Wojciech Siński, MSc
Poznań University of Economics and Business

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Human capital as a factor of local economic development – case study

Abstract

The article attempts to examine human capital as a determinant of local economic development, which is defined as a process of quantitative changes, that is the economic growth, as well as qualitative changes regarding transformation of socio-economic structures. It has been assumed that the measure of efficiency of these processes is the enhancement of standard of living of inhabitants. The objective of the study was to assess the impact of changes in the human capital of a selected local government on the dynamics of its economic development. The study comprised the relationship between human capital and economic development of Ustka Municipality. Ustka is a territorial unit of a supralocal character resulting from its coastal location and subsequent multi-century traditions of maritime economy (fishery, fish processing, shipbuilding industry), recuperative qualities of climatic conditions and attractive recreational properties (sunbathing, sea bathing, land and sea tourism). The research period, encompassing a period between 1995 and 2015, results from the availability of relevant statistical material. Selected job market indicators in two coastal municipalities located in Central Pomerania, i.e. Darłowo and Łeba, were used as comparative material, auxiliary for the purpose of the examination.

Keywords: human resources, human capital, economic development, local economy.

Introduction

The article attempts to analyze selected elements of human capital as a factor of local economic development, defined as a process of positive transformations taking place in a selected, relatively small area and covering all aspects of the life of its residents. The objective of the study was to assess the impact of changes in the human capital of a selected local government on the dynamics of its economic development, assuming as a research hypothesis the existence of significant differences in the impact of human capital on local development. The subject of the study concerns the analysis of human capital in the period from 1995 to 2015 in Ustka Municipality, a supralocal center of economic development,

whose coastal location favors the development of maritime economy, tourism and recreation, as well as spa and wellness sectors.

In the preparation of the article, the literature and statistical data available in the Local Data Bank (BDL), Regon Internet Database (BIR), Public Information Bulletin (BIP), the website "*Polska w liczbach*" ["Poland in numbers"], and data obtained from the Local Tax Office in Słupsk were used. It should be noted that the information contained in the databases - especially the BDL - was in some cases incomplete, i.e. it did not cover the entire research period. The analysis of the empirical material was carried out using mainly descriptive statistical methods, where a correlation analysis was used to examine the dependence between selected factors and the dynamics of local development. Failure to compare the measures calculated for Ustka with those obtained in other similar municipalities would surely provide an incomplete assessment, hence the analysis also employed selected human capital indicators of two coastal municipalities located in Central Pomerania, namely Darłowo and Łeba.

The second part of the study presents the basic theoretical assumptions in a relationship between human capital and economic development. Parts three and four discuss empirical research results whereas the third part contains an analysis of the human capital of Ustka, while the fourth part presents elements of the assessment of local economic development. The last part of the study summarizes the presented analyses and draws relevant conclusions.

Human capital as a factor of economic development

Economic development is an category marked by considerable complexity, which stems primarily from the multitude of factors affecting, or sometimes shaping, the development process. There are many classifications of local economic development factors available in the literature, including the traditional division of factors into internal (endogenous) and external (exogenous). Although the development process always requires the involvement of both internal and external factors, and the relations between them can be considered as the driving force of development (Potoczek 2003, p.156), it is increasingly argued that it is the internal factors that truly determine local development (Adamowicz 2003, pp. 20-21).

Capital resources which are at the disposal of a given local government determine its potential, i.e. the possibility of carrying out the tasks for which it was established in the first place. Human capital is considered to be the one which is the most basic and which decides about tapping into a specific potential and generating its growth.

P. Krugman and R. Wells (2012, p. 902) view human capital as increasing labor productivity realized through education and knowledge, stressing at the same time the

importance of technological progress which influences the high level of technical advancement in many professions. According to the OECD, "the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (GUS, 2014, p. 3). In a broad sense, human capital is defined as the effect of investment not only in education, but also investments prompting the improvement of the qualitative characteristics of human resources, i.e. investments in health, environmental protection and culture (Kożuch 1998, p. 9). It can be stated that human capital is the result of many different types of investments in people, which translate into improved human economic activity (Janc 2009, p.7), with the basic implication of human capital being that the economic benefits stemming from these investments do not just increase the productivity of individuals, but also boost the productivity and wealth of the community in which these individuals live (Schuler 2001, p. 5).

Human capital is a potential factor in the rapid development of an economy, since educated people are more innovative –an argument put forward by L. Balcerowicz (1998, p. 37), who also adds that "there is no direct correlation between the level of education and the pace of economic development". Thus, the quality of human capital being a derivative of the quantity and quality of the workforce involved in research and development is an important endogenous factor of economic growth (Knapińska, Woźniak 2016, pp. 138-139).

In the report *Monitoring of Environmental Progress* published by the World Bank (World Bank, 1995, as cited in Płoszaj 2007, p. 289), an attempt was made to estimate sources of global wealth in the context of three types of capital: natural, economic and human (the last one covering social and human capitals). According to this source, 20% of world wealth pertains to natural capital, 16% to economic capital (*produced assets*), and the remaining 64% - to human capital (*human resources*).

The measurement of human capital is not an easy task due to the heterogeneity of this economic category, the reason for which it often comes down to what is possible to measure, rather than what is desirable. Three basic approaches to measuring human capital are distinguished (Czajkowski 2012, pp. 5-6). In the first (retrospective),the goal is to determine the "cost of production" of human capital, which, depending on the study, may either include expenditure on living, health care and education, or focus strictly on education spending. The second (prospective) approach bases the estimation of the human capital stock on the discounted stream of future income of the employees of a given economy. This is the most difficult approach due to the frequent lack of reliable data. The third approach is based on the study of the level of education using measures such as: schooling rate, percentage of

interruptions in education or repetition of the grade (year of study), average time of study, and results of tests measuring scholastic performance (e.g. the PISA).

It is worth noting that in the study of long-term economic and social trends in the countries of Central and Eastern Europe, forming part of the project *The European Human Capital Index: The Challenge of Central and Eastern Europe*, in which the role of human capital in economic growth and social well-being was examined, the authors distinguish four areas of analysis of human capital (Ederer et al. 2007, pp. 8-17):

- *Human Capital Endowment,* measured by spending on training and education per one employee,
- *Human Capital Utilization*, measured as a percentage of employees in the entire population and containing an intergenerational component, showing that different age groups have different capital resources,
- *Human Capital Productivity*, measured as a ratio of GDP to the number of employees in an economy,
- *Demography and Employment*, measured by the indicator of the forecast number of people employed in the economy of a given country in 2035.

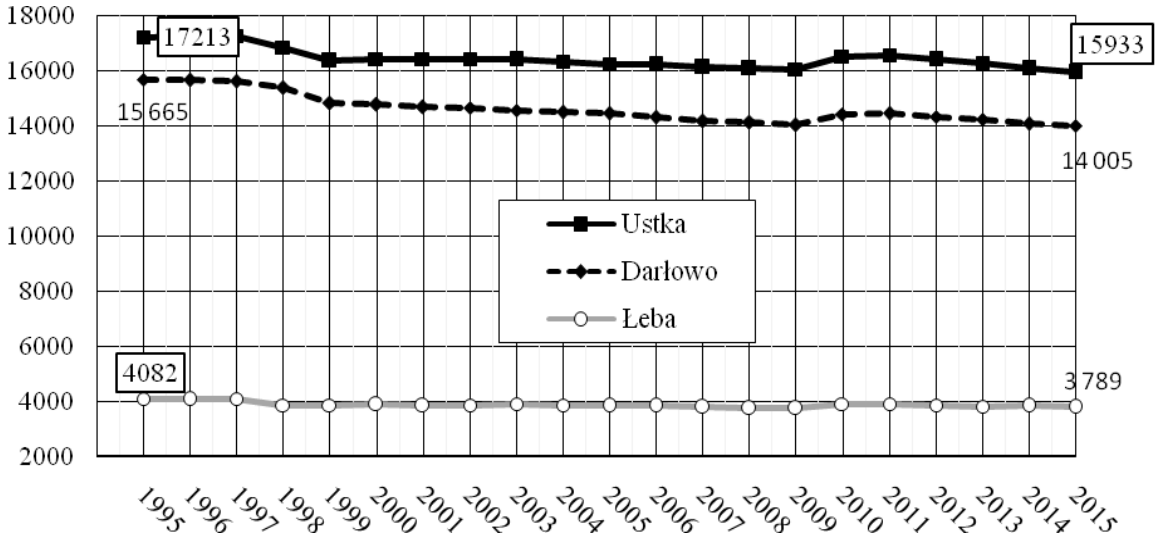
The measures used in this article, due to the limitations with respect to the source data collected and made available by the Polish statistical offices, are a compromise between the availability of data and their desirable relevance. In this light, a remark by D. Strahl (2004, p. 344) seems fully justified that the selection of measures is not only a derivative of the research objective and the adopted definitions of human capital and local economic development, but also of the scope of access to relevant statistical material.

Analysis of Ustka's human capital

Human capital is generated by labor resources, but interestingly, the term *resources*, which is often identified in the literature with capital, goes beyond the concept of capital. In this article, indicators defining human potential (derived from the demographic situation) and the degree of economic and professional activation of the population were adopted as measures that characterize human capital in terms of resources,. The size of labor resources depends primarily on the number of people actually residing in a given territory[1].

[1]The base information for the number and structure of inhabitants inUstka, Darłowo and Łeba was data from censuses (conducted in 1998, 2002, 2010), adjusted for "inter-census" yearsusing the balance sheet method according to the following scheme: population at the beginning of the year + live births - deaths + permanent residence - check-out from permanent residence = population at the end of the year.

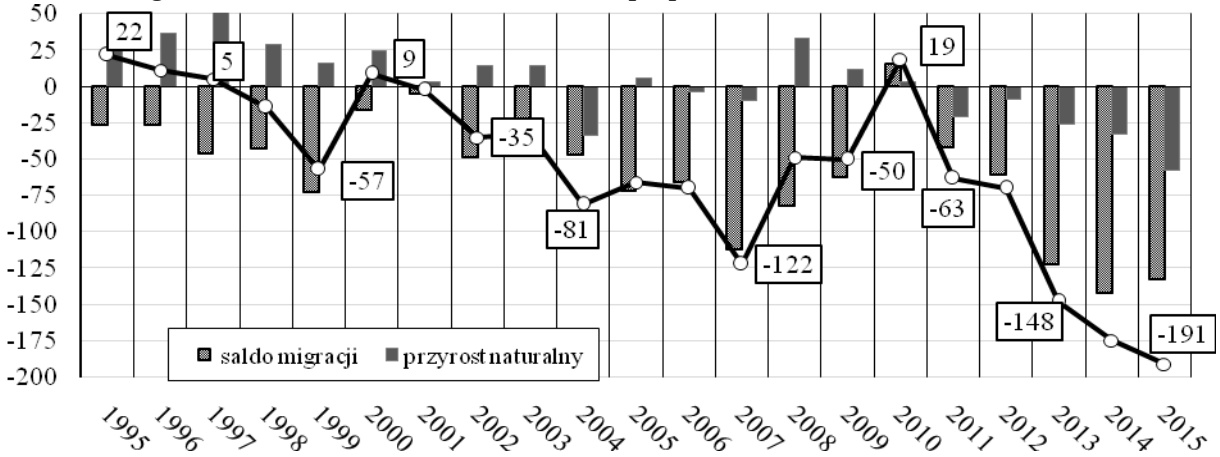
Chart 1. Actual population of Ustka, Darłów and Łeba as at December 31st [people]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

The downward trend presented in Chart 1 should be seen as unfavorable, with the largest decrease in the number of residents (at 10.6%) recorded for Darłowo. Meanwhile, for Ustka and Łeba, the decline was almost the same, at 7.4% and 7.2%, respectively. Population size was dependent on two factors: birth rate (natural population growth) and migration balance (see Chart 2). A positive birth rate in Ustka was recorded mainly in the period between 1995 and 2003, while the last five years of analysis indicate a growing prevalence of deaths over births, and consequently, an overall change in the demographic situation. Data from Chart 2 show that migration had a greater impact on the decrease in the number of Ustka residents than birth rate. The decisive factor was internal migration, as emigration balance for the years 1995-2015 was positive (104 immigrants per every 75 emigrants). A decrease in the number of residents was determined primarily by internal migration also in other municipalities.

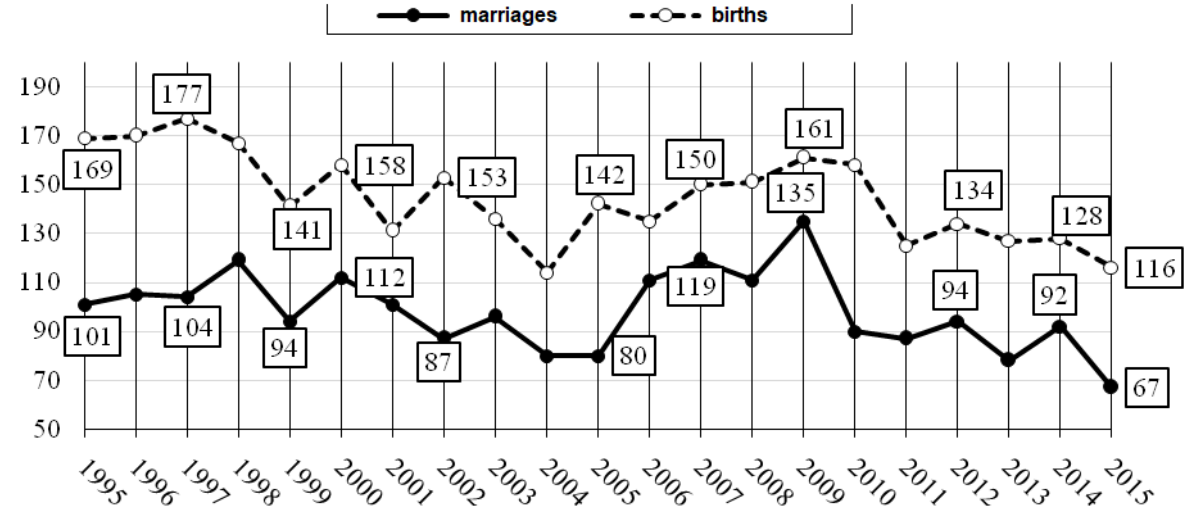
Chart 2.Change in the total number of Ustka residents [people]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

It might be worth addressing the correlation of the number of births with the number of marriages concluded by Ustka residents, as shown in Chart 3. The value of the Pearson coefficient for this correlation (0.63) indicates a moderate correlation between these variables[2].

Chart 3. Marriages and births in Ustka



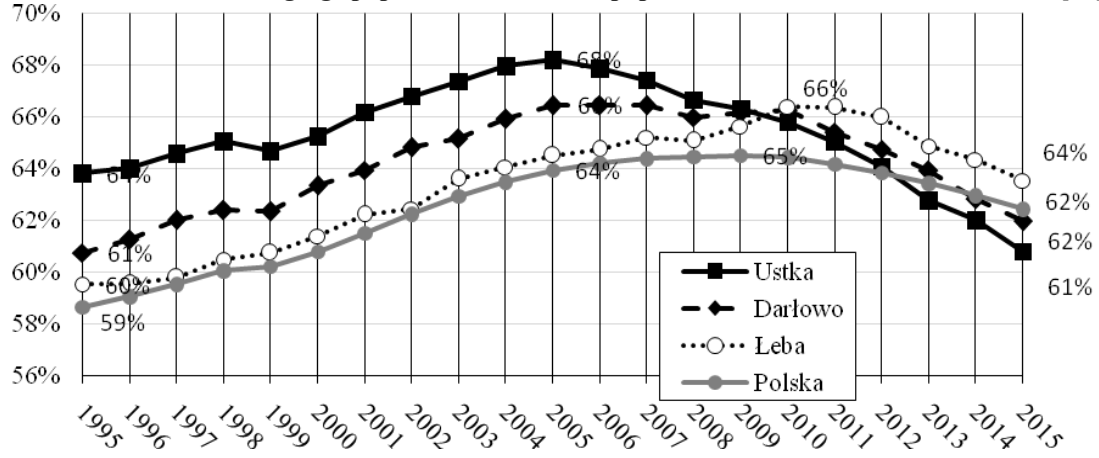
Source: own study based on BDL data, available at:https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

It needs to be emphasized that real labor resources are determined by the number of working-age residents (men aged 15-64, women aged 15-59). The share of working-age population, presented in Chart 4, was shaped for Ustka until 2009 at a higher level than in the compared towns of Darłów and Łeba. At the same time, until 2012, it exceeded the average share of working-age population for Poland as a whole. However, since 2006, there was a

[2] It is assumed (Kośny and Peternek 2011, p.74) that the value of the Pearson coefficient in the range of 0.4-0.7 is moderate, 0.7-0.9 –is significant, above 0.91 –shows a very strong correlation.

change in the trend of growth, which is considered unfavorable from the point of view of labor supply. Correlations between individual age groups - i.e. working age, pre-working age (under 17) and post-working age (men - 65 years and above, women - 60 years and above) - are presented in Chart 4 in the form of age dependency ratios.

Chart 4. Share of working-age population in the total population of Ustka, Darłowo and Łeba[%]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793#, https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/3802#, https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2767#, http://bdm.stat.gov.pl/ (retrieved 20.11.2017).

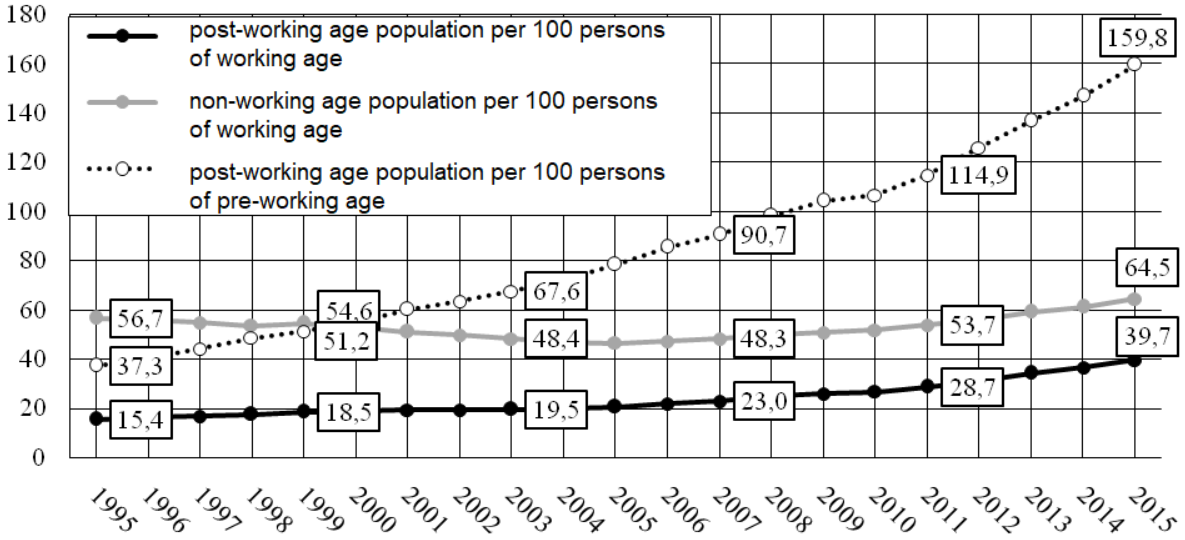
The ratio of the population in post-working age to the population in pre-working age was particularly unfavorable from the point of view of Ustka's human capital. On the other hand, the increase of the demographic correlation ratio, calculated as a ratio of non-working age people to working-age people (Dańska-Borsiak Dan, Laskowska 2016, p. 33, Murkowski 2017, p. 118), should be assessed positively. This indicator, being a destimulant, in the final year of the analysis was only 7% higher than the national average (60.3)[3]. It is worth noting that the observed changes in the demographic structure, similarly to most developed countries, are typical of the so-called second demographic transition, marked by a decrease in birth rate below the level guaranteeing continuous replacement of generations (Szmytkowska et al., 2010, pp. 7, Pruszyński, Putz 2016, pp. 129-130).

Human social resources, including the professionally active population, meaning people who are working and actively seeking employment, are also used as a measure of human capital. To assess professional activity, the ratio of the number of professionally active people to the number of people aged 15 and more is used (Knapińska 2009, p. 62). The relationship between professionally active people and the working-age population is also used, which is a method used in the article. In this particular case, it was considered that residents of the age

[3]Source: Polish Central Statistical Office (GUS), available at: http://swaid.stat.gov.pl/Demografia_dashboards/Raporty_Predefiniowane/RAP_DBD_DEM_3.aspx (retrieved 20.11.2017)

that entitles them to retire for natural reasons are relatively rarely found in the group of jobseekers.

Chart 5. Age dependency ratios [people]

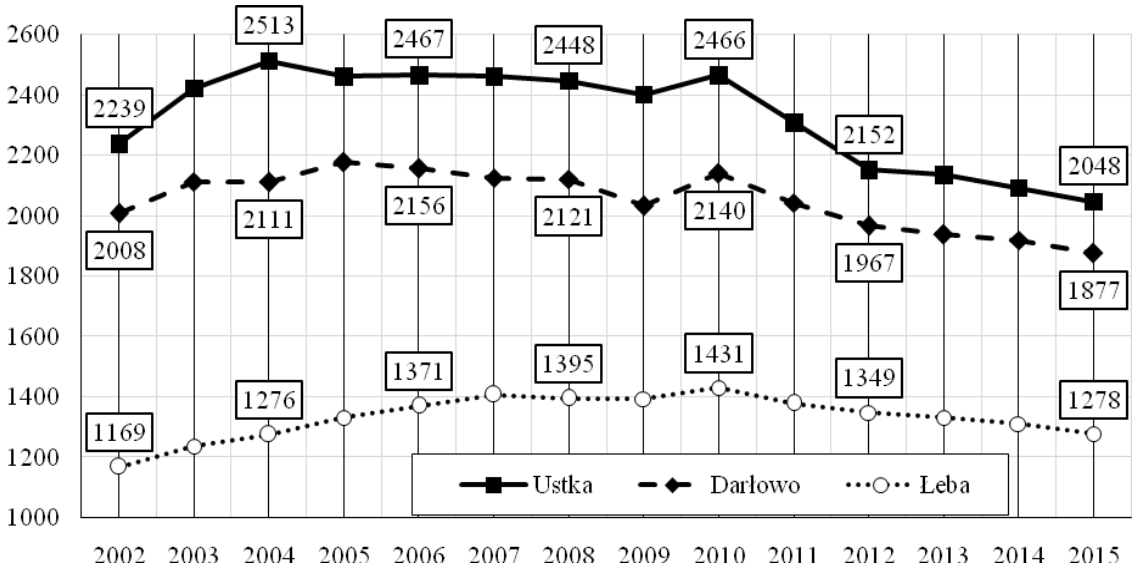


Source: own study based on BDL data, available at:https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

In the case of the analyzed local governments, however, an issue arises concerning the calculation of the activity rate (i.e. labor force participation rate), due to incomplete data on the number of employees[4]. To make the activity rate more realistic, an attempt was made to estimate the approximate number of employees in microenterprises, taking as a base the information from the 2002 Census.

[4] In the source database (BDL), this category at municipal level does not include persons who were employed in companies of natural persons employing up to 5 (in 1995-1998) and up to 9 (1999) people, and in economic entities employing up to 9 people (from 2000 onwards).

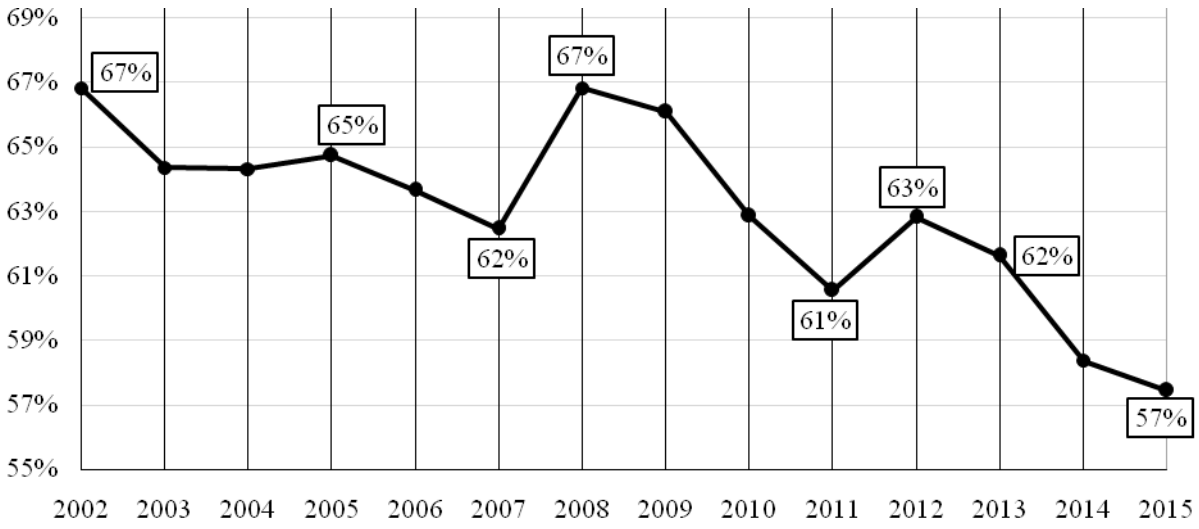
Chart 6. Number of microenterprises in Ustka, Darłowo and Łeba



Source: own study based on BDL data, available at:https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793#, https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/3802#, https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2767# (retrieved 20.11.2017).

This problem is all the more significant given that the share of microenterprises in the structure of all entities in the period from 2002 to 2015 was approx. 97%. Based on data published in the BDL, it was calculated that 2,228 people were employed in 2,239 microenterprises, hence it was assumed thateach of these companies employed an average of 1.3 employees.

Chart 7. Economic activity rate of Ustka residents [%]

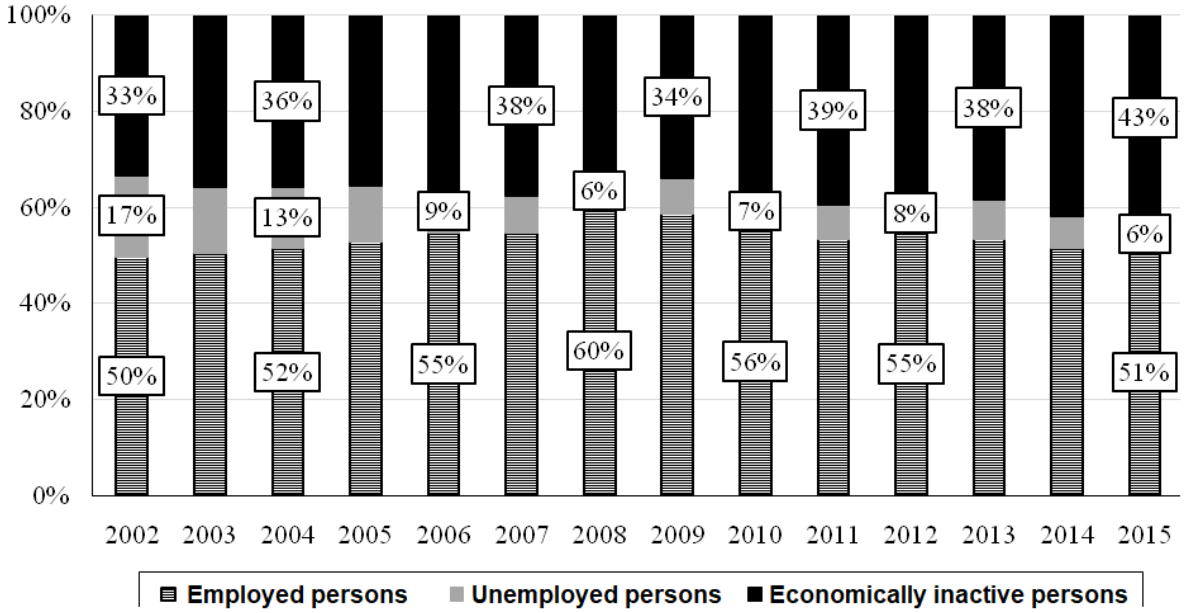


Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

Chart 7 indicates an unfavorable downward trend in economic activity. To investigate the causes of this phenomenon, it was necessary to analyze the structure of the working-age

population in terms of its economic activity. As can be seen in Chart 8, the declining number of unemployed persons was accompanied by a growing number of passive residents in Ustka, an occurrence which is unfavorable in economic terms.

Chart 8. Economic activity of Ustka's working-age population [%]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

Education spending per one student in Ustka was assumed as the basic indicator for measuring the quality of human capital,. Real wages of Ustka residents were also assessed, assuming that their level is to a large extent correlated with their professional skills (Roszkowska, Rogut 2007, p. 80).

Table 1.Education spending and average wage (in real prices) [PLN]

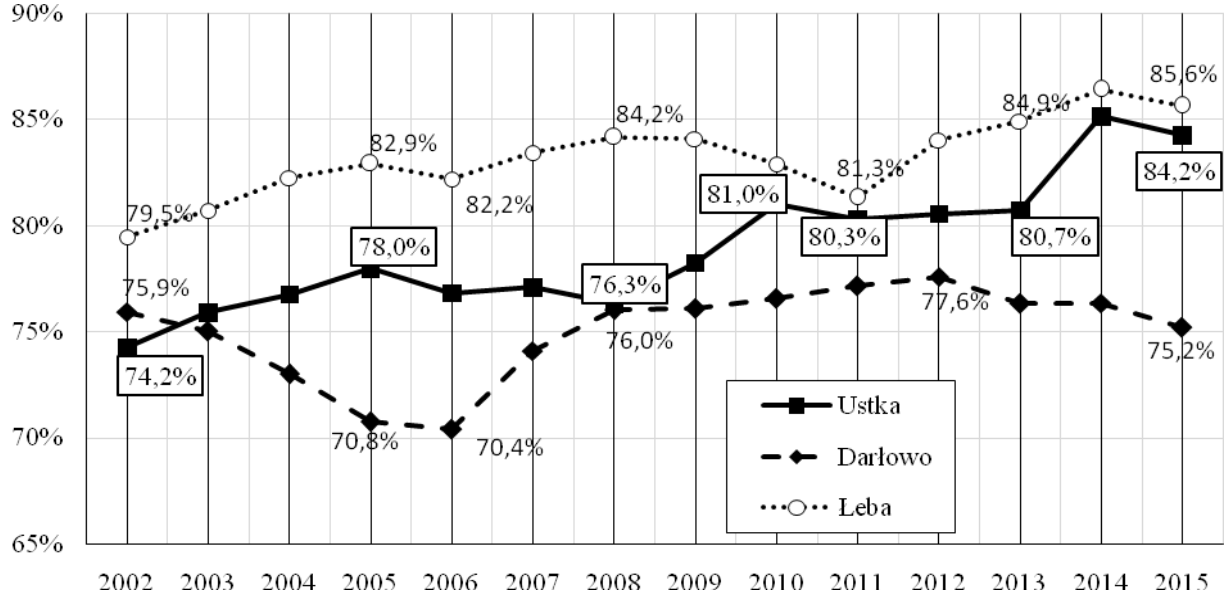
Years	Education spending per capita	Gross average wage	Years	Education spending per capita	Gross average wage	Years	Education spending per capita	Gross average wage
1995	.	.	2002	1090	1663	2009	2106	2181
1996	931	.	2003	1371	1743	2010	2538	2281
1997	1045	.	2004	1708	1773	2011	3539	2287
1998	1064	.	2005	2309	1835	2012	2702	2285
1999	1294	.	2006	2005	1883	2013	2746	2350
2000	1149	.	2007	2149	2003	2014	2842	2560
2001	1236	.	2008	2287	2097	2015	3004	2650

Note**: .** no data.
Source: own study based on BDL data, available at: http://bip.um.ustka.pl/Article/id,371.html, BDL/dane/teryt/kategoria/2793#, portal Polska w liczbach, http://www.polskawliczbach.pl/Ustka (retrieved 20.11.2017).

As can be seen from the data presented in Table 1, Ustka's spending on education (section 801 of the Budgetary Classification – Education and upbringing, and section 854 - Educational care) per capita, i.e. per preschooler and student, increased 3.2 times between 1996 and 2015. It should be noted that said data applies only to current expenditure, excluding investments. A positive assessment of the presented trend results from the assumption that the qualifications developed in the education and upbringing process are the greater, the more expenditures are earmarked for education (Moroń 2012, pp. 16-17).

Indirectly, the quality of human capital can also be characterized by the value of average wages, assuming that their growth is correlated with both the level of education and professional experience of employees, and that it reflects changes in their productivity. The main disadvantages of assuming that wage differences significantly reflect differences in the productivity of human capital concern primarily the fact they do not take into account the effects of economic growth and factors affecting local wage disturbances, such as persistent high unemployment or local monopsony in the labor market (Czajkowski 2012, pp. 9-10). In addition, for the assessment of more than a 1.5-fold (in 2002-2015) wage increase, including inflation, the average remuneration of residents of the analyzed municipalities was compared with the average remuneration in Poland (see Chart 9), noting - in the case of Ustka–an increase in the level of wages in the analyzed period by 10 percentage points.

Chart 9.Share of gross average income vs. average income in Poland [%]



Source: own study based on „*Polska w liczbach*" data, available at: http://www.polskawliczbach.pl/ http://www.polskawliczbach.pl/Ustka,http://www.polskawliczbach.pl/Leba, http://www.polskawliczbach.pl/Darlowo (retrieved 20.11.2017).

The article also proposes measuring the quality of human capital related to foreign language learning and computerization of schools, despite the fact that it is the level of education that is considered to be the basic element of the assessment of this capital (Zieliński, Gaura 2014, pp. 9-18). The above limitation is a consequence of access to the BDL in terms of residents' education being limited to data from census years (1998, 2002). In the case of Ustka, schooling indices are mostly unhelpful, as they are above 100% due to the fact schools in Ustka are attended also by children from outside the municipality (BDL).

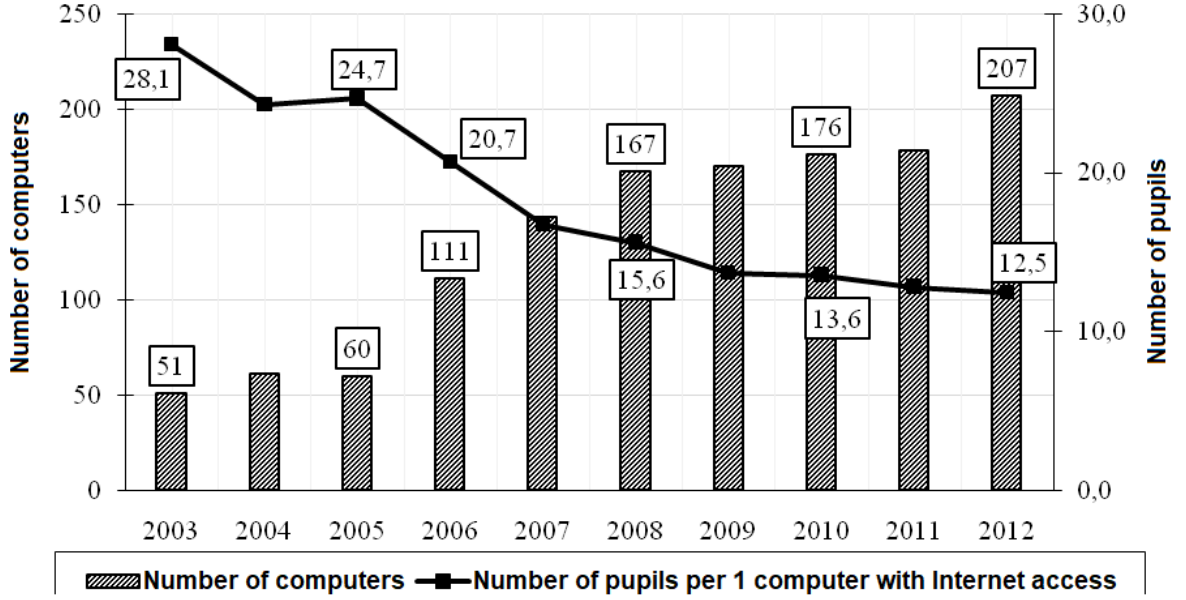
Table 2. Students learning foreign languages at schools in Ustka [people,%]

Item		2008	2009	2010	2011	2012	2013	2014	2015
Elementary schools	Number of students	1243	1172	1131	1151	1109	996	1206	1342
	% of students in total*	126%	127%	127%	129%	125%	117%	131%	130%
Secondary schools	Number of students	807	807	1119	1282	1048	982	1018	1090
	% of students in total*	119%	118%	165%	200%	176%	175%	182%	190%

Note: *students are included as many times as the number of different languages classes they attend
Source: own study based on BDL data, available at:https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

In the conditions of a knowledge-based economy, as aptly put by D. Bell, "knowledge and information have become a source of strategy and change in society, which is equivalent of what capital and labor are in an industrial society" (as cited in Olechnicka 2000, p. 38). Thus, the skills that significantly increase the quality of human capital (along with knowledge of foreign languages) can also include the use of information technology. Chart 10 shows that in the analyzed period there was a 4-fold increase in the number of computers in schools, while access of students to the Internet has more than doubled.

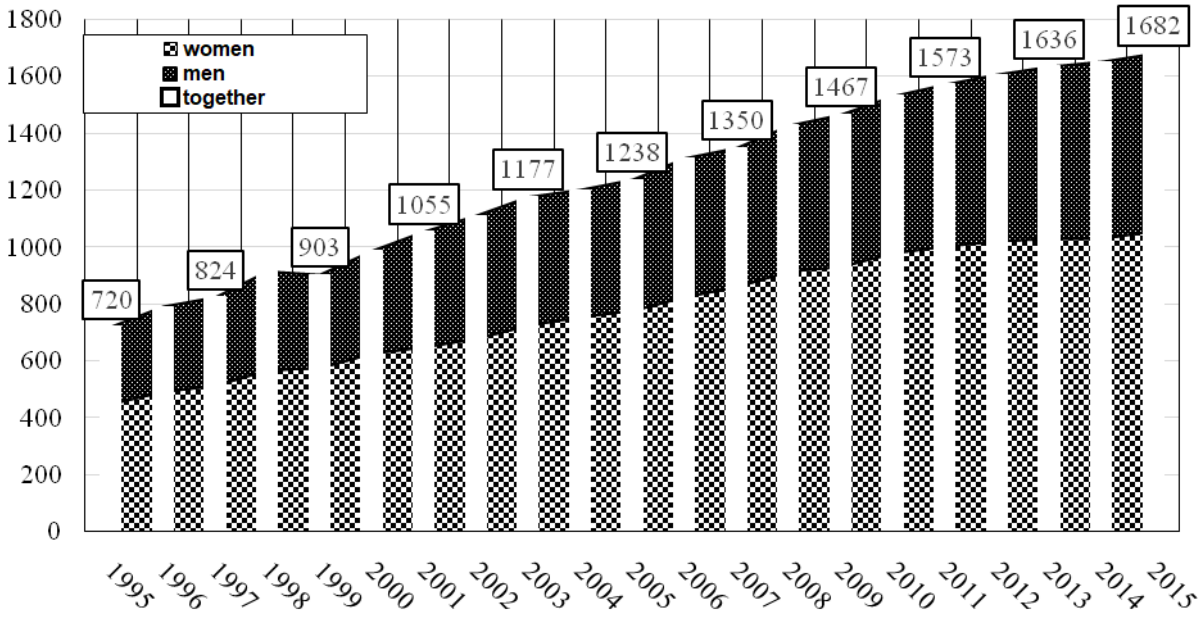
Chart 10. Computers in elementary and secondary schools [pcs, people]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/,BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

One of the most important non-economic qualities of human capital is health. When assessing health, it is assumed that the more healthy people are, the longer they live, hence it seems that the average life expectancy might be the right measure to turn to[5].

Chart 11.Number of Ustka residents aged 70 and above [people]



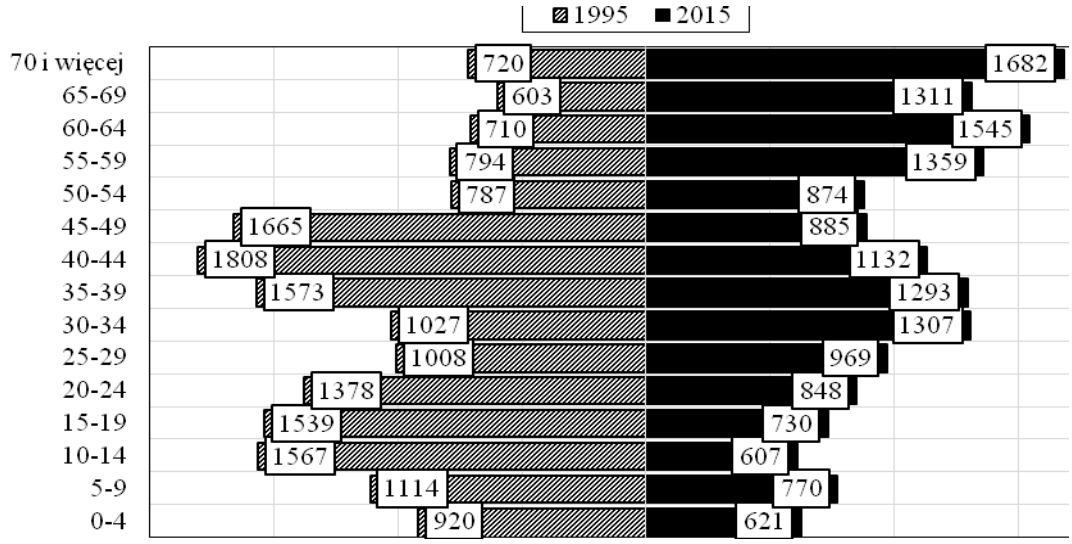
Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

However, due to the lack of available data in this respect, an attempt was made to estimate the size of this measure indirectly, relying on the fact that the number of Ustka

[5] This measure is one of the components of the Local Social Development Index (Arak et al. 2012, pp. 36-38).

residents aged 70 and above, as well as the percentage share of this group in the entire population, increased throughout the research period. From the data shown in Chart 11, it can be concluded that the average life expectancy of Ustka residents has increased, that is – of course – without quantifying that figure.

Chart 12.Age-sex pyramid of Ustka residents, 1995, 2015
[people]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

Chart 12 is a graphical representation of the structure of the population in the form of a combination of two adjacent histograms of age distribution, developed separately for 1995 and 2015. It is worth noting that the 2015 histogram is a reflection of the regressive type of structure (narrow base and wide crown), a feature characteristic of aging societies.

Elements of the assessment of local economic development

Correlations between human capital and economic development in Ustka were analyzed in relation to quantitative changes, i.e. economic growth, and also to qualitative changes, assuming that the measure of the effectiveness of these activities is the increase in the standard of living (Bąkiewicz, Czaplicka 2011, p. 77). Since the assessment of economic growth based on GDP was difficult to carry out at municipal level due to the lack of access to relevant statistical material, the calculations relied on wealth ratios. The subject of the study was the income of residents calculated on the basis of PIT tax declarations and the municipality's own revenue, in which funds from targeted subsidies and EU funds were omitted given that they are not related to sustainable growth of wealth. As part of the analysis of qualitative aspects of local economic development, structural transformations were

examined in order to verify how much they stimulated economic growth. Assuming that the positive impact of human capital on economic development can be achieved by increasing productivity and entrepreneurship, the rate of entrepreneurship during the research period was also reviewed.

Table 3. Residents' real income and local government's own revenue per capita [PLN]

Years	Residents' income per capita	Local government's own revenue per capita	Years	Residents' income per capita	Local government's own revenue per capita	Years	Residents' income per capita	Local government's own revenue per capita
1995	7233	201	2002	8461	395	2009	12077	716
1996	6928	289	2003	8524	441	2010	12493	667
1997	7131	280	2004	8726	577	2011	12282	883
1998	7326	310	2005	9098	773	2012	12167	743
1999	8875	530	2006	9925	601	2013	12877	790
2000	8414	438	2007	10785	885	2014	13230	856
2001	8550	411	2008	11650	974	2015	13931	941

Source: own study based on data from the Local Tax Office in Słupsk (letter dated 14/12/2017, ref. no.: 2216-SKA3.4020.4.157.2017) and BDL, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

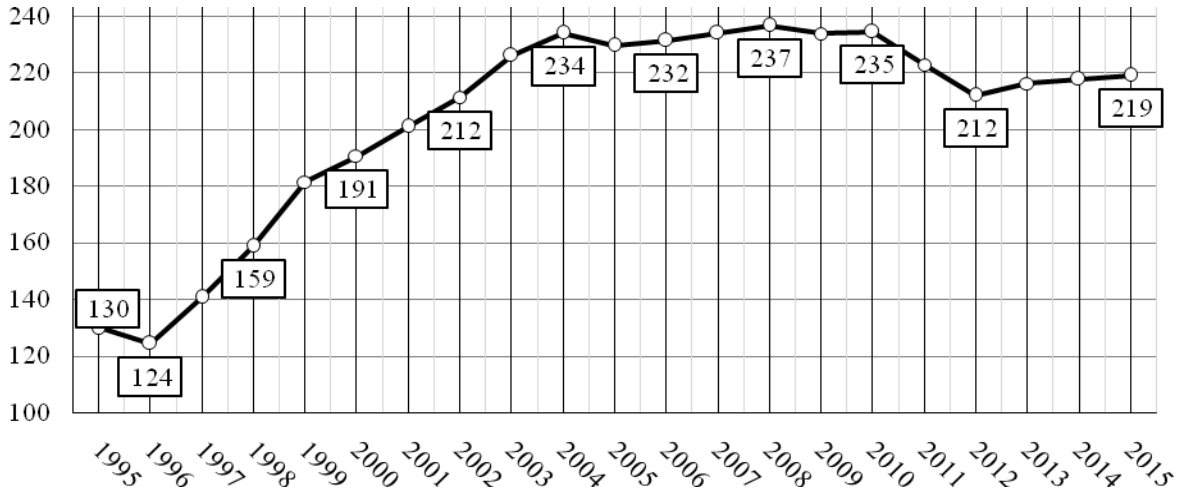
The nearly2-fold increase in the real wealth ratio of Ustka residents, presented in Table 3 (in nominal terms, the increase was almost 5-fold), can be considered the basis for a positive assessment of the dynamics of Ustka's economic development. This assessment is confirmed by the increase in the share of the average income per Ustka resident against the GDP per one resident of Pomerania[6], which was 76% in 2000, reaching 80% in 2015. This shows, bearing in mind all reservations related to the different methods of calculating measures, that the growth in wealth ratio among Ustka residents was slightly higher than the increase in average wealth (calculated by the GDP ratio) of Pomerania since 2000. An analysis of the correlation between the dynamics of the economic development of Ustka, measured by the indicator of residents' income and changes in the quality of human capital, measured by the local government's spending on education, indicates a very strong correlation at 0.91, with the coefficient of determination at approx.. 83%, which proves the high accuracy of adjustment of regression to the empirical data.

Table 3 shows the shaping of the average own revenue of the municipality, which in real terms increased 4.7-fold during the analyzed period. It should be noted that this increase was not influenced by location, constituting the main source of revenue of Kleszczew, the

[6] Source: West Pomerania, eRegion, available at: http://eregion.wzp.pl/wskaznik/produkt-krajowy-brutto-na-1-mieszkanca (retrieved 12.02.2018).

richest Polish municipality[7]. In addition, the growth rate of Ustka's own revenue, apart from the measures of the local government and Ustka residents, was largely influenced by changes in the economic situation (e.g. economic crisis in 2009-2010) and fiscal policy of the state, over which Ustka's local government had no direct influence.

Chart 13. Entrepeneurship rates– Ustka



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

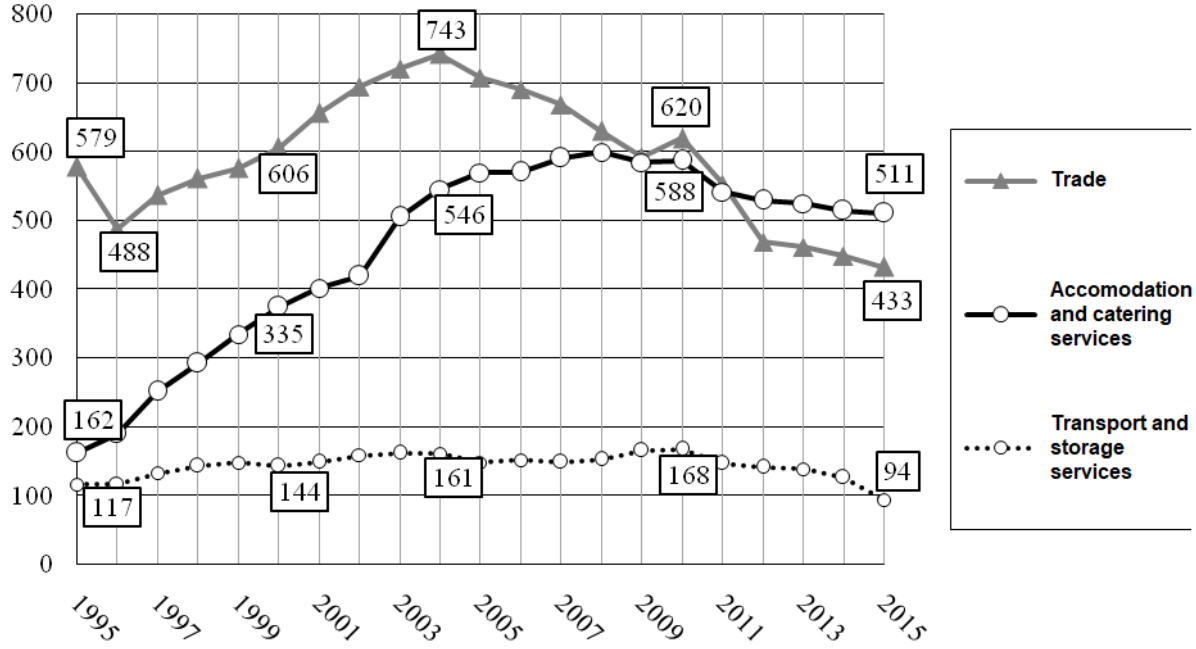
Changes in the economic potential of the examined local governments are illustrated in Chart 13, showing entrepreneurship rates calculated as the number of business entities per 1000 working-age residents. The increase in the entrepreneurship rate between 1995 and 2004 was accompanied by the increase in real labor resources, measured by the share of the working-age population in the population of the municipality (see Chart 4). The correlation between the two variables measured by the Pearson correlation coefficient at 0.94, with the coefficient of determination at 87%, should be assessed as very strong.

An advantage of the qualitative changes in the material structure is the movement of capital resources towards more productive and competitive areas. At present, this type of activities in the most developed economies are services (Czaplicka2011, p. 3). In the case of Ustka, as a consequence of a significant decline in shipbuilding production and the closing of large fish processing plants outside the town limits, the share of industrial enterprises decreased from 12% to 7%, while the share of entities providing services increased from 76% to 82% at the end of the research period. Importantly, the share of enterprises providing

[7] At over PLN 234 million (this was the budget of the Kleszczewmunicipality in 2013), more than PLN 150 million were property taxes, maintenance fees and other charges paid by the brown coal mine and the Bełchatów power plant (Solska 2014).

business and IT services, acting as carriers of modern technological and organizational progress, increased, reaching in 2015 the share of 6.8% in the number of service enterprises.

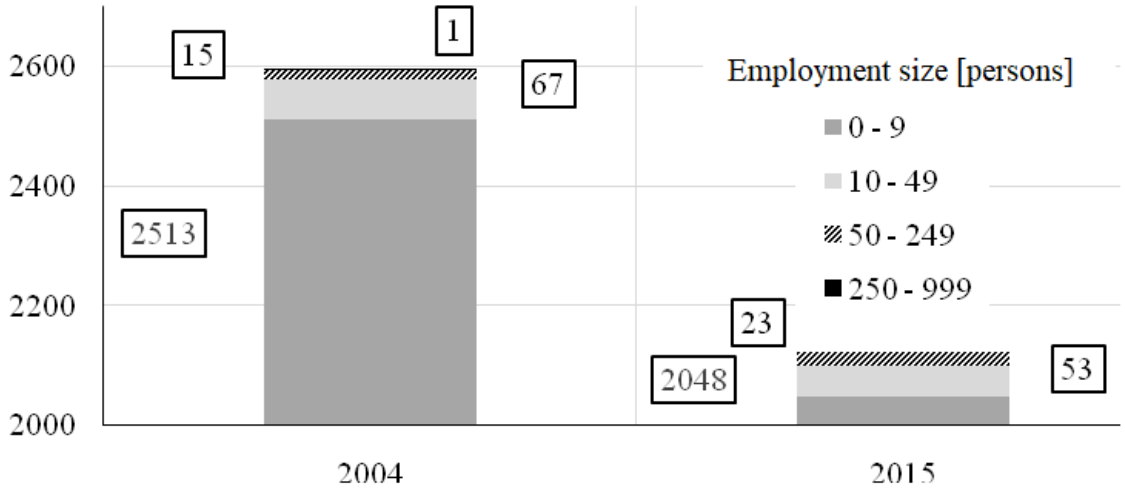
Chart 14. Number of business entities by selected types of market services



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

Chart 14 shows there was also a change in leadership among service providers. Trading enterprises lost their number one position after 2011 in favor of tourism service providers, i.e. providers of accommodation and catering services. Hotel-type services were provided by various hotels and boarding houses, but a significant also comprised natural persons dealing in seasonal rental of private accommodation (Regon Internet Database). According to the data shown in Chart 15,from among companies operating within Ustka's economy, microenterprises (employing up to 9 employees) were predominant, constituting approx. 97% of enterprises in total.

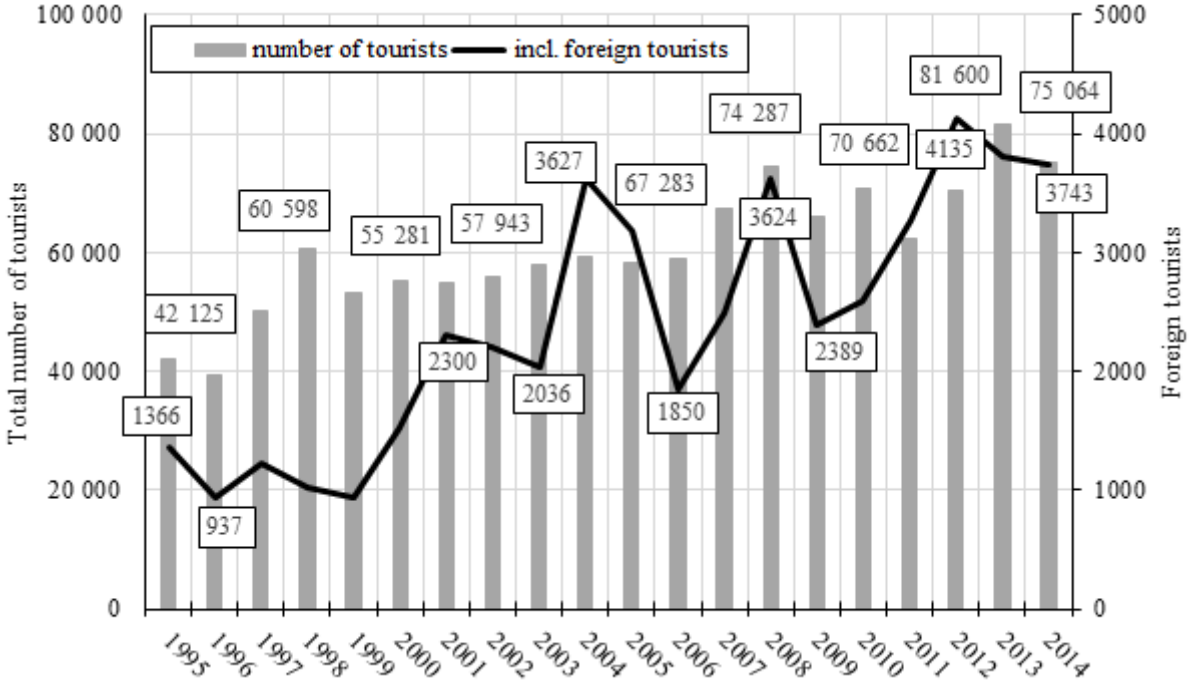
Chart 15. Number of business entities by employment size classes



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

The structural changes presented in Chart 14 were a response of the market to the dynamically increasing tourism traffic, springing from the growing popularity of Ustka as a seaside resort. Particularly noteworthy is the 2004 increase in the number of foreign tourists, which coincides with the accession of Poland to the EU.

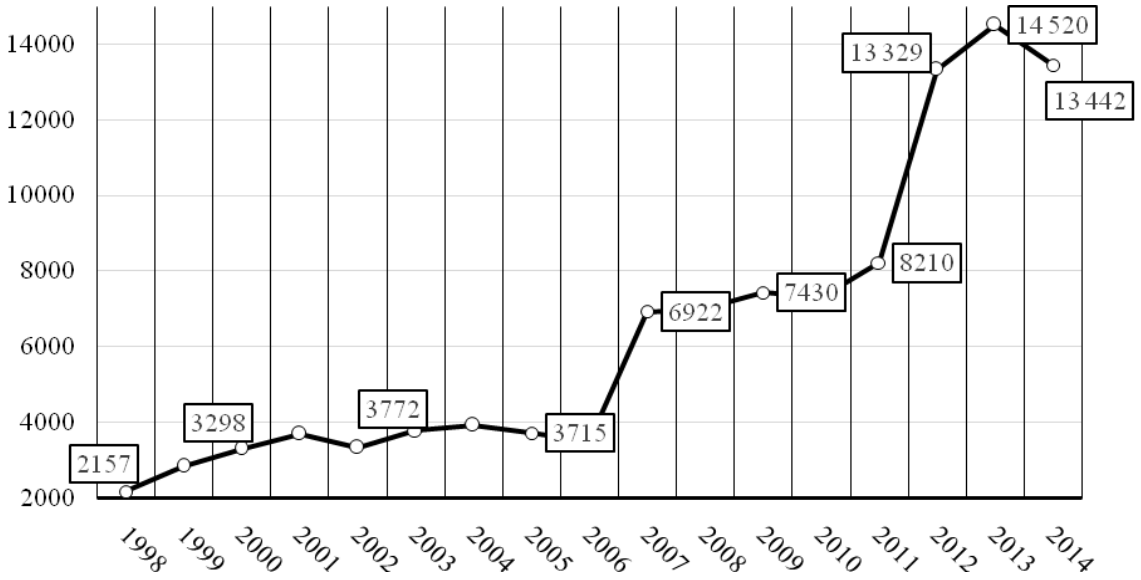
Chart 16.Number of tourists in Ustka [people]



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

The fastest growth, along with traditional recreational tourism, was recorded for health tourism[8], as a result of which chronologically the youngest economic function in Ustka became the most important in the second half of the research period. Based on the Ustka's own documented deposits of balneological raw materials, i.e. brine and peat (therapeutic mud), Ustka's health resorts provided year-round medical services, including prevention and rehabilitation (including spa and wellness services), as well as treatment of rheumatic, orthopedic, cardiac and respiratory diseases/conditions (Development Strategy for the Town of Ustka until 2020, 2009, pp. 44-45, 68).

Chart 17. Number of tourists in spa establishments [people]

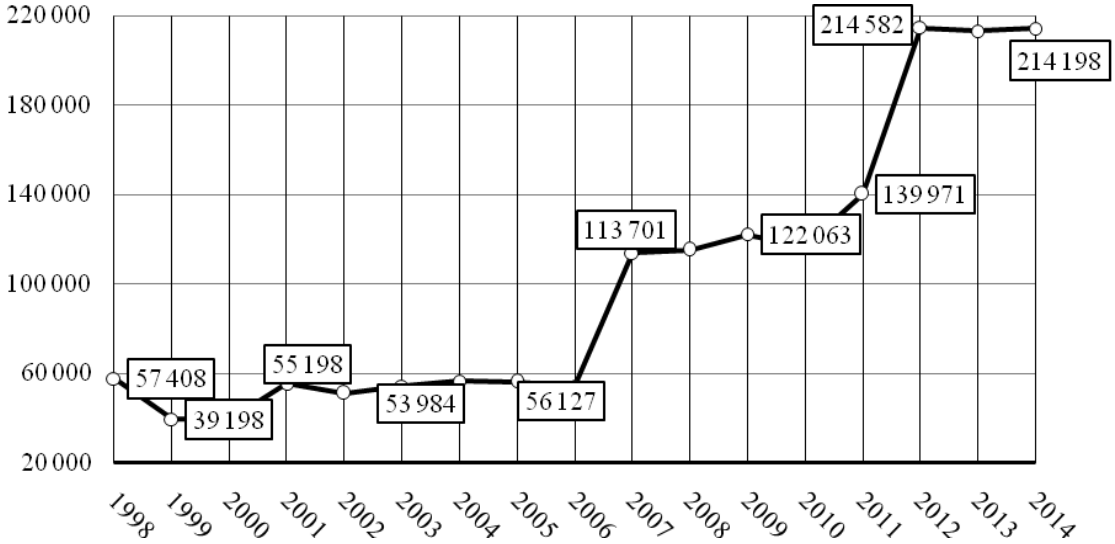


Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# retrieved 20.11.2017).

It needs to be emphasized that the spa and climate characteristics make Ustka a perfect place for year-round treatments. The town's coastal location moderates daily and annual air temperature amplitudes, and at the same time, the average number of sunshine hours is above 1,500. However, the more than 6-fold (in 1998-2014) increase in the number of spa tourists in Ustka - shown in Chart 17 –would have not been possible without investments in health-resort infrastructure. Accordingly, the significant increase in the number of overnight stays in health resorts was owed to the launching in 2007 of one such establishment, and then two more in 2012 (BDL).

[8] On 1 January 1988, Ustka was officially recognized as a spa town.

Chart 18. Number of overnight stays in Ustka health resorts



Source: own study based on BDL data, available at: https://bdl.stat.gov.pl/BDL/dane/teryt/kategoria/2793# (retrieved 20.11.2017).

Summarizing, it can be said that the most important element of the town's tourism offer, resulting from local natural resources, has been health tourism . Importantly, tourist-patients are not driven solely by the spa infrastructure, i.e. the healing qualities of the area or the range and level of spa services, but also the attractiveness of tourist and recreational facilities.

Conclusions

The analyses carried out allow to draw the following conclusions:

- the period between 1995 and 2015 was marked by a dynamic economic growth of Ustka, taking as a criterion the values of wealth ratios;
- the assessment of qualitative changes cannot be as unambiguous as in the case of quantitative changes; proprietary transformations took place prior to 1995, while material changes were limited to the increase in the share in the municipality's economic structure of entities providing broadly understood tourism services,
- the analysis of the correlation between human capital in terms of resources and the level of economic development allows to distinguish two sub-periods with a different direction of impact on the dynamics of local development. Depending on the analyzed measure, the year ending the first subperiod, in which human capital could have a stimulating effect on economic development, was either:
- 2004, in which the largest number of business entities operated in Ustka and the entrepreneurship rate was the highest,

- or 2005, in which the share of the working age population in the total population was the highest;
- the demographic deterioration in the second year of the subperiods (after 2004), and consequently, the increasingly unfavorable trends in age dependency ratios and activity rates (professional and economic) made the impact of human capital on economic development in these years overall destimulating;
- negative balances of internal migration and the accompanying decline in birth rate (natural growth) from 201 onwards, against the backdrop of the increasing number of post-working age population, are the reasons to anticipate in the future social problems related to aging and unfavorable from the point of view of the labor market and the insurance system social proportions of age groups,
- in terms of the quality of human capital, not only its increase, measured by real education spending, can be positively assessed, but so can be the corresponding increase in real income among residents (the correlation ratio of 0.91).

Accordingly, the following can be considered to be threats to development, and therefore challenges for Ustka as a town: the need to meet the long-term negative social and economic implications of an aging population, and the need to take measures so as to encourage potential residents to settling in the town. Against this background, the key recommendation would be to implement an investment program that would expand and enrich the year-round recreational and spa offer of Ustka, addressed to both domestic and foreign recipients of services provided by the town's Baltic resort[9].

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[9] Due to the incompleteness of certain groups of data, the conclusions contained in this paper should be viewed as an approximate picture of the actual state of affairs and processes.

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Kapitał ludzki jako czynnik lokalnego rozwoju gospodarczego – studium przypadku

Abstrakt

W artykule podjęto próbę analizy kapitału ludzkiego jako czynnika lokalnego rozwoju gospodarczego, definiowanego jako proces zmian ilościowych, czyli wzrostu gospodarczego, a także przemian jakościowych, dotyczących przekształceń struktur społeczno-gospodarczych, przyjmując, że miarą skuteczności tych działań jest wzrost poziomu życia mieszkańców. Celem badania było sprawdzenie, na ile zmiany w kapitale ludzkim wybranej jednostki samorządu terytorialnego, miały wpływ na dynamikę jej rozwoju gospodarczego. Przedmiotem badania objęto relacje pomiędzy kapitałem ludzkim a rozwojem gospodarczym gminy miejskiej Ustka, a więc jednostki terytorialnej o ponadlokalnym charakterze, będącym pochodną jej nadmorskiego położenia i wynikającymi stąd: wielowiekowymi tradycjami gospodarki morskiej (rybołówstwo i przetwórstwo ryb, przemysł stoczniowy),warunkami klimatycznymi o leczniczych właściwościach oraz atrakcyjnymi możliwościami dla rekreacji (plażowanie, kąpiele morskie, turystyka morska i lądowa). Okres badawczy, obejmujący lata 1995-2015, wynika głównie z możliwości dysponowania odpowiednim materiałem statystycznym. Jako materiał porównawczy, wspomagający analizę wykorzystano także wybrane wskaźniki rynku pracy dwóch nadmorskich gmin miejskich zlokalizowanych na Pomorzu Środkowym, tj. Darłowa i Łeby.

Słowa kluczowe: zasoby ludzkie, kapitał ludzki, rozwój gospodarczy, gospodarka lokalna.