new term, previously unknown – knowledge-based economy. According to the definition of this term, economic development is assumed to be correlated with the appropriate use of knowledge (Mańkiewicz, 2016, pp. 130-140). This condition is increasingly determined by the disappearance of impact on development of economies of factors such as capital and labour resources in areas of productivity, competitiveness and efficiency in order to increase impact on these areas of knowledge in technical sciences, economics, organisation and management. As the literature review indicates, such relations enable the competitiveness of economies to increase, which are additionally determined by the following key factors: innovative technologies and products and efficient management. In conclusion, dynamics of changes taking place in globalised economies is determined by resource and modernity of people's knowledge, quality of work, education and training, ability to think quickly and innovatively and to implement new solutions to manufacturing, distribution and service processes (Kołodko, 2010).

In this context, from the point of view of investing in the development of human resources, it should be noted once again that process of globalisation, internationalisation and the knowledge-based economy is fully correlated with the level of human knowledge; and to a lesser extent with the material, natural and labour resources. The dominance of human

[1] The project is also co-financed by the Ministry of Science and Higher Education Republic of Poland.

capital results in its influence on the formation of all other factors and its recognition as a key factor of global development. Numerous literature sources stress that without investment in human capital economic development is impossible to achieve (Gołaszewska-Kaczan, 2016, pp. 91-104). It is this capital that will determine condition of the national economies of the European Union and the distance in their development. Therefore, it is assumed that a necessary and indispensable condition for the development of economies is the permanent development and strengthening of human capital, together with the recognition of this activity as an imperative of modern times (Becla, 2014, pp. 16-28). Along with the indicated economic benefits resulting from investing in the development of human capital, the quality of life, its level and numerous social benefits such as the decrease in crime, strengthening of social bonds, increase in tolerance behaviours, increase in ecological awareness or actions to protect natural environment also develop. An extremely positive role is played in these areas by educational system, on the basis of which development of human capital influences shape of social principles and norms and determines social cohesion. As a result, economic activities create benefits for society as a whole and fairer distribution and also clearer division of the economic sphere.

On the basis of above theses and megatrends in the analyses and research presented in the article, the authors focused – according to project guidelines – on the following key variables:

- number of persons employed by broad economic activity: agricultural, industrial and service sectors,
- average monthly gross remuneration,
- unemployment rate,
- education expenditure ratio,
- health expenditure ratio.

Table 1.
Variables introduced in economic analyses and studies

Item	Variable	Definition/Scope
1	Number of persons employed	Percentage of the active population working in agricultural sector (agriculture, forestry, hunting and fishing), industry and construction, service sector (trade, vehicle repair, transport, accommodation and catering, information and communication) and financial sector (financial and insurance activities, real estate).
2	Average monthly gross remuneration	The total value of recognition of remuneration, i.e. including personal income tax advances and, since 1999, compulsory social security contributions (pension, disability, sickness) paid by the insured employee.
3	Unemployment rate	Share of registered unemployed in civil professionally active population, i.e. without employees of budgetary units conducting activities in the field of national defence and public security.
4	Education, upbringing and care expenditure	Total expenditure by heading of the Budgetary Classification (Units: Territorial units; Budgetary classification headings) Heading 801
5	Health expenditure	As above Heading 851

Source: Statistics Poland – glossary of terms.

This article analyses of economic conditions – in compliance with assumptions adopted in the project – focus on selected 11 poviats (Poviaties) of Dolnośląskie Voivodeship. In the light of regularity of the matter, it should be noted that, taking into accunt Poviat territorial division of the analytical area according to NUTS 3 – on the basis of available statistical data from EUROSTAT and Statistics Poland describing variables – the analyses and surveys for the administrative units adopted in draft are only available by 5 Poviaties and the administrative division NUTS 3 presented in Table 2.

Table 2.
Division of the analytical area by administrative units on the basis of statistical data provided by EUROSTAT, Statistics Poland and NUTS 3

Item	Administrative unit	Administrative division	(Poviat)
1	Przerzeczyn Zdrój	village in the Niemcza Poviat	dzierżoniowski
2	Cieplice Śląskie-Zdrój	currently the district of Jelenia Góra	Jelenia Góra, city
3	Długopole-Zdrój	Village	kłodzki
4	Duszniki-Zdrój	urban commune	
5	Kudowa-Zdrój	urban commune	
6	Lądek-Zdrój	urban-rural commune	
7	Polanica-Zdrój	urban commune	
8	Czerniawa-Zdrój	currently the district of Świeradów Zdrój	lubański
9	Świeradów-Zdrój	urban commune	
10	Jedlina-Zdrój	urban commune	wałbrzyski
11	Szczawno-Zdrój	urban commune	

Source: Polska w liczbach 2019 [Poland in numbers], Local Data Bank Statistics Poland, European Union Statistical System EUROSTAT.

The analyses used statistical data from three sources: statistical portal Polska w liczbach [Poland in numbers], Statistics Poland and European Union Statistical System EUROSTAT. The research is based on the method of descriptive and comparative statistics and literature review, critical literature analysis, documentary research and comparative analysis.

2. Implementation of research – discussion

The data provided by Statistics Poland in the surveyed Poviaties of DLŚ in 2017 shows that the following number of people per 1000 inhabitants worked in given Poviaties: Dzierżoniów Poviat – 161, the Poviat of Jelenia Góra city – 258, Kłodzko Poviat – 162, Lubań Poviat – 159 and Wałbrzych Poviat – 102. Women constituted in these Poviaties the following percentage of employed persons, respectively: 52% – Dzierżoniów Poviat, 52.3% – Jelenia Góra city, 55.5% – Kłodzko Poviat, 56.2 – Lubań Poviat and 58% – Wałbrzych Poviat. Whereas the working men represented respectively: 48%, 47.7%, 44.5%, 43.8% and 42%. Among the professionally active inhabitants of Dzierżoniów Poviat – 6800 people were going to work in other towns or cities, and 5351 people were coming to work from outside the Poviat, therefore, the balance of arrivals and departures to work is – 1449. In the Poviat of Jelenia Góra city –

2058 people were going to work in other town or cities and 4400 people were coming from outside the Poviat, so the balance of arrivals and departures to work was – 2342. In Kłodzko Poviat – 14 087 people were going to work in other towns or cities, and 10 265 were coming to work from outside the Poviat, and the balance of arrivals and departures to work is – 3822. In Lubań Poviat – 4867 people were going to work in other towns or cities, and 3763 employees were coming from outside the Poviat, so the balance of arrivals and departures to work is – 1104.

In Wałbrzych Poviat – 7123 people were going to work to other towns or cities, and 2022 employees were coming to work from outside the Poviat, and the balance of arrivals and departures to work is – 5101.

This process was accompanied by a stable trend of predominance in the number of women in total employment. The highest median for the number of employees in the years from 2008 to 2018 in the population of women occurred in Lubań Poviat and amounted to 59.4%. Next, the following Poviaties were: 55.33% Wałbrzych, 55.2% Kłodzko, 54.4% Jelenia Góra city and 50.2% Dzierżoniów (Table 3).

Table 3.
Employed in selected Poviaties of Dolnośląskie voivodeship in 2008-2018 by gender

Poviat	Detailed list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Median
dzierżoniowski	males	51.4	50.7	50.2	50.9	49.8	49.7	49.4	48.8	48.4	48.8	49.1	**49.8**
	females	48.6	49.3	49.8	49.1	50.2	50.3	50.6	51.2	51.6	51.2	50.9	**50.2**
Jelenia Góra, city	males	45.4	45.7	45.6	45.6	44.0	44.8	44.6	45.6	46.4	47.7	48.5	**45.6**
	females	54.6	54.3	54.4	54.4	56.0	55.2	55.4	54.4	53.6	52.3	51.5	**54.4**
kłodzki	males	46.5	46.7	49.8	47.7	46.5	47.5	47.1	47.2	48.7	48.8	47.5	**51.2**
	females	53.5	52.5	55.4	54.5	53.1	55.0	54.9	55.9	56.7	57.2	57.0	**55.2**
lubański	males	48.4	42.4	49.9	50.6	49.6	48.7	48.3	48.7	50.7	50.4	51.5	**49.6**
	females	51.6	51.5	58.8	59.3	58.0	59.4	60.8	59.9	61.4	61.4	62.0	**59.5**
wałbrzyski	males	-	-	-	-	-	44.9	45.6	44.4	45.0	44.0	43.2	**50.0**
	females	-	-	-	-	-	55.1	54.4	55.6	55.0	56.0	56.8	**55.3**

The symbol '-' indicates a lack of information due to: a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables.

In the analysed period economic sector with the highest share of employees in the analysed Poviaties – excluding Dzierżoniów Poviat– were the remaining services. In this sector, the median for the number of employed persons – in decreasing order – was: 42.7% Jelenia Góra city, 38.5% Kłodzko Poviat, 34.6% Wałbrzych Poviat and 31.2% Lubań Poviat. In the Poviat of Dzierżoniów, the dominant sectors were industry and construction – 42.1%. The indicated sector was second in the order of the share of employed in the remaining Poviaties, characterised by the following percentage of employed persons: 32.1% Jelenia Góra city, 24.8% Kłodzko Poviat, 25.1% Wałbrzych Poviat and 27.7% Lubań Poviat. It is worth noting that in Jelena Góra city the following branches were characterised by a high percentage of workers: trade; repair of motor vehicles; transport and storage; accommodation and catering; information and communication – 20.9%. In Kłodzko Poviat these were agriculture, forestry,

hunting and fishing – 17.4%. In Lubań Poviat, similar to Kłodzko Poviat, these were agriculture, forestry, hunting and fishing – 23.9%. And finally, in Wałbrzych Poviat these were trade; repair of motor vehicles; transport and storage; accommodation and catering; information and communication – 18.7%.

The remaining sections, due to the median value, were not significant in the quantitative development of the working structure (Table 4).

Table 4.
Employed in selected Poviaties of Dolnośląskie voivodeship in 2008-2018 by economic sectors

Subregions	Detailed list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Median
dzierżoniowski	1	11.3	11.6	12.8	12.8	13.1	13.0	12.8	13.1	12.7	12.8	12.5	**12.8**
	2	45.5	42.6	40.5	41.8	41.1	41.7	43.4	42.1	41.5	43.8	44.0	**42.1**
	3	13.8	13.7	15.5	14.5	15.5	14.2	13.3	13.3	14.8	14.0	13.9	**14.0**
	4	3.0	3.2	3.1	3.1	2.9	3.0	2.9	2.9	2.8	2.6	2.5	**2.9**
	5	26.4	28.9	28.1	27.8	27.4	28.1	27.6	28.6	28.2	26.8	27.1	**27.8**
Jelenia Góra, city	1	0.8	0.7	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6	**1.5**
	2	33.8	32.2	30.4	30.6	29.7	30.5	32.1	32.1	33.9	34.4	34.7	**32.1**
	3	21.2	20.9	21.9	19.3	18.7	18.3	17.0	20.0	22.4	20.9	21.0	**20.9**
	4	5.0	4.8	3.6	3.3	3.1	3.5	3.2	3.3	3.2	3.0	2.7	**3.3**
	5	39.3	41.4	42.7	45.4	46.9	46.2	46.2	43.1	39.0	40.2	40.0	**42.7**
kłodzki	1	12.8	12.6	17.2	17.7	18.1	17.8	18.0	17.6	17.2	17.3	17.4	**17.4**
	2	26.3	25.7	25.2	24.8	23.5	22.9	23.3	24.6	25.1	25.7	24.7	**24.8**
	3	15.6	16.1	15.1	15.1	15.6	16.6	17.0	16.6	16.8	16.5	16.7	**16.5**
	4	4.6	4.7	4.0	3.9	3.6	3.2	3.3	2.7	2.6	2.6	2.5	**3.3**
	5	40.7	40.9	38.4	38.5	39.1	39.4	38.5	38.5	38.3	38.0	38.6	**38.5**
lubański	1	13.4	14.1	24.0	23.8	24.1	24.3	24.3	24.3	23.6	23.9	23.6	**23.9**
	2	32.3	29.0	25.3	26.9	26.4	24.9	25.3	27.7	28.3	28.8	30.0	**27.7**
	3	17.1	16.6	16.3	15.7	15.2	16.0	16.6	15.5	16.5	16.5	15.9	**16.3**
	4	3.0	2.6	2.6	2.6	3.1	2.8	2.7	2.1	2.2	2.0	2.3	**2.6**
	5	34.2	37.7	31.8	31.1	31.3	32.0	31.2	30.4	29.3	28.7	28.1	**31.2**
wałbrzyski	1	-	-	-	-	-	17.9	16.7	18.0	18.6	18.7	17.8	**17.9**
	2	-	-	-	-	-	25.7	23.9	24.8	25.7	25.3	24.0	**25.1**
	3	-	-	-	-	-	18.8	24.2	19.5	17.6	18.6	18.4	**18.7**
	4	-	-	-	-	-	3.0	2.9	3.0	2.9	3.1	2.9	**2.9**
	5	-	-	-	-	-	34.6	32.3	34.7	35.2	34.4	37.0	**34.6**

Legend: 1. Agriculture, forestry, hunting and fishing, 2. Industry and construction, 3. Trade; repair of motor vehicles; transport and storage; accommodation and catering; information and communication, 4. Financial and insurance activities; real estate services, 5. other services[2].

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables.

In the whole period of 2008-2018 the number of employees in the surveyed Poviaties – excluding the city of Jelenia Góra – was stable and characterized by a slight increase. In a descending order, the shares of Poviaties are as follows: dzierżoniowski – 105.4% (median 101.3%), kłodzki – 104.6% (102.4%), lubański – 113.5% (108.7%) and wałbrzyski – 101.4% (100.4%). In the Poviat of Jelenia Góra city, as it has already been indicated, the total number

[2] Other services include: extraterritorial organisations and bodies, households as employers; other service activities of households as producers of goods and services for own use. Cf. Regulation of the Council of Ministers of 24 December 2007 on the Polish Classification of Activities (PKD) (Journal of Laws 251, item 1885, as amended).

of employees was decreasing. The fall was nearly 8% (5% median). In the analysed period, the growth dynamics of female employees prevailed in all surveyed Poviaties (Table 5).

Table 5.
Dynamics of growth/decrease in the number of employed persons in selected Poviaties of Dolnośląskie voivodeship in the years 2008-2018. Year 2008 = 100%

Sub-regions	Detailed list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Med.
dzierżo-nowski	Total	17973	17 370	18 261	18 161	17 825	17 810	18 253	17 965	18 277	18 620	18 945	**18207**
	%	100	96.6	101.6	101.0	99.2	99.1	101.6	100.0	101.7	103.6	105.4	**101.3**
	Males	9 246	8 798	9 174	9 252	8 879	8 851	9 026	8 758	8 855	9 085	9 306	**8952.5**
	%	100	95.2	99.2	100.1	96.0	95.7	97.6	94.7	95.8	98.3	100.6	**96.8**
	Females	8 727	8 572	9 087	8 909	8 946	8 959	9 227	9 207	9 422	9 535	9 639	**9147**
	%	100	98.2	104.1	102.1	102.5	102.7	105.7	105.5	108.0	109.3	110.5	**104.8**
Jelenia Góra, city	Total	25114	24 764	25 179	23 895	24 110	24 077	23 542	22 923	23 056	23 298	23 169	**23 895**
	%	100	98.6	100.3	95.1	96.0	95.9	93.7	91.3	91.8	92.8	92.3	95.1
	Males	11407	11 307	11 482	10 892	10 604	10 779	10 492	10 443	10 705	11 107	11 241	**10 892**
	%	100	99.1	100.7	95.5	93.0	94.5	92.0	91.5	93.8	97.4	98.5	95.5
	Females	13707	13 457	13 697	13 003	13 506	13 298	13 050	12 480	12 351	12 191	11 928	**13 050**
	%	100	98.2	99.9	94.9	98.5	97.0	95.2	91.0	90.1	88.9	87.0	95.2
kłodzki	Total	29261	29 031	30 783	29 894	29 153	29 971	29 850	30 174	30 833	31 022	30 596	**29 971**
	%	100	99.2	105.2	102.2	99.6	102.4	102.0	103.1	105.4	106.0	104.6	**102.4**
	Males	13609	13 670	14 581	13 954	13 618	13 885	13 785	13 816	14 249	14 275	13 905	**13 885**
	%	100	100.4	107.1	102.5	100.1	102.0	101.3	101.5	104.7	104.9	102.2	**102.0**
	Females	15652	15 361	16 202	15 940	15 535	16 086	16 065	16 358	16 584	16 747	16 691	**16 086**
	%	100	98.1	103.5	101.8	99.3	102.8	102.6	104.5	106.0	107.0	106.6	**102.8**
lubański	Total	10110	9 493	10 989	11 103	10 881	10 938	11 023	10 983	11 332	11 303	11 478	**10 989**
	%	100	93.9	108.7	109.8	107.6	108.2	109.0	108.6	112.1	111.8	113.5	**108.7**
	Males	4 890	4 285	5 045	5 111	5 016	4 928	4 881	4 927	5 124	5 096	5 211	**5 016**
	%	100	87.6	103.2	104.5	102.6	100.8	99.8	100.8	104.8	104.2	106.6	**102.6**
	Females	5 220	5 208	5 944	5 992	5 865	6 010	6 142	6 056	6 208	6 207	6 267	**6 010**
	%	100	99.8	113.9	114.8	112.4	115.1	117.7	116.0	118.9	118.9	120.1	**115.1**
wałbrzy-ski	Total	-	-	-	-	-	7 073	7 593	7 136	7 071	6 832	7 174	**7 105**
	%	-	-	-	-	-	100	107.3	100.9	100.0	96.6	101.4	**100.4**
	Males	-	-	-	-	-	3 179	3 462	3 168	3 184	3 006	3 100	**3 174**
	%	-	-	-	-	-	100	108.9	99.6	100.2	94.6	97.5	**99.8**
	Females	-	-	-	-	-	3 894	4 131	3 968	3 887	3 826	4 074	**3 931**
	%	-	-	-	-	-	100	106.1	101.9	99.8	98.2	104.6	**100.9**

The symbol '-' indicates a lack of information due to: a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables.

In the light of the regularities described above, it is worth pointing out that structure of economies is characterised, among others, by structure of economic entities operating there. Every developing economy is subject to structural changes, especially changes in the structure of entities. As a result of structural transformations, the share of particular parts of the economy in GDP creation changes, as well as the share of employment in particular sectors (Klamut, 1996). As Leszczewska notes, analyses of structural changes in economy in long term indicate the following several regularities: along with economic development, importance of agricultural sector is decreasing and its share in employment is decreasing, at a certain stage of economic development, the importance of the industrial sector is increasing, which manifests itself in increase of its share in total employment, at a further stage of development, importance

of industrial sector is stabilising and then decreasing, and at the same time employment in this sector is decreasing, along with economic development, share of services sector in the economy is increasing and the share of those working there is increasing at expense of employment in agricultural and industrial sector (Leszczewska, 2010, pp. 215-225).

Another variable describing socio-economic situation of the surveyed Poviaties is average monthly gross remuneration, which in 2018 in decreasing order was respectively (in PLN): Jelenia Góra city – 4546.1, Kłodzko Poviat – 4054.2, Dzierżoniów Poviat – 4024.94, Lubań Poviat – 3939.03 and Wałbrzych Poviat – 3835.44. The highest growth rate of the average monthly gross remuneration was observed in Lubań Poviat – 170.2%, followed by 162.6% in Jelenia Góra city, 161.7% in Dzierżoniów Poviat, 161.4% Kłodzko Poviat and the lowest growth dynamics were achieved by Wałbrzych Poviat – 121.9% (Table 6).

Table 6.
Dynamics of decrease/growth of average monthly gross salary in selected Poviaties of Dolnośląskie voivodeship in the years 2008-2018. Year 2008=100%

Sub-regions	Det. list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Med.
dzierżo-niowski	Total	2489.4	2645.1	2832.1	3024.1	3113.1	3156.1	3300.0	3406.2	3562.6	3825.2	4024.9	**3156.1**
	%	100	106.3	113.8	121.5	125.1	126.8	132.6	136.8	143.1	153.7	161.7	**126.8**
Jelenia Góra, city	Total	2795.9	2913.0	2969.8	3192.2	3291.1	3367.2	3577.0	3835.1	3979.8	4237.5	4546.1	**3367.2**
	%	100.0	104.2	106.2	114.2	117.7	120.4	127.9	137.2	142.3	151.6	162.6	**120.4**
kłodzki	Total	2511.4	2663.4	2803.2	2962.3	3063.4	3200.5	3333.4	3410.2	3526.7	3741.8	4 054.2	**3200.5**
	%	100.0	106.1	111.6	118.0	122.0	127.4	132.7	135.8	140.4	149.0	161.4	**127.4**
lubański	Total	2314.7	2464.4	2600.6	2810.0	2937.0	3034.9	3195.7	3314.0	431.3	3622.2	3939.0	**3034.9**
	%	100.0	106.5	112.4	121.4	126.9	131.1	138.1	143.2	148.2	156.5	170.18	**131.1**
wałbrzy-ski	Total	-	-	-	-	-	3138.1	3213.8	3293.5	3528.0	3638.6	3825.4	**3410.8**
	%	-	-	-	--	-	100.0	102.4	105.0	112.4	115.9	121.9	**108.7**

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables. Remuneration and social benefits.

In each of the analysed Poviaties, the average gross monthly remuneration in relation to national average was lower, and in the analysed period it was at the following levels: Jelenia Góra city – 94%, Kłodzko Poviat – 83.9%, Dzierżoniów Poviat – 83.3%, Lubań Poviat – 81.5% and Wałbrzych Poviat – 79.1%. In the years between 2008 and 2018, monthly gross remuneration expressed in median were as follows: 88.5% – Jelenia Góra city, 82.2% – Kłodzko Poviat, 82.4% – Dzierżoniów Poviat, 78.4% – Lubań Poviat and 80.3% – Wałbrzych Poviat (Table 7).

Table 7.
Average gross monthly remuneration in relation to the national average (Poland = 100%) in selected Poviaties of Dolnośląskie Voivodeship in the years 2008-2018

Subregions	Detailed list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Median
dzierżoniowski	Total	78.8	79.8	82.4	83.4	83.1	81.4	82.4	82.1	83.0	84.5	83.3	**82.4**
Jelenia Góra, city	Total	88.5	87.9	86.5	88.1	87.9	86.8	89.3	92.4	92.8	93.6	94.0	**88.5**
kłodzki	Total	79.5	80.3	81.6	81.7	81.8	82.0	83.3	82.2	82.2	82.6	83.9	**82.2**
lubański	total	73.3	74.3	75.7	77.5	78.4	78.3	79.8	79.8	80.0	80.0	81.5	**78.4**
wałbrzyski	total	-	-	-	-	-	80.9	80.3	79.3	82.2	80.4	79.1	**80.35**

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables. Remuneration and social benefits.

To conclude, in years between 2009 and 2018 a dynamic and high growth of gross monthly remuneration should be recorded in the analysed Poviaties. It is worth noting that this was also a linear increase in the average monthly gross remuneration in relation to national average, which in the analysed period ranged between 88.5% and 94% in Jelenia Góra city, between 79.5% and 83.9% in Kłodzko Poviat, between 78.8% and 83.3% in Dzieżoniów Poviat, 73.3% and 81.5% in Lubań Poviat and between 80.9% and 79.1% in Wałbrzych Poviat.

Given the above analysis, it is worth stressing that among various aspects of wage developments in a market economy, wage differentiation in Poland deserves special attention. It is also a result of various factors: demographic and social (including age, gender and education) and economic (economic development level, situation on labour market, economic attractiveness). On the other hand, knowledge about the level and diversity of remuneration for work can be used in the Polish economy (both on a micro- and macro-economic scale) for measures to increase work efficiency and improve the competitive position of enterprises and for more rational human resources management in the region and the Poviaty (Karaszewska, 2003).

On the basis of these theses, the above analyses focusing on the socio-demographic and economic area gain additional value, indicating the need to take them into ac Poviats in the process of conclusions resulting from the entirety of the research carried out in the design works.

The analysis of the rate of registered unemployment in the studied Poviaties in the years from 2008 to 2020 shows a systematic decrease: Dzierżoniów Poviat from 21.1% to 5.6%, Jelenia Góra city 6.5% to 3.4%, Kłodzko Poviat 21.6% to 11.5%, Lubań Poviat 22.2% to 7.1% and Wałbrzych Poviat from 29.8% to 12.9%. The highest rate of decrease in the unemployment rate in the analysed period was observed in Dzierżoniów Poviat – 26.5% (the year 2008 = 100%). Next, the following Poviaties: 52.3% Lubań, 32.0%, Wałbrzych 43.4%, Jelenia Góra 52.3% and Kłodzko 53.2% (Table 8).

Table 8.
Dynamics of decrease/growth in the registered unemployment rate in selected Poviaties of Dolnośląskie voivodeship in the years 2008-2020. Theyear 2008 = 100%

Sub-regions	Det. list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Med.
dzierżo-	Total	21.1	24.5	22.3	19.3	20.5	20.2	15.8	11.9	10.0	7.4	6.1	5.1	5.6	**19.3**
niowski	%	100	116.1	105.7	91.5	97.2	95.7	74.9	56.4	47.4	35.1	28.9	24.2	26.5	**74.5**
Jelenia	Total	6.5	9.6	10.9	9.9	10.1	9.3	7.5	5.7	4.6	3.6	3.6	3.2	3.4	**7.5**
Góra, city	%	100	147.7	167.7	152.3	155.4	143.1	115.4	87.7	70.8	55.4	55.5	49.2	52.3	**100**
kłodzki	Total	21.6	24.4	24.7	24.9	27.1	27.1	23.6	19.9	16.0	12.5	11.8	10.9	11.5	**23.6**
	%	100	113.0	114.3	115.3	125.5	125.5	109.3	92.1	74.1	57.9	54.6	50.5	53.2	**100**
lubański	Total	22.2	25.4	24.7	22.9	23.1	21.6	17.8	14.2	11.3	9.3	7.3	6.9	7.1	**17.8**
	%	100	114.4	111.3	103.1	104.0	97.3	80.2	64.0	50.9	41.9	32.9	31.1	32.0	**80.2**
wałbrzy-	Total	-	-	-	-	-	29.8	24.9	22.4	19.3	14.3	13.6	12.3	12.9	**20.8**
ski	%	-	-	-	--	-	100	83.6	75.2	64.8	48.0	45.6	41.3	43.4	**56.4**

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

The symbol '*' indicates the end of January 2020.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables. Remuneration and social benefits.

The same trend determines the size of the unemployment rate in relation to its national value and is in the range, according to the surveyed Poviaties: Dzierżoniów from 222.1% to 105.2%, Jelenia Góra city from 68.4% to 60.3%, Kłodzko from 227.4% to 200%, Lubań from 233.7% to 127.6% and Wałbrzych from 222.4% to 237.9% (Table 9).

Table 9.
*Registered unemployment rate (Poland = 100%) in selected Poviaties of Dolnośląskie voivodeship in the years between 2008 and 2020**

Sub-regions	Det. list	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Med.
dzierżonio-	Total	222.1	202.5	179.8	154.4	153.0	150.7	138.6	122.7	122.0	112.1	105.2	150.7
wski													
Jelenia Góra, city	Total	68.4	79.3	87.9	79.2	75.4	69.4	65.8	58.8	56.1	54.5	60.3	68.4
kłodzki	Total	227.4	201.7	199.2	199.2	202.2	202.2	207.0	205.2	195.1	189.4	200.0	201.7
lubański	Total	233.7	209.9	199.2	183.2	172.4	161.2	156.1	146.4	137.8	140.9	127.6	161.2
wałbrzyski	Total	-	-	-	-	-	222.4	218.4	230.9	235.4	216.7	237.9	226.7

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

The symbol '*' indicates the end of January 2020.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables. Remuneration and social benefits.

Despite the very low unemployment in 2020 in the Poviat of Jelenia Góra city and the dynamic decline of this phenomenon in the remaining examined Poviaties, it is worth noting that in the next few decades in the developing globalised economy in the phase of demographic change significant processes will be taking place on the demand and supply side of the labour market. The state of supply and demand that is not equivalent to the labour force is a structural mismatch that may be of a qualification, branch, industry, vocational and spatial nature.

Equally important in the process of shaping the relationship between labour supply and demand is the already mentioned demographic change. It will result in a process of a systematic decrease in labour supply and, above all, an increase in the demographic burden factor. According to forecasts, by 2060 the demographic burden will be significant. In turn, the old-age dependency ratio may increase by more than three times, according to forecasts (Kiełkowska, 2013, pp. 6). This process will have a huge impact on the quantitative and qualitative dimension of unemployment, which is also determined by changes in the structure of consumer demand or, for example, the collapse or development of economies. This is related, among other things, to the emergence of more and more innovative technologies – more and more determined by Revolution 4.0. in a globalised economy in the phase of demographic change.

Another analysed variable is expenditure on education, upbringing, and care. In the light of this analysis, the huge role of the education system – and thus of expenditure on education, upbringing and care – in shaping qualified staff and their position in the labour market is revealed. Numerous documents and studies stress that education is a key factor determining the increase of an individual's developmental changes on the labour market, in particular in the context of professional activation and chances related to gaining employment. In this light, it is worth stressing that the modern paradigm of the knowledge-based economy should take into acPoviat the fact that human needs are met in the production and service process. It is through education that knowledge "spreads" to all sectors of the economy. Economists and social politicians provide convincing tangible evidence of the benefits of education. The economic benefits illustrate the differences in income between people with different levels of education. In more than 2/3 of OECD Poviaties, people with higher education have 50% higher earnings than people with upper secondary and post-secondary education. Also, from a macroeconomic point of view, investment in education is profitable. In OECD Poviaties, a male with higher education during his working life brings the state budget an average income of about USD 100 000 more in taxes and insurance premiums than a person with secondary education. After deducting the public funds allocated to finance student education in higher education, the net benefit is over USD 91 000 (Educationat a Glance, 2011, pp. 161-165). The benefits of education are even greater if the social benefits expressed in indicators important for building up social capital resources are taken into acPoviat. According to the OECD report, in Poland also – according to the results of the "Social Diagnosis" study – people with higher education declare greater life satisfaction, better health, a higher degree of mutual trust, greater involvement in social life in the form of participation in elections or voluntary activities (Social Diagnosis 20090, 2009, pp. 271). In this context, as U. Sztanderska emphasizes, education matters not only when entering the labour market and matching employers' expectations. The effects of primary/initial education last practically throughout life because the knowledge and skills acquired at school are used for an exceedingly long time. These competencies are complemented over time by professional experience and training already undertaken during employment. Above all, under the influence of technological

developments and intensification of global ties, primary (school) education often needs to be modified and expanded if it is to provide work and satisfactory earnings (Sztanderska, 2008, p. 5).

In years between 2008 and 2018, the analysed variable grew dynamically in each of the analysed Poviaties. The highest growth rate of expenditure on education and upbringing was observed in Kłodzko and Lubań Poviaties. The dynamics measured by the median value in the years 2008-2018 was respectively 125.8% and 123.2%. The lowest dynamics occurred in Wałbrzych Poviat and amounted to 108.5% (Table 10). In 2018, the total expenditure in the areas under consideration was as follows (in PLN): Dzierżoniów Poviat – 108 265 132.8, Jelenia Góra Poviat – 144 633 211.0, Kłodzko Poviat – 195 889 476.3, Lubań Poviat – 79 149 929.3 and Wałbrzych Poviat – 52 764 222.7. The highest amount of expenditure on education, upbringing and care per capita was characteristic of Jelenia Góra Poviat. The amount of expenditure in 2018 amounted to PLN 2260.5. The lowest was in Wałbrzych Poviat, with the level of PLN 937.9 (Table 10).

Table 10.
Dynamics of growth/decrease in expenditure on education, upbringing and care in selected Poviaties of Dolnośląskie voivodeship in the years 2008-2018

Poviat	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Median	Expenditure per capita in PLN
dzierżoniowski	100	102.4	112.5	118.8	114.5	120.0	118.0	116.1	119.9	129.1	160.6	**118.1**	**1063.6**
Jelenia Góra, city	100	105.1	112.8	117.7	128.7	119.7	119.8	122.4	120.8	129.9	148.9	**119.8**	**2260.5**
kłodzki	100	110.6	120.2	122.6	122.1	126.4	125.8	131.3	136.2	156.1	169.1	**125.8**	**1225.5**
lubański	100	106.1	117.6	117.5	121.5	123.2	129.2	133.4	137.4	143.1	170.9	**123.2**	**1444.5**
wałbrzyski	-	-	-	-	-	100	108.5	114.2	100.8	103.8	111.2	**108.5**	**937.9**

The symbol '-' indicates a lack of information due to a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables.

Health care expenditure, on the other hand, was characterised by a variable rate of growth/decrease. The highest growth dynamics of expenditure on health care was observed in Dzierżoniów and Lubań Poviaties. The dynamics measured by the median value in years 2008-2018 was respectively 116.1% and 114.1%. The lowest dynamics were observed in Jelenia Góra Poviat and amounted to 99.9% (Table 11). In 2018, the total expenditure in the areas under consideration was as follows (in PLN): Dzierżoniów Poviat 1 950 197.2, Jelenia Góra Poviat 2 670 255.8, Kłodzko Poviat 4 233 521.4, Lubań Poviat 1 383 537.5 and Wałbrzych Poviat 1 209 656.9. The highest amount of expenditure on health care per capita was characteristic of Jelenia Góra Poviat. The amount of expenditure in 2018 amounted to PLN 41.7. The lowest was in Dzierżoniów Poviat, at the level of PLN 18.8 (Table 11).

Table 11.
Dynamics of growth/decrease in expenditure on health care in selected Poviaties of Dolnośląskie voivodeship in the years 2008-2018

Poviat	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Median	expen. per capita in PLN
dzierżo-niowski	100	137.6	418.4	120.2	96.0	104.3	111.0	117.0	111.0	117.3	115.1	**116.16**	**18.8**
Jelenia Góra, city	100	125.7	130.2	98.4	91.7	96.6	97.5	99.8	108.0	93.0	114.5	**99.1**	**41.7**
kłodzki	100	90.2	98.5	83.1	88.9	333.9	94.5	103.8	110.8	103.9	109.4	**101.1**	**26.5**
lubański	100	95.9	98.0	108.0	112.7	113.6	124.1	114.6	118.5	127.4	124.0	**114.1**	**25.2**
wałbrzy-ski	-	-	-	-	-	100.0	114.1	105.9	106.1	104.0	99.7	**105.9**	**21.5**

The symbol '-' indicates a lack of information due to: a change in the level of presentation, changes in the list of territorial units or modifications.

Source: Local Data Bank, Statistics Poland. Data aggregated in predefined public tables.

In the light of increasing expenditure on both education, upbringing, and health care, it is worth noting that according to demographic forecasts, number of people in working age in the European Union will fall by almost 21 million by 2030. The population of young Europeans will decrease by 20% over the next 20 years. This change is one of the key challenges facing modern Europe in education and health. This is very clearly noted by the European Expert Network on Economics of Education (EENEE), which in its report "The Future of European Education and Training Systems: Key Challenges and Their Implications" puts demographic change at the top of the four key challenges for education and training systems (Schlotteri et al, 2008). It is worth recalling here that it was the French demographer Adolphe Landry (1909) who at the beginning of the twentieth century developed a theoretical concept to explain the demographic development of the world. Over time, the concept has taken several characteristic names, such as demographic transition, phase development or cyclical demographic transition. This was the result of its development by the author and numerous further researchers (Wittthauer, 1959, pp. 289-298). Despite this work, basic assumptions shaping Landry's concepts were not subject to any changes. Following this approach, population development for each large social group follows several successive phases of time, differentiated by characteristic development of natural population movement determined by births and deaths. This process throughout history – from a society living in primitive conditions to a society functioning in a globalised world and rich knowledge-based economies – is universal (Landry, 1934).

In conclusion, demographic depression is an important challenge for many public policies, such as family, labour market, health, social security, and education. The challenges and areas of impact identified are part of a broader spectrum of reflection that should focus on a holistic approach to education and health, which are key determinants of human capital, where projections indicate that by 2050 people over sixty-five years old will represent 20% of total population of Europe as a whole.

3. Conclusions

On the basis of the analyses and research carried out, it can be concluded that a systematic increase in the standard of living of the inhabitants of the surveyed Poviaties, and thus of the tourist communes covered by the project activities, is clearly visible. The key factor that may determine further increase in the standard of living of the residents of the areas appears to be the development of knowledge-based economies together with the development of innovative technologies and products as well as efficient management. Together with the indicated economic benefit – which should be emphasized once again – in health resort communes covered by the project activities, further development of the quality of life, its level and numerous social benefits should also be expected, such as the decrease in crime, strengthening of social bonds, increase in tolerance behaviour, increase in ecological awareness or environmental protection activities.

A special role in the creation of the above-described vision of the development of the studied areas should be attributed to Jelenia Góra Poviat. All the results obtained in the research clearly indicate predominant position of this Poviat. It dominates in the area of number of employees per 100 inhabitants, a highly positive balance of arrivals and departures to work, a stable number of employees, in number of those working in services and industry and construction, the highest average monthly gross remuneration, it occupies the second position in the group of the analysed Poviaties due to the remuneration growth dynamics, the highest level of remuneration in relation to the national average, the lowest unemployment rate among the analysed Poviaties, the lowest unemployment rate in relation to its national value, the highest value of expenditure on education and upbringing and health care per capita.

When result of the study is presented in the cross-section of analytical variables, a few more important regularities are visible – due to the economic development of Poviaties – which should include:

- Low – except for the Poviat of Jelenia Góra city – number of employees per 1000 inhabitants,
- predominance in working female population - especially in service sector,
- high — except for Jelenia Góra Poviat – negative balance of labour migration,
- prevailing shares of employees working in two sectors, i.e. services and industry and construction,
- stable – with an upward trend – total number of employees,
- dynamically growing average gross monthly remuneration,
- lower than the national average – with an upward trend – the average gross monthly remuneration,
- a dynamic drop in the registered unemployment rate – with a high level in relation to the national rate,

- dynamically growing expenditure on education, upbringing, and care – with a trend towards stable growth,
- dynamically growing expenditure on health care – with a trend towards stable growth

Furthermore, in the light of the above-mentioned processes, regularities and trends, it is worth highlighting that as a result of the demographic processes taking place and mainly the related reversal of the age pyramid, maintaining balance in labour market will be a serious challenge. As a result of the ongoing changes, it will be a great challenge to keep older people in employment for as long as possible. This in turn, in the context of demographic challenges, will force economies to re-profile into the so-called silver economy, i.e. to create services and products that meet needs of a population dominated by the elderly. This process will also significantly determine development of the small and medium-sized enterprise sector, which in the vast majority of cases will provide necessary and indispensable food products, related to safety, professional activity, leisure, maintaining the independence and self-sufficiency of older people[3].

It seems that on the basis of all the considerations, the thesis that since it is impossible to stop the changes, one has to learn to benefit from them is confirmed. The view expressed above concerns changes that imply several important technological and social challenges, among which the following deserve particular attention:

- growing importance of local participation in global decision making in more culturally diverse conditions of cooperation,
- need to implement projects based on international mobility, adaptability, and cultural sensitivity,
- need to increase public awareness related to the responsibility for the natural environment,
- disappearance of the state policy in implementation of social functions and their assumption by an increasingly organised local society.

In conclusion, it should be recognised that development of the surveyed communes and Poviaties will largely be based on their endogenous conditions and their strategic advantages. The key potential in this area is people and their knowledge, as well as skills, competencies, and talents as they shape social attitudes and influence behaviour towards the changes taking place, thus influencing acceptability or resistance to them. Here, it seems that development of the examined Poviaties depends mainly on activity and mobility of people and achievement of the set goals. The ability to create a culture of cooperation based on trust among local communities, which may become the foundation shaping the future of the areas in which they operate, may prove to be crucial in this area.

[3] See: Strategia na rzecz Odpowiedzialnego Rozwoju do roku 2020 (z perspektywą do 2030 r.), Warszawa 2017, pp. 12-13.

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