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Is the development of the eastern part of Poland at risk? The role of universities in the absorption of human capital

INTRODUCTION

The experience of eastern regions, not only in Poland but also in other European Union countries, shows that human capital emigrates from them, leaving numerous problems (Atoyan, 2016, pp. 30–34). The brain drain process is a particular challenge for developing regions. It concerns a significant part of the population: characterized by high mobility, at the age of highest productivity (Kaempf, Singh, 1987, p. 5). The emigration process indirectly leads to the loss of historical financial outlays spent on education, and, in the future, to a direct loss of knowledge potential necessary on the local labour market. With the extension of human life measured in years, and the increasingly lower fertility rate of European societies (which does not guarantee the replacement of generations and does not meet the needs of the labour market), and thus the observed process of aging of societies, this will lead to a regression of regions with lower competitiveness in terms of acquiring and maintaining human capital.²

An important task was to identify the endogenous and exogenous factors responsible for the ability to “attract” high school graduates who, at the regional

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² In 2019, as part of the report on the global competitiveness of national economies published by the World Economic Forum, countries in the eastern and southern parts of the European Union were at the bottom of the ranking in terms of their ability to retain talent; more in: (World Economic Forum, [http](http://www.weforum.org)).

level – within a provincial city or university – will receive appropriate education, acquiring the necessary value for the development of a given region. The aim of the article was to determine the role of the university in “attracting” human capital to selected geographical areas, as well as to create recommendations resulting from the survey and interviews with students.

Assuming that the most important factor in the sustainability of socio-economic development is human capital, the following assumption was made: the development of Polish regions (understood by the administrative boundaries of voivodeships) will depend on the ability of universities to acquire human capital both from the area of a given voivodeship, and the ability to compete for secondary school graduates from all over the country. Competition results directly from demographic changes, which lead to a reduction in the rate of population growth in regions, forcing it to be acquired externally.

Spatially, the analysis was narrowed down to the capitals of voivodeships in eastern Poland, i.e. Olsztyn, Białystok, Lublin, Rzeszów. Due to their location, peripherality compared to the EU and Poland, and the level of socio-economic development, they are model examples of areas subject to loss of human capital, as well as reduction of the potential of the natural resources, i.e. villages and smaller towns in the regions. In such cases, universities become one of the most important factors in the absorption of people starting their adult life (including professional life).

The article consists of an introduction, three substantive parts and a conclusion containing selected recommendations. The first part discusses the problem of the loss of human capital, and then presents forecasts regarding the change in population in the studied group of cities. The literature review also allowed us to emphasise the importance of human capital for regional development. The next part focuses on the role and impact of (selected) universities – universities from voivodeship capital cities in the eastern part of Poland. Their potential was determined and external factors were also indicated, including: the field of science management in Poland, which make it difficult to acquire human capital. In addition to statistics, the role of universities in shaping labour resources in the region was also determined. The third part was dominated by the issue of human capital migration. During the analysis, fragments of our own research on student mobility were used, which allowed us to formulate recommendations regarding the creation of relationships between universities and high school graduates.

The article uses Polish and foreign literature on demography, with particular emphasis on issues of migration, depopulation, and regional development. The literature review served to confirm the importance of human capital in the economic development of regions. The aim of the statistical analysis was to show the problem of loss of human potential, especially in the voivodeships of eastern Poland.

The literature review was supplemented with conclusions from our own

research, conducted since autumn 2018 (cyclical examination; 10 reps so far, to late autumn 2023); undertaken with students of the first and fifth year of studies (1st year of bachelor's studies and 2nd year of master's studies, respectively; 1376 surveys) at the University of Białystok, in order to determine, among others, decision-making attitudes regarding education and susceptibility to specific spatial, social and financial factors in terms of their mobility. Ultimately, the literature review and, above all, the survey research, lead to the answer to the research question: what actions should universities take and in which geographical area to intensify the absorption of high school graduates from voivodeships other than the home voivodeship of a given university?

EMIGRATION AS A KEY PROBLEM OF THE EASTERN METROPOLISES OF POLAND

One of the key factors determining the competitiveness of a country, region or city (as a highly urbanised area) is the relatively large share of people with high and diversified qualifications in the population. Many economists pointed out that the level of qualifications and the number of people of working age correlate with the rate of economic growth (Domański, 1993; Herbst, 2007; Gołaszewska-Kaczan, 2014). These types of statements dominate primarily in the literature on endogenous growth (Rogowski, 2006; Bugowski, 2020).

The problem turns out to be the shortage of human capital, which is the result of depopulation of selected geographical areas, and concerns virtually every country (Piontek, 2019, pp. 523–542). The demographic effects of depopulation, i.e. the permanent and systematic reduction of the population in a given area, imply numerous problems in a given time horizon. It directly leads to intensive qualitative and quantitative changes among the inhabitants of the territorial unit covered by this process. Its main measures include, for example, the number of births and deaths and migration balance. The key aspect seems to be the absolute, negative change in the population size, leading to, among others, loss of demographic potential due to, for example, the aging of the population, i.e. with the change in the age and gender structure of citizens (Hryniewicz, 2020, p. 19).

Depopulation concerns, for example, areas outside the centres of regional growth – the largest metropolitan cities. According to W. Gaczek, it should be stated that “most large cities in Poland function as growth poles, at least some large cities function as development poles, and some metropolises may also be integration poles” (Gaczek, 2010, p. 90). The studied entities can be classified into the first of the above-mentioned categories, but it is difficult to find grounds for recognizing them as poles of development. For this reason, there are growing disproportions in social assessments of Polish provincial cities.

The problem of population aging and migration of human capital in the coming decades, not only in Poland but also in the entire European Union, will probably be one of the greatest challenges (Tzouganatou, 2022, pp. 207–208). As already mentioned, less developed, border regions located in the eastern part of Poland are particularly susceptible to this process.

Table 1. Białystok, Olsztyn, Lublin, Rzeszów – population change forecast (2022 and 2060)

Voivodeship capital	Number of inhabitants in 2022	Forecast of the number of inhabitants in 2060	Change in population size in 2060 compared to 2022
Białystok	292600	243191	-16.9%
Olsztyn	168212	126502	-24.8%
Lublin	331243	273892	-17.3%
Rzeszów	197181	202961	2.9%

Source: (GUS, 2023b).

In the case of three out of four cities examined by GUS, the loss of human population will most likely reach between 17% and 25% of the total population as of 2022. The situation in Rzeszów is different (Table 1). It is worth noting that in the last two decades, the territorial expansion of this city (inclusion of neighbouring communes) had a significant impact on the population growth. In 2005, Rzeszów had 159,000 inhabitants and 53.7 km² of area. However, at the end of 2021 it was already 198,000 inhabitants and 128.5 km² of area, i.e. 24.5% and 139% more than in 2005 (*Jak rosło...*, http). Taking into account immigration from the east (including Ukraine), Rzeszów is the only city – the capital of the Polish border voivodeship – which by 2060 will probably (slightly) increase the number of inhabitants.

Table 2. Białystok, Olsztyn, Lublin, Rzeszów – forecast change in the number of population aged 0–18 (2022 and 2060)

Voivodeship capital	Number of inhabitants in 2022, aged 0 to 18	Projected number of inhabitants in 2060, aged 0 to 18	Difference in population size at the studied age between 2060 and 2022
Białystok	54752	44189	-19.3%
Olsztyn	30009	19444	-35.2%
Lublin	59151	47153	-20.3%
Rzeszów	39426	36801	-6.7%

Source: (GUS, 2023b).

The key part of the population, which reflects the prospects of a given LGU (local government unit), are people of pre-working age. Table 2 shows the

population ratio of selected cities in the forecast for 2060 compared to 2022. Each of the studied entities will probably experience a loss of potential. Therefore, it seems necessary to create a strategy for implementing external human capital. Competition between provincial cities therefore seems inevitable.

In the coming decades, eastern voivodeships, apart from regional capitals, will be subject to the same trends, with relatively higher intensity. The natural “resource” for provincial cities may turn out to be a “drying well” that will not provide the quantity and quality of human capital expected by the labour market. Without an influx of people with secondary and vocational education who could be educated and professionally activated, it is doubtful that the growth rate will be maintained.

Ł. Bugowski draws attention to the fact that endogenous factors, including human capital, play a key role in regional development. They are the guarantee of economic growth. He treated the exogenous inflow of human capital as a complement to internal shortages (Bugowski, 2020, pp. 119–120). However, regional forecasts indicate that the shortage will increase. Coordination of the activities of local government units with the offer and promotion of universities may allow us to fight for human capital.

THE ROLE OF THE UNIVERSITY IN ATTRACTING AND IMPLEMENTING HUMAN CAPITAL

The presence of universities in regions as factors creating competitiveness was indicated by, among others, B. Winiarski (1999, p. 51). Similarly, D. Strahl recognized the size, diversity and availability of the labour force, as well as the possibilities of its education in the region, as key development factors (Strahl, 2000, p. 21). The role of higher education is the axis of the concept of a “learning region” – a store of knowledge, innovation, and a generator of growth (Florida, 1995, pp. 255–277). However, G. Boucher, C. Conway, and D. Meer emphasized that universities are, among others, knowledge factories, institutions forming human capital (Boucher, 2003, pp. 887–897). The dominant view in Polish literature on the subject is that higher education primarily creates soft factors of the region’s development, i.e. it provides labour resources to the market (Piotrowska-Piątek, 2014, p. 42). “Creating new knowledge is the most traditional type of benefit that a region or city can derive from the presence of a university in its area (...)”, according to M. Szmit (2012, p. 229).

Polish universities, and specifically public academic institutions of higher education (MEiN, Wykaz..., [http](http://)), can be divided into at least two groups (following the example of the Ministry of Education and Science): leading centres/

research universities and regional universities. At the end of 2019, the Ministry responsible for higher education designated ten units that were called “research universities”, providing increased funding for 2020–2026 (MEiN, Bohaterowie konkursu IDUB..., [http](http://)). All the above universities are located in the central part of Poland, from north to south. The Ministry of National Education categorized universities in the eastern part of the country as regional centres. This makes their functioning more difficult (e.g. reduces the level of subsidies) and also lowers their prestige, leading to difficulties in attracting secondary school graduates.

Leading centres, thanks to the brand developed over decades and their absolute size, are characterized by consistently high interest among high school graduates. Universities from eastern Poland occupy places outside the top 20 in the rankings (Figure 1).

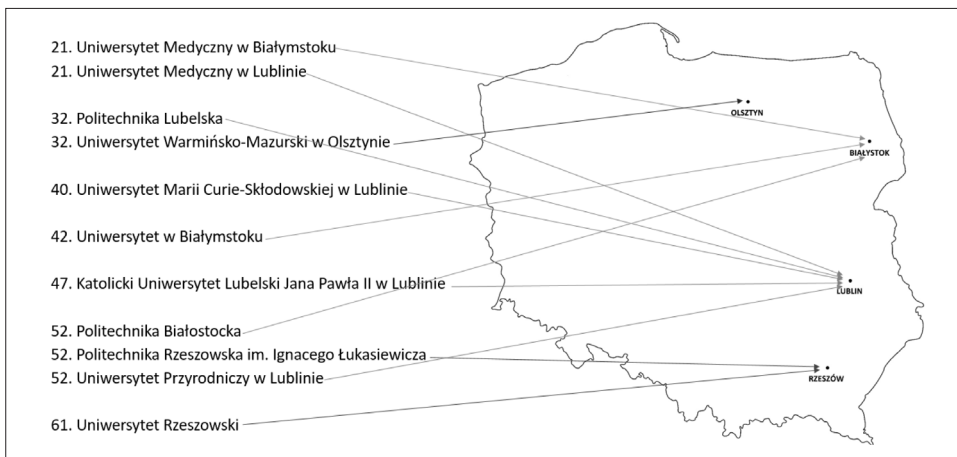


Figure 1. Selected Polish universities in the National Academic Ranking 2022

Source: own elaboration based on: (Ranking Uczelni Akademickich, [http](http://)).

Demographic challenges will intensify competition between universities. While the number of students has stabilised at approximately 1.2 million since 2018 (GUS, BDL), the number of high school graduates who passed the “matura” examination, obtaining the right to study at a university in 2020, decreased by 1/3 compared to 2010 (GUS, 2023a). In support of the national urban policy, it should be stated that in the case of voivodeship capital cities of the so-called Eastern Poland (dominated by regional universities), the inflow of people to their suburban zones in 2004–2020 from other voivodeships was relatively small (several percentage points). The share of people moving to Urban Functional Areas (Busłowska, 2022, p. 70) from the same voivodeship is much higher (depending on the city – between 25–35%). In the rest of the country, the proportions are

opposite (MFiPR, 2022, p.33). This demonstrates the limited regional capability to acquire human capital.

“Educational migration” is characterized primarily by young people of post-secondary age. This type of migration also becomes the final migration for a significant part of people coming from rural areas or smaller towns far from growth centers (Jończy, Dolińska, 2016, p. 52).

MIGRATION OF THE YOUNG – MOBILITY AS AN OPPORTUNITY FOR SOCIO-ECONOMIC DEVELOPMENT OF POLAND’S EASTERN VOIVODESHIPS

Migration – according to E. Lee – is “a permanent or semi-permanent change of place of residence, with no restrictions as to the distance of movement, its forced or voluntary, internal or external nature” (Górny, Kaczmarczyk, 2003, pp. 17–22; Lee, 1966). It should therefore be stated that the movement of people from the areas of rural and urban communes surrounding a university city, or from a given voivodeship, as well as from outside it, fits into the above classic definition of this phenomenon. The activating factor here is spatial mobility, defined as moving around, e.g. changing one’s place of residence (Herbst, Sobotka, 2014, p. 11).

Taking up education and professional activity is correlated with the level of mobility of society, which is not homogeneous. Research including, among others, Central Statistical Office (GUS) confirmed that people aged 18–49 were more mobile. Moreover, it was confirmed that people with higher education were characterised by the highest tendency to migrate for work (compared to people with a lower level of education). Residents of the Podlaskie Voivodeship were least likely to be willing to travel outside the commune for work in 2016–2020. The highest mobility according to the tendency to commute to the workplace (so-called long commute) was characterised by people aged 18–34 (GUS, 2021, pp. 54–57), and in the case of foreign migration, within the EU (in 2022), the dominant category were people aged 35–49 (European Commission, 2023, p. 3).

The key category of people analysed in this article were adults obtaining a “matura” certificate. This is a relatively young part of society, with little professional experience, looking for their life path and at the stage of planning and creating their future professional path. Based on our own research conducted on students of the 1st and 5th year of studies, i.e. people with at least a “matura” certificate, it was found that: the level of declared (national) mobility within a voivodeship/country increases with age and completed level of education of students. Interestingly, it concerned primarily the area of the home country, i.e. Poland. A different opinion was given in the case of working abroad. Younger students were more willing to declare the possibility of working outside Poland (approx. 16%); at the end of their studies, less than 5% of students considered this option.

From the point of view of this article, the section of the study regarding the place of study is important. Students from the Podlaskie Voivodeship were more likely to choose a university in Białystok. The University of Białystok was the first choice for less than 1/3 of high school graduates from Białystok, and approximately 4/5 among the rest. Distance (measured by commute time) turned out to be crucial for the second group (among the “pull” factors). Students from the Podlaskie Voivodeship and other voivodeships, declaring in the surveys a commute time exceeding 60 minutes, more often indicated: job potential [size of the labour market (56%), level of earnings (69%), diversity of job offers (82%)], and further: availability of accommodation, entertainment and recreation aspect of a larger city than the home city, possibility of becoming independent. In spring 2023, “room availability” was indicated by 19 percentage points more first-year students than a year earlier.

During the in-depth study (from autumn 2021 – group discussion with approximately 5–10% of survey respondents/annually), it was also found that for 5th-year students declaring: “I’ll stay in the place of study after finishing education”, a decisive role was played by obtaining employment during studies/confidence in finding a job after graduation. In this case, approximately 4/5 of the students declared they would stay in the provincial city where they studied. This confirms that a flexible approach to studying, i.e. the ease of obtaining an individual course of study or conducting classes in the evening rather than in the morning, may constitute an advantage of the university. Moreover, they pointed out the importance of the university building relationships between employers and students. They referred to examples from other universities when business representatives attended classes, or when solving specific case studies provided the opportunity to start paid internships.

During interviews, first-year students drew attention to the importance of becoming independent, which they achieved by leaving their hometown. They consciously chose a university outside their current place of residence, although geographically as close as possible. This may suggest that the promotion of the university in the city of its location is not relevant for high school graduates choosing a place to study.

Students were also asked about non-university factors pushing them out of the region. Among others, availability of apartments (rental/purchase costs in relation to wages), availability of work in relation to skills and qualifications, spatial accessibility of the university (ease of access/costs), and possibility of continuing education (2nd cycle; postgraduate studies) were pointed out. Interviews with some respondents also confirmed the importance of direct marketing – promotion of universities in schools located in the home voivodeship (away from the voivodeship centre) and outside it; On average, 23% of students annually indicated that it had a significant impact on the decision to choose a university.

CONCLUSION AND RECOMMENDATIONS

The whole of Poland is affected by the problem of demographic decline in the coming decades. The most important challenges of the largest Polish cities include the decreasing overall population (GUS, 2023b, pp. 30–32), in extreme cases leading to depopulation and shrinking of cities (Häußermann, Siebel, 1988, pp. 79–93). Combining emigration from the less developed eastern regions of Poland with the aging of the population and declining fertility rates, it turns out that the ability to attract human capital is important.

The condition for a higher ability to attract human capital is, among others, perceived competitiveness of urban space, i.e. “the ability of cities to continuously improve their business environment, skills base and physical, social and cultural infrastructure in order to attract and retain fast-growing, innovative and profitable companies and an educated, creative and entrepreneurial workforce, so as to achieve high productivity rates, high employment rates, high wages, high GDP per capita and low levels of income inequality and social exclusion” (Martin, Simmie, 2008, pp. 333–351). The competitiveness of cities is determined by, among others, universities. They are a place to create human capital with specific skills, qualifications and knowledge. Well-educated people are not only responsible for creating innovations, but also independently determine the innovative potential of the region (Proniewski, 1996, p. 34).

The author’s study allowed to outline conclusions that may contribute to the inflow of human capital to voivodeship university centres, and these are:

- promotion of the university outside its direct impact zone, i.e. daily mobility (approx. 60 km ~ approx. 1 hour’s drive from the university),
- stronger integration of universities and enterprises; universities as an intermediary between students and employers on the labour market,
- intensifying the university’s visibility in social media dedicated to high school graduates,
- “be with students” – support their passions, direct the message about them to their former schools.

University cities in eastern Poland will be the first to feel the negative trends. However, the problems concern the entire country, which requires a change in perspective regarding the role of universities in attracting and absorbing human capital.

The future of the metropolis is inextricably linked with universities. It is the synergy of these two entities that may enable the creation of a mechanism for capital substitution. The value of a city can lead to attracting young people to university and vice versa; universities can be a magnet that will enable you to establish relationships with a potential future resident of a given municipality. The study will continue. The problem still exists and so does the need to solve it.

BIBLIOGRAPHY

- Atoyan, R.V. (2016). Emigration and its Economic Impact on Eastern Europe. *International Monetary Fund*, 7, 30–34. DOI: 10.5089/9781475576368.006.
- Boucher, G., Conway, C., Meer, D. (2003). Tiers of Engagement by Universities in their Region's Development. *Regional Studies*, 37(9), 887–897. DOI: 10.1080/0034340032000143896.
- Bugowski, Ł.K. (2020). *Kapitał ludzki jako endogeniczny czynnik rozwoju regionalnego w Polsce Wschodniej*. Białystok: Wydawnictwo Uniwersytetu w Białymstoku.
- Busłowska, A. (2022). Zróżnicowanie rozwoju miejskich obszarów funkcjonalnych ośrodków wojewódzkich w Polsce. *Nierówności Społeczne a Wzrost Gospodarczy*, 70(2), 70–85. DOI: 10.15584/nsawg.2022.2.5.
- Domański, R. (1993). *Kapitał ludzki i wzrost gospodarczy*. Warszawa: PWN.
- European Commission. (2023). Intra-EU Labour Mobility at a Glance 2022, European Union, Brussels, 3. Retrieved from: <https://ec.europa.eu/social/BlobServlet?docId=26779&langId=en> (2023.09.16).
- Florida, R. (1995). Toward the learning region. *Futures*, 27(5), 255–277. DOI: 10.1016/0016-3287(95)00021-N.
- Gaczek, W. (2010). Miasta jako bieguny rozwoju w polskiej przestrzeni – polaryzacja czy konwergencja. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Poznaniu*, 161, 88–109.
- Gołaszewska-Kaczan, U. (2014). Wiedza jako element budujący kapitał ludzki. *Optimum. Studia Ekonomiczne*, 4(70), 90–100. DOI: 10.15290/ose.2014.04.70.07.
- Górny, A., Kaczmarczyk, P. (2003). Uwarunkowania i mechanizmy migracji zarobkowych w świetle wybranych koncepcji teoretycznych, ISS UW. *Prace Migracyjne*, 49, 17–22.
- GUS. Bank Danych Lokalnych, Kategoria: Szkolnictwo wyższe, Grupa: uczelnie, studenci, absolwenci. Retrieved from: <https://bdl.stat.gov.pl/bdl/metadane/> (2023.09.11).
- GUS. (2021). *Kapitał ludzki w Polsce w latach 2016–2020*. Gdańsk: GUS.
- GUS. (2023a). *Liczba osób które przystąpiły/zdały egzamin maturalny*. Retrieved from: <https://stat.gov.pl/obszary-tematyczne/edukacja/edukacja/liczba-osob-ktore-przystapilyzdaly-egzamin-maturalny,15,1.html> (2023.10.12).
- GUS. (2023b). *Prognoza ludności na lata 2023–2060*. Warszawa: GUS.
- Häußermann, H., Siebel, W. (1988). Die Schrumpfende Stadt und die Stadtsoziologie. In: J. Friedrichs (ed.), *Soziologische Stadtforschung. Kölner Zeitschrift für Soziologie und Sozialpsychologie*, vol. 29 (pp. 79–93). Wiesbaden: VS Verlag für Sozialwissenschaften, Wiesbaden. DOI: 10.1007/978-3-322-83617-5_5.
- Herbst, M. (2007). *Kapitał ludzki i kapitał społeczny a rozwój regionalny*. Warszawa: Wydawnictwo Naukowe Scholar.
- Herbst, M., Sobotka, A. (2014). *Mobilność społeczna i przestrzenna w kontekście wyborów edukacyjnych*. Warszawa: Instytut Badań Edukacyjnych.
- Hrynkiewicz, J. (2020). Depopulacja wyzwaniem polityki ludnościowej. In: J. Hrynkiewicz, G. Ślusarz (eds.), *Depopulacja. Uwarunkowania i konsekwencje* (pp. 19–37). Warszawa: GUS.

- Jak rosło nasze miasto*. Retrieved from z: <https://www.erzeszow.pl/print/692/13520> (2023.10.22).
- Jończy, R., Dolińska, A. (2016). Charakter i kierunki migracji pomaturalnych młodzieży na przykładzie województwa dolnośląskiego. In: M. Butrymowicz, P. Kroczyk (eds.), *Prawne i ekonomiczne aspekty migracji* (pp. 51–68). Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Kaempf, S., Singh, S. (1987). The Brain drain problem: its causes, consequences, remedies and the role of Unesco in this regard, UNESCO, 127 EX/SP/Rap.2, Paris, 5. Retrieved from: <https://unesdoc.unesco.org/ark:/48223/pf0000075299> (2023.08.27).
- Lee, E. (1966). *A Theory of Migration*. From: Górny, A., Kaczmarczyk, P. (2003). Uwarunkowania i mechanizmy migracji zarobkowych w świetle wybranych koncepcji teoretycznych. *Prace Migracyjne Instytutu Studiów Społecznych Uniwersytetu Warszawskiego*, 49, 17–22.
- Martin, R., Simmie, J. (2008). The theoretical bases of urban competitiveness: does proximity matter? *Revue d'Économie Régionale & Urbaine*, 3, 333–351. DOI: 10.3917/reru.083.0333, 335.
- MEiN. Bohaterowie konkursu IDUB, czyli najlepsze uczelnie w kraju. Retrieved from: <https://www.gov.pl/web/edukacja-i-nauka/bohaterowie-konkursu-idub-czyli-najlepsze-uczelnie-w-kraju> (2023.09.03).
- MEiN. Wykaz uczelni publicznych nadzorowanych przez Ministra właściwego ds. szkolnictwa wyższego – publiczne uczelnie akademickie. Retrieved from: <https://www.gov.pl/web/edukacja-i-nauka/wykaz-uczelni-publicznych-nadzorowanych-przez-ministra-wlasciwego-ds-szkolnictwa-wyzszego-publiczne-uczelnie-akademickie> (2023.09.15).
- MFIPR. (2022). *Krajowa Polityka Miejska 2030*. Warszawa: MFIPR.
- Piontek, W. (2019). Depopulation in the Concept of Sustainable Development. *Rocznik Ochrona Środowiska*, 21(1), 523–542.
- Piotrowska-Piątek, A. (2014). Szkoły wyższe jako czynnik rozwoju regionalnego. *Rozwój Regionalny i Polityka Regionalna*, 28, 37–49. DOI: 10.14746/rrpr.2014.28.04.
- Proniewski, M. (1996). *Polityka kształcenia jako czynnik rozwoju regionalnego na przykładzie Niemiec*. Białystok: Wydawnictwo Filii Uniwersytetu Warszawskiego.
- Ranking Uczelni Akademickich 2022. Retrieved from: <https://ranking.perspektywy.pl/2022/ranking/ranking-uczelni-akademickich> (2023.08.30).
- Rogowski, J. (2006). Kapitał ludzki a wzrost regionu. In: A.F. Bocian (ed.), *Podlasie – kierunki zmian* (pp. 121–131). Białystok: Wydawnictwo Uniwersytetu w Białymstoku.
- Strahl, D. (2000). Rola uczelni wyższych w rozwoju regionalnym. In: J. Dietl, Z. Sapijaszka (eds.), *Rola wyższej uczelni w rozwoju społecznym i ekonomicznym regionu*, (pp. 19–41). Łódź: Wydawnictwo Fundacji Edukacyjnej Przedsiębiorczości.
- Szmit, M. (2012). Rola uczelni wyższych w procesie rozwoju regionalnego: studium przypadku. *Nierówności Społeczne a Wzrost Gospodarczy*, 28, 228–235.
- Tzouganatou, S.G. (2022). The Ageing Population of the European Union: Challenges and Prospects. *Policy Briefs Series, Hellenic Association of Political Scientists*, 3(1), 207–208. DOI: 10.12681/hapscpbs.31010.

- Winiarski, B. (1999). Czynniki konkurencyjności regionów. In: M. Klamut (ed.), *Konkurencyjność regionów*, (pp. 48–56). Wrocław: Wydawnictwo Akademii Ekonomicznej im. O. Langego we Wrocławiu.
- World Economic Forum. (2019). Global Competitiveness Report 2019. Retrieved from: <https://www.weforum.org/reports/global-competitiveness-report-2019> (2023.09.28).

Summary

The aim of the article was to determine the role of universities in “attracting” human capital to selected geographical areas, as well as to indicate recommendations in the area of university marketing.

Assuming that the most important factor in the sustainability of socio-economic development is human capital, it was concluded that the development of Polish regions will depend on the ability of universities to acquire human capital both from within a given voivodeship, and the ability to compete with other academic units for secondary school graduates in the country. The need for competition results directly from demographic changes, which lead to a reduction in the rate of population growth in regions.

Spatially, on a theoretical basis, the studied entities will be the capitals of the voivodeships of eastern Poland, i.e. Olsztyn, Białystok, Lublin, Rzeszów. Due to their location, peripherality compared to the EU and Poland, and the level of socio-economic development, they are model examples of areas subject to the loss of human capital.

During the work, a review of Polish and foreign-language literature was used to verify the assumption about the essence of higher education among the endogenous factors of regional development. Then, based on statistical studies, including: The Central Statistical Office and the relevant Ministries, the author compared research entities and the local government units in which they are located. Surveys and interviews allowed for the assessment of young people's mobility.

It was found that universities play a key role in the absorption of human capital with a relatively high tendency to migrate. Additionally, recommendations were prepared regarding the scope of university promotion to meet the expectations of high school graduates as much as possible.

Keywords: depopulation, promotion, education, innovation, development.

Zagrożony rozwój wschodniej Polski? – Rola uniwersytetów w absorpcji kapitału ludzkiego

Streszczenie

Celem artykułu było określenie roli, jaką pełni uniwersytet w ogóle czynników „przyciągania” kapitału ludzkiego do wybranych obszarów geograficznych, jak również wskazanie rekomendacji z zakresu marketingu uczelni.

Zakładając, że najważniejszym czynnikiem trwałości rozwoju społeczno-gospodarczego jest kapitał ludzki założono, iż rozwój polskich regionów będzie zależał od zdolności uniwersytetów do pozyskiwania kapitału ludzkiego zarówno z obszaru danego województwa, jak i zdolności do rywalizacji z innymi jednostkami akademickimi o absolwentów szkół średnich w kraju. Potrzeba rywalizacji wynika bezpośrednio ze zmian demograficznych, które prowadzą do ograniczania tempa przyrostu liczby ludności w regionach.

Przestrzennie, na kanwie teoretycznej, badanymi podmiotami są stolice województw wschodniej Polski, tj. Olsztyn, Białystok, Lublin, Rzeszów. Ze względu na swoje położenie, peryferyjność na tle UE i Polski, poziom rozwoju społeczno-gospodarczego, stanowią modelowe przykłady obszarów poddawanych utracie kapitału ludzkiego.

W trakcie prac wykorzystano przegląd literatury polskiej i obcojęzycznej celem weryfikacji założenia o istocie edukacji wyższej wśród czynników endogenicznych rozwoju regionalnego. Następnie, na bazie opracowań statystycznych, m.in. Głównego Urzędu Statystycznego i właściwych ministerstw dokonano porównania podmiotów badawczych i JST, w których są zlokalizowane. Badania ankietowe i wywiady pozwoliły na ocenę mobilności młodych osób.

Stwierdzono, iż uniwersytety odgrywają kluczową rolę w zakresie absorpcji kapitału ludzkiego o relatywnie wysokiej skłonności do migracji. Ponadto przygotowano rekomendacje dotyczące zakresu promocji uczelni, tak by w jak najwyższym stopniu odpowiadały oczekiwaniom maturzystów.

Słowa kluczowe: depopulacja, promocja, edukacja, innowacje, rozwój.

JEL: H70, I23, I24, I25, J11, J13, J18, O15.