COMPETITIVENESS IN THE CONTEXT OF HUMAN POTENTIAL IN THE SLOVAK REPUBLIC

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Abstract

In developed economies, innovation is the main means of achieving the competitiveness of companies and countries. The achievement of economic growth and development is linked to radical innovations that change established patterns of behaviour, have an impact on job creation and the development of regions and countries. The European Innovation Scoreboard provides a comparative assessment of research and innovation performance in EU countries. It assesses the relative strengths and weaknesses of national innovation systems and helps countries identify areas they need to address. The Slovak Republic has long been one of the EU countries that lags behind the EU average in terms of innovation performance and belongs to the group of moderate innovators whose performance is 10 % to 50 % below the EU average. The aim of the paper is to analyse the innovation performance of Slovakia and its regions in comparison with the EU average in the selected period, to specify the strengths and weaknesses of Slovakia's innovation performance and their dynamics in the period under review.

Keywords: *competitiveness, innovation, innovation scoreboard, Slovak Republic*, *regions*

1. INTRODUCTION

In advanced economies, innovation is the main means of the competitiveness of companies and countries, i. e. the ability to compete. The most important indicator of the country's economic development and competitiveness is productivity. Its growth depends on the state of the business environment and human potential, which is a natural part of it. Ochotnický and Kiseľáková (2019) emphasize that in the modern notion of national competitiveness it is proceeded from the fact that the economic level of individual countries is also affected by areas related to political stability, education, innovation ecosystems or tax or financial systems. Regional competitiveness is to some extent affected by the competitiveness of countries and businesses.

2. MATERIALS AND METHODS

2.1 Materials

Rusnák and Korec (2020) state that the European Commission considers regional competitiveness to be the region's economy's ability to produce goods and services that can compete in domestic and foreign markets, and at the same time is able to ensure a high standard of living for its inhabitants through rising employment levels. The degree of regional competitiveness is directly proportional to the resilience of companies, respectively to their market positions.

Hontyová and Beňuš (2014) recall that recent trends show that competitiveness consists in the increase of innovative performance of companies, namely the implementation of new innovative products and production processes.

The comparison of competitiveness at international or global levels is carried out by international organizations, based on the analysis and assessment of relevant data which are summarized and interpreted due to several indices.

One of the most famous organizations is the World Economic Forum which interprets competitiveness as a complex of indices obtained from institutions, policies and such factors that define the level of productivity in a given country (WEF, 2013). Productivity determines the degree of prosperity achievable for a country's economy.

2.2 Methods

Since 2004, the World Economic Forum (WEF) has been compiling a ranking called the Global Competitiveness Index (GCI), which combines a number of indicators in assessing and comparing the competitiveness, with productivity as the common feature of indicators. The latest revised version of GCI 4.0 was introduced in 2018 (Schwab, 2019). It is based on 4 sub-indices, which are made up of 12 basic economic pillars shown and take into account 114 indicators. The GCI takes into account a comparison of 141 national economies, which together account for 99 % of world GDP. The evaluation of the participating countries is expressed on a scale of 0-100, while the highest achievable value of 100 expresses the so-called ideal state. Within this index, systems thinking and the human factor are considered determinants of sustainable growth and development of society.

In addition to the WEF, other significant institutions are involved in the assessment of the competitiveness of world economies. One of them is the International Institute for Management Development (IMD), founded in 1989 and based in Switzerland. The institute compiles and publishes the World Competitiveness Yearbook (WCY) annually to support decision-making and policy-making. Data released on June 17, 2021, examined several factors that affect the prosperity of 64 economies. The four main factors monitored by the WCY included economic performance, government efficiency, business efficiency and infrastructure, where additional 5 sub-factors are assigned to each of the factors, emphasizing a different aspect of competitiveness.

The total data are made up of so-called soft and hard data. Soft data represent primary data obtained from special surveys and make up about 1/3 of the total data. According to Zábojník, Čiderová and Krajčík (2020), hard data, called secondary data, are obtained from organizations with national or regional scope, such as the OECD, the World Bank, and other institutions.

The ranking of the competitiveness of economies published by the World Bank is based on a differentiated approach of countries in overcoming barriers to the establishment and implementation of business. The main sources used in compiling the ranking are country measures and relevant legislation, government representatives, the views of experts and collaborators of the World Bank. From the first edition until 2020, more than 48,000 experts have taken part in the data collection.

Ochotnický and Kiseľáková (2019) drew attention to the OECD definition, considering competitiveness as the ability of individual countries to produce goods and services under the same, free, market conditions and at the same time the ability to contribute to long-term growth of living standards.

In connection with the advent of the circular economy, where the emphasis is put on the change of the pattern of production and consumption, the human factor has an irreplaceable place, as the ability to create new understanding and knowledge and then use them. The importance of cognition and knowledge as one of the basic sources of the competitiveness of regions is emphasized, including the analysis of factors and mechanisms affecting the process of knowledge creation and dissemination in the given area.

The current period of the transformation phase of the development is characterized by a relatively high intensity of differentiation tendencies, distinct with regard to territorial units as well as social groups. The deepening of territorial polarization remains a common feature of the process. This process is a reflection of fundamental changes in the performance and prosperity of economic agents, but also, increasingly, also in the application of qualitative factors such as human resources, social capital and the infrastructure of the regions.

The spatial manifestation of these processes is denoted as regional disparities. Disparities are generally understood as inequalities, differences, heterogeneities or gaps. In the paper, we will understand disparities as differences in the degree of socio-economic development of individual regions, by which we mean mainly regions as units of territorial-administrative division (NUTS 2) in the Slovak Republic.

3. RESULTS

3.1 Human resources and their sustainability in the regions of Slovakia

The development of regions and regional differentiation in Slovakia is accompanied by reform and structural changes in the social and economic fields. On the one hand, regional differentiation and regional disparities are accompanied by the emergence of developed regions, which are characterized by a predominantly urban structure with intensive investment activity, modern social, technical and environmental infrastructure, as well as other predominantly favourable and synergistic several development factors.

On the other hand, there are lagging regions in Slovakia, which are characterized by unfavourable parameters of regional development, insufficient transport infrastructure, higher share of rural population, growing share of unemployed persons, poorly developed and less diversified economic structure or lower educational level of population.

The basic preconditions for the country´s development include a balanced population structure. The overall development depends on the demographic composition of the population, including the phenomenon of the aging population. Currently, the aging of population is perceived as a global problem, not just a regional one. However, this problem is more observable at regional level. This situation has an overall impact on the economic, social and cultural aspects of the development in regions.

Each country makes effort to respond to the change in demographic composition by its population policy. In Slovakia, in 2013 the National Program for Active Aging for 2014 to 2020 was approved, aimed to help mitigate the negative consequences associated with demographic change. The structure of the population is one of the basic demographic variables, by which demographic development and subsequent changes can be predetermined. The most common population breakdown is the gender breakdown into men and women. According to the last census in Slovakia, it can be stated that the ratio of both sexes is relatively balanced. As of 31December 2020 Slovakia has had a population of 5,459,781, of which 2,793,295 are women (51.16 %) and 2,666,486 men (48.84 %) of the total population.

Table 1 shows the number of inhabitants in the Slovak Republic, which is inversely proportional to the area of individual regions (Fig. 1). Some regions, even though they are the largest in area, have a lower population share, as observed best on the example of the Banská Bystrica region.

In the Slovak Republic, national (interregional) migration is observed, which represents the movement of the population from the eastern regions to the western regions, especially to the capital Bratislava. Based on this continuing trend, the population in each region is changing, as shown in Table 2.

Region	Bratislava	Trnava	Nitra	Trenčín	Žilina	Banská Bystrica	Prešov	Košice	SR
Number of inhabitants	677024	565324	582567	671508	691136	643102	827028	802092	5459781
Share in %	12,4	10,36	10,67	12,30	12,66	11,78	15,15	14,68	100
Population density per km²	329,84	136,34	91,83	149,16	101,51	68,02	92,17	118,75	111,35
Area of the region in km²	2052,6	4146,3	6343,7	4501,8	6808,5	9454	8972,8	6754,3	49034

Table 1. Population in regions of the Slovak Republic, 2020

Source: Statistical Office of the Slovak Republic. 2020. Statistical Yearbook of the Regions in the Slovak Republic. p. 664.

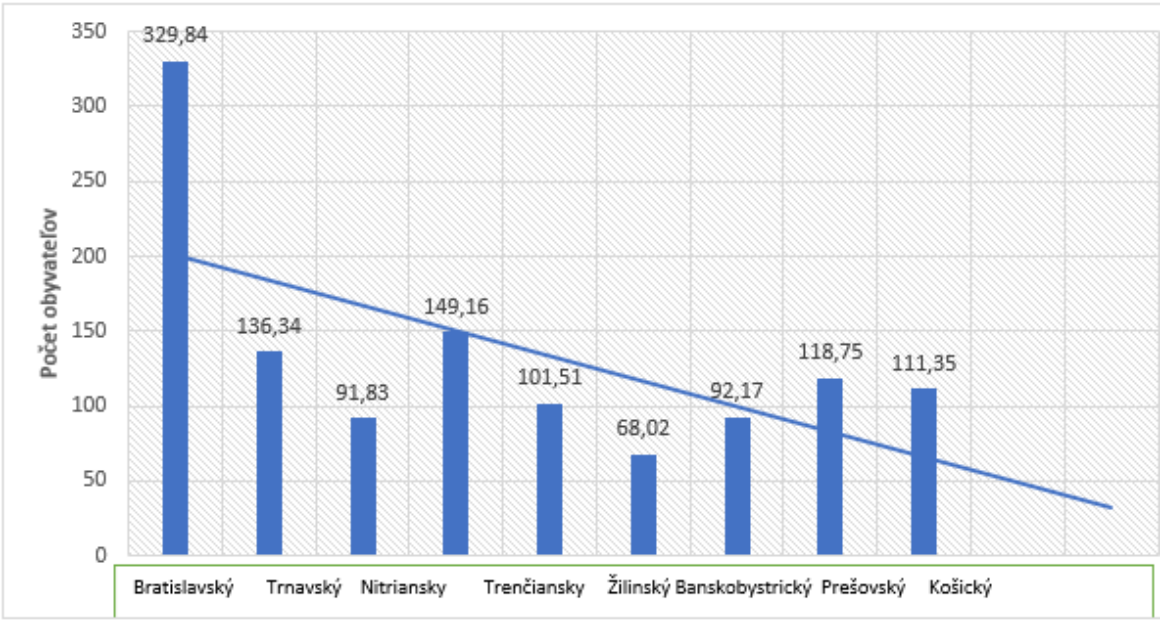


Fig. 1. Population per km² in 8 regions in the Slovak Republic

Region	2012	2013	2014	2015	2016	2017	2018	2019	2020	increment/decline
Bratislava	612682	618380	625167	633288	641892	650838	659598	669592	677024	64342
Trnava	556577	557608	558677	559697	561156	562372	563591	564917	565324	8747
Trenčín	593159	592394	591233	589935	588816	587364	585882	584569	582567	-10592
Nitra	688400	686662	684922	682527	680779	678692	676672	674306	671508	-16892
Žilina	690121	690420	690449	690434	690778	691023	691368	691509	691136	1015
Banská bystrica	658490	656813	655359	653024	651509	649788	647874	645276	643102	-15388
Prešov	817382	818916	819977	820697	822310	823826	825022	826244	827028	9647
Košice	794025	794756	795565	796650	798103	799217	800414	801460	802092	8067
Slovak Republic	5410836	5415949	5421349	5426252	5435343	5443120	5450421	5457873	5459781	48946

Table 2. Development of population in regions of the Slovak Republic

3.2 Unequal distribution of population

This uneven distribution of the population is linked to large extent to demographic developments, the economic issues and, consequently, to expectations of a better quality of life. When analysing, we observe a high increase in population in Western Slovakia (Bratislava region and Trnava region) and in Eastern Slovakia (Prešov region and Košice region). When 2012 with 2020 in the Bratislava region is compared, the increase represented by 64,342 inhabitants. In contrast, a decline in population in Central Slovakia (Banská Bystrica region) and the eastern part of Western Slovakia (Nitra region) was observed. The declining population trend in these regions can be attributed to national population migration in search for better quality of life and job opportunities. Disparities have a significant impact on regional development and require the application of effective measures and policies to regulate interregional disparities and the application of new strategies for effective regional development. Slovakia shows large regional disparities in the quality of life of its inhabitants.

3.3 Education and human capital in regions

One of the basic priorities in the field of human resources is the development of human potential, which is promoted in the region through education. Education is an important component of human capital that significantly determines the regional development. Tables 3, 4 and 5 present the evolution of the number of students at secondary schools and universities.

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	increment/decline
Slovak Republic	80346	76711	74524	73757	72287	73880	72842	72755	70675	-9671
Bratislava region	13388	13275	13166	13430	13210	14009	14373	14430	14639	1251
West Slovakia	21779	20558	19619	19549	19150	19395	19048	18660	18670	-3109
Trnava region	6713	6388	6222	6069	6025	6190	6039	5955	6044	-669
Trenčín region	6981	6636	6126	6415	6334	6369	6274	6142	6150	-831
Nitra region	8085	7534	7271	7065	6791	6836	6735	6563	6476	-1609
Central Slovakia	19929	18807	18193	17696	17355	17630	17152	18381	16491	-3438
Žilina region	11593	11061	10714	10438	10217	10353	10133	9802	9594	-1999
Banská Bystrica region	8336	7746	7479	7258	7138	7277	7019	8579	6897	-1439
Eastern Slovakia	25250	24071	23546	23082	22572	22846	22269	21304	20875	-4375
Prešov region	13045	12318	11902	11633	11329	11428	11151	10730	10447	-2598
Košice region	12205	11753	11644	11449	11243	11418	11118	10574	10428	-1777

Table 3. Number of pupils in secondary grammar schools in regions of the Slovak Republic

Source: http://datacube.statistics.sk/#!/view/sk/VBD_DEM/om7011rr/v_om7011rr_00_00_00_sk.

The number of grammar school students is increasing in the Bratislava region, which is the most economically developed region in the Slovak Republic, with the largest share of economically active population. Students in the region have the opportunity to proceed their studies at universities. On the other hand, other regions in Slovakia experience a declining trend in the number of students in grammar schools.

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	increment/decline
Slovak Republic	157956	148748	142799	138360	134154	129642	125075	122211	12265	-35300
Bratislava region	13605	12708	12383	12132	12428	12442	12522	12856	13313	-292
West Slovakia	55976	52402	49860	47608	45694	43821	42033	40471	40253	-15723
Trnava region	17447	16537	15724	14416	13970	13437	12772	12355	12257	-5190
Trenčín region	17999	16447	15549	14763	13896	13118	12556	12005	11908	-6091
Nitra region	20530	19418	18587	18429	18728	17266	16705	16111	16088	-4442
Central Slovakia	41836	39765	37956	37003	35700	34534	33393	32126	32024	-9812
Žilina region	24099	22767	21719	20992	20090	19332	18609	17970	17939	-6160

Banská Bystrica region	17737	16998	16237	16011	15610	15202	14784	14156	14085	-3652
East Slovakia	46539	43873	42600	41617	40332	38845	37127	36758	37066	-9473
Prešov region	25193	23466	22419	21482	20787	20299	19329	18724	18752	-6441
Košice region	21346	20407	20181	20135	19545	18546	17798	18034	18314	-3032

Table 4. The number of pupils in secondary vocational schools in regions of the Slovak Republic

Source: http://datacube.statistics.sk/#!/view/sk/VBD_DEM/om7011rr/v_om7011rr_00_00_00_sk.

In the Bratislava region, the number of students at secondary vocational schools in the monitored years practically has not changed, and if yes, only with a minimal decrease. In other regions however, the number of students sharply declines. If the trend continues to deepen in the coming years, it will have an impact on the quantity and quality of human capital on labour markets in regions.

The competitiveness of regions is determined by the quality of human resources and their willingness to learn, study and be permanently educated in further education, thus acquiring skills and competencies required for labour markets of the future. The population of the young nineteen years old represent the graduates of secondary schools, job seekers or applicants enrolling for the first degree of university studies.

3.3 Disparities in Slovak higher education

In recent decades, Slovakia has met the political goal of increasing the share of young people in the population with attained higher education. There are 34 universities, 117 faculties, 4,592 study programs at present in the Slovak Republic. However, after 2014 there was a significant decrease in the number of students studying at Slovak universities and it was not solely a consequence of demographic development. The study "Vision of Slovakia's Development Strategy until 2030 states" (2019) mentioned that as many as 300,000 people have left abroad for work, including the most numerous part of university-educated young people under 30 years of age. For their possible return and stabilization, the availability of rental housing should be provided as a key factor of their social security. Another key factor influencing population development is the economic stability of young families during parental leave and their subsequent professional development and performance.

In 2020 compared to 2019, there was a year-on-year increase in the number of university students. The total number represented 133,311 university students, out of which 77,726 were women. The increase of more than 2,000 students compared to 2019 represented a percentage increase by 1.7 %. The number of applicants for the first degree, and for the liaison first and second degree of university studies also increased year-on-year by 1,329 candidates, which represented a total of 40,820 applicants. Together with applicants from abroad, the number of candidates for study increased year-on-year to 3003, which in the final summary meant that 78,356 applications were submitted together with domestic and foreign applicants. In the end, a total of 37,327 accepted applicants applied to study, of which 4,517 were registered from abroad.

The decrease was recorded only in the number of duly completed university studies at public and private universities. The total number of students who duly completed their studies was 35,658, of which 21,879 were women. This represented a year-on-year decline by 4.42%, ie 1,650 graduates. The result was caused to a greater extent by full-time graduates, recording a year-on-year decrease by 4.47%, which was 1,420 university students, and in the case of external graduates, there was a year-on-year decline of 3.69%, which was 230 graduates.

Year	2014	2015	2016	2017	2018	2019	2020	increment/decline
Slovak Republic	160297	145040	142644	102283	118097	121119	121889	-38408
Bratislava Region	59254	52803	54470	34863	48270	47404	50277	-8977
Western Slovakia	41105	37821	34778	27828	27984	26713	28295	-12810
Trnava Region	15876	14801	14260	10149	10138	9950	10869	-5007
Trenčín Region	6043	5064	3736	2545	4047	3648	4413	-1630
Nitra Region	19186	17956	16782	15134	13799	13115	13013	-6173
Central Slovakia	29320	26168	24611	18270	19729	25419	20301	-9019
Žilina Region	15252	13445	13138	10055	10578	16763	11312	-3940
Banská Bystrica Region	14068	12723	11473	8215	9151	8656	8989	-5079
Eastern Slovakia	30618	28248	28785	21322	22114	21583	23016	-7602
Prešov Region	10346	9928	10173	7359	7486	7329	7682	-2664
Košice Region	20272	18320	18612	13963	14628	14254	15334	-4938

Table 5. Number of graduates at universities in regions of the Slovak Republic

Source: Slovak Accreditation Agency for Higher Education

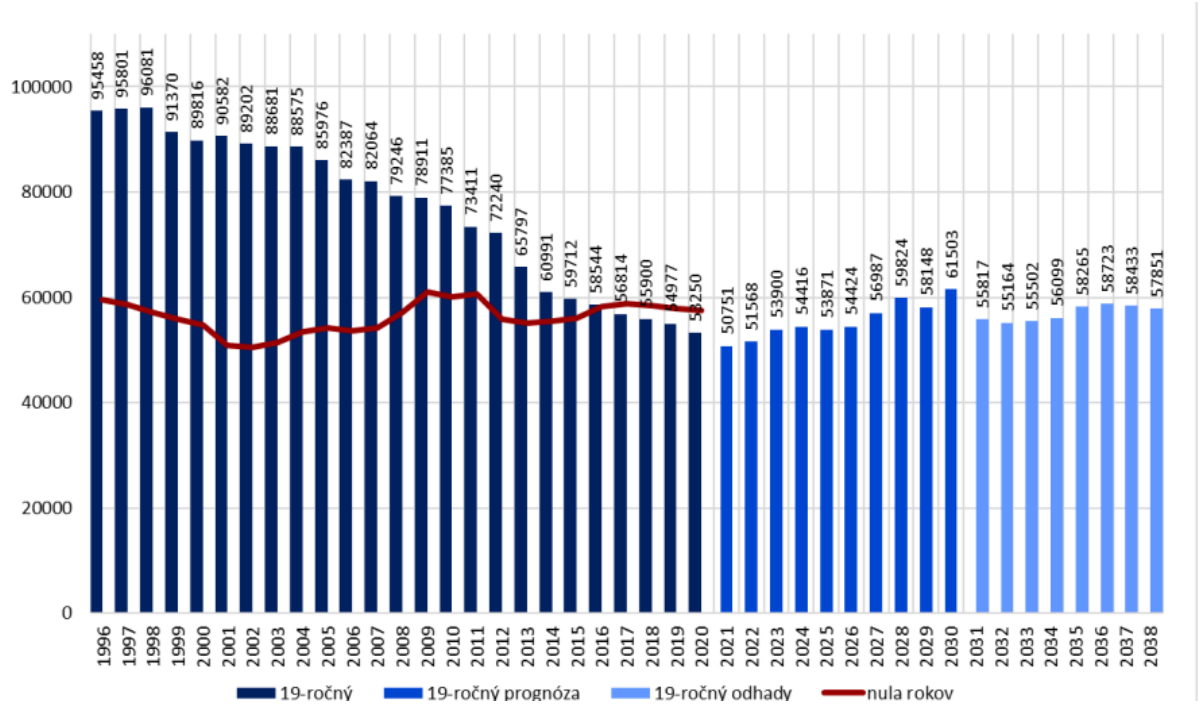


Fig. 2. Demographic evolution of 19-year-old population in the Slovak Republic

Source: Slovak Accreditation Agency for Higher Education, p. 9

Based on demographic tracking by the Research demographic centre a the INFOSTAT for the project That makes sense (To dá rozum), there is an estimate of a slight increase in the population of 19-year-olds, which should reach the level of 2014 by 2030. However, the increase is not evenly distributed regionally, due to population migration within Slovakia and the development of natality in western Slovakia.

The largest population increase in the 19-year-old cohort between 2018 and 2030 should come mainly in the Bratislava region (up to 84%) and then in the Trnava region (by 17%), while the other four regions of Slovakia will maintain approximately the same number (Trenčín region + 7%, Nitra region + 2%, Žilina region 0%, Košice region 0%) and in two cases the cohort will even shrink (Prešov region -2%, Banská Bystrica region -4%).

The decline in the number of students has stabilized since 2017 and has reached approximately the level of 2000. In 2020, there was even a slight increase (by 2,368 students) compared to 2019, possibly due in part to the COVID-19 pandemic, which may have discouraged some students from study abroad. There was also an increase in the population of foreign students, which increased by up to 1,200 students, compared to 2019.

The development of the number of students according to groups of disciplines in the Slovak Republic shows several significant trends in the last 18 (in absolute numbers), or 31 years respectively (at a percentage share). In the case of students I. + II. degree it is possible to see a more significant increase in the number of students of social sciences, humanities and services culminating in 2009 (full-time), and in 2008 (external), followed by a gradual decline to the current level (Figures 3 and 4).

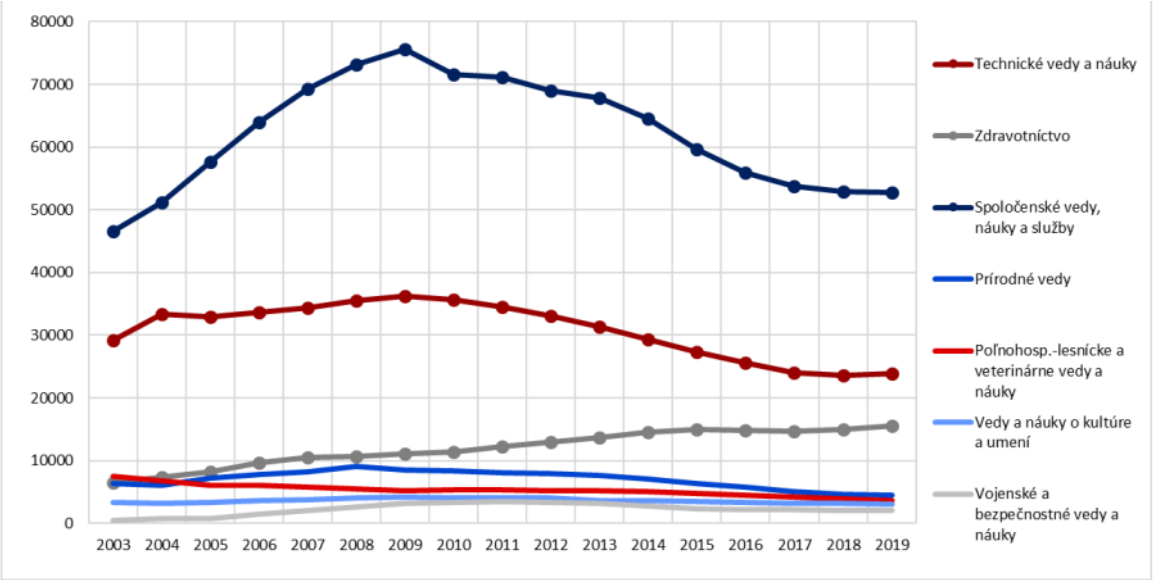


Fig. 3. Development of full-time study by groups of disciplines in 2003-2019

Source: Slovak Accreditation Agency for Higher Education, p. 14

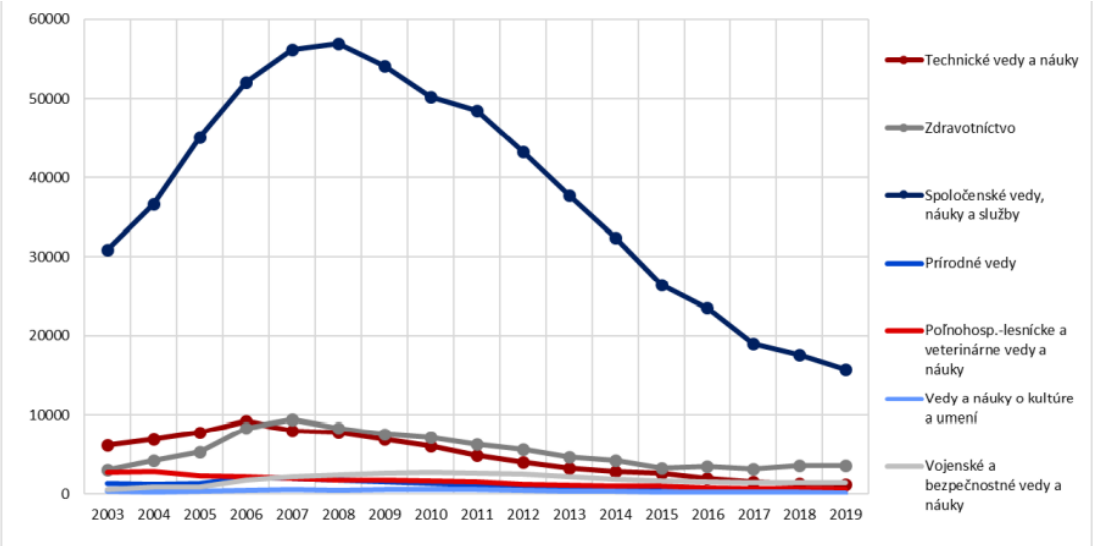


Fig. 4. Development of external students by groups of disciplines in 2003-2019.

Source: Slovak Accreditation Agency for Higher Education, p. 14

Over the last 23 years, Slovakia has managed to increase the share of university-educated people in the economically active population by up to 16.5 percentage points (Fig. 5). However, a similar trajectory is followed by all the surrounding countries. Despite mass accessibility to higher education in the Slovak Republic, the country still lags behind the OECD average. Withing the economically active populations in Hungary and the Czech Republic a similarly high share of university graduates as Slovakia is shown. Poland and Austria have a lead by 7 and 8 percentage points, respectively. The difference in the attained education of the entire monitored population is partly due to the lower level of education of the older generations. A similar increase in the level of education can be seen in the population of young people aged 25 to 34 (Fig. 6).

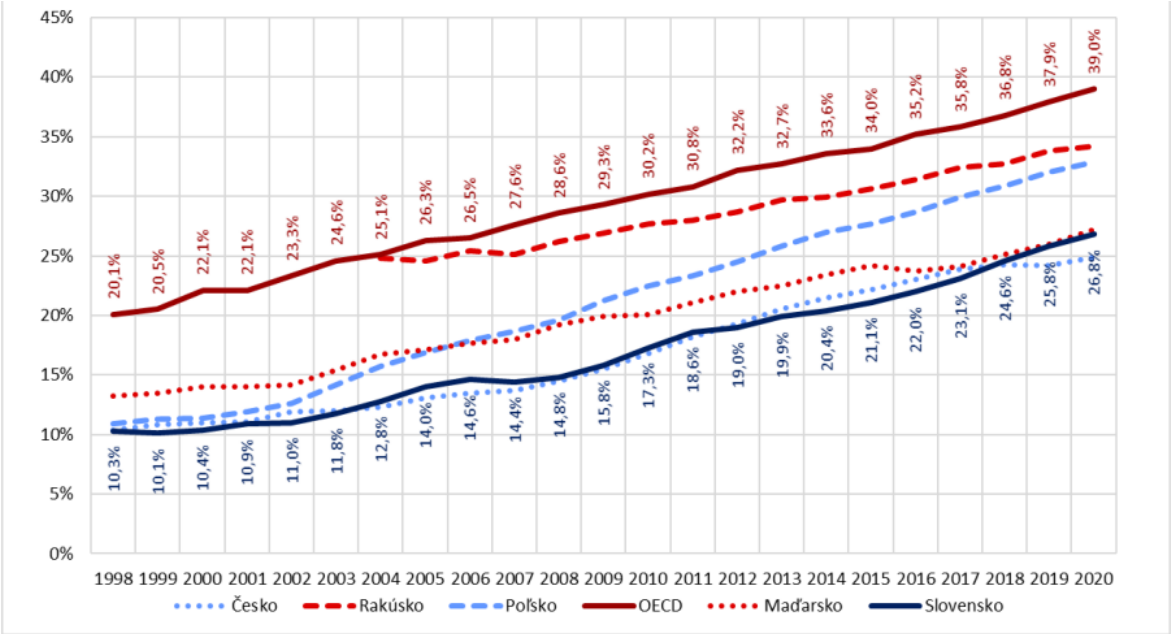


Fig. 5. Share of economically active population in 25-64 years old with university education

Slovak Accreditation Agency for Higher Education, p. 19

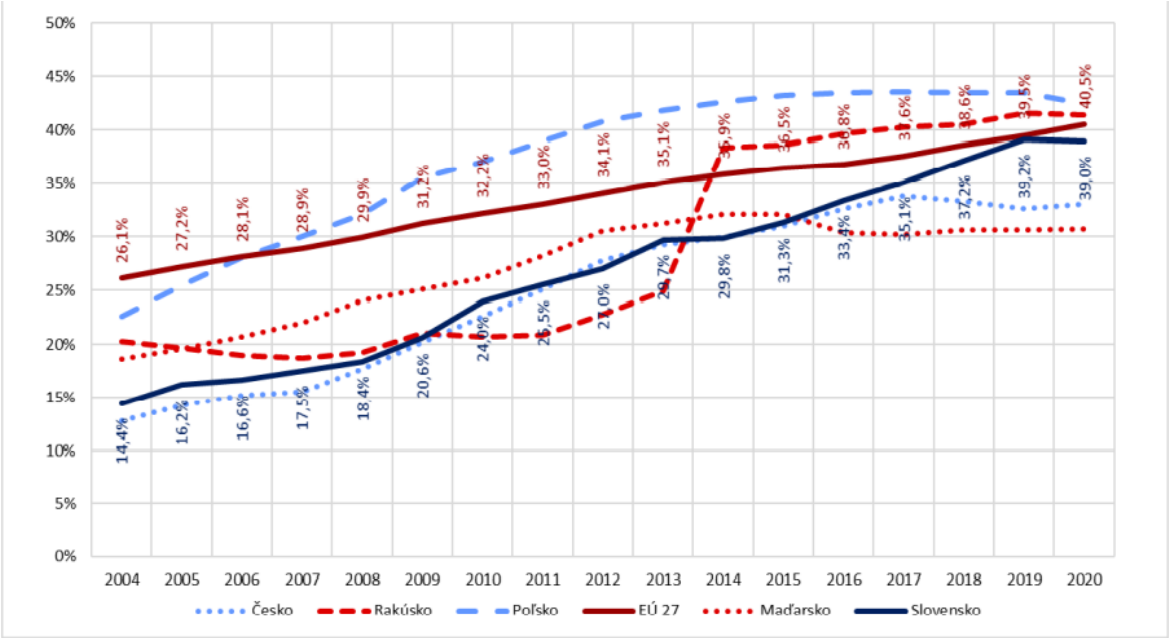


Fig. 6. Share of 25-34 years old population with university education

Slovak Accreditation Agency for Higher Education, p. 19

The comparison of Eurostat reflects the growth of higher education since the 1990s and has been closely linked to demographic developments in recent years. Slovakia has almost reached the average of EU countries and has a more significant lead over Hungary and the Czech Republic. In the case of the neighboring countries, we see a stabilization of the share in the last 3-5 years, while Slovakia was on the increase. However, it is questionable whether Slovakia has begun its stagnation in 2019. Current challenges of the Slovak economy in terms of new requirements for the abilities and skills of employees are expected in the near future in the form of production automation and increased risk of extinction of current professions.

The evolution of the number of graduates in the years 1989 to 2020 gradually increased, and in 2008 it reached its peak, when more than 230,000 students studied in Slovakia (Fig. 7).

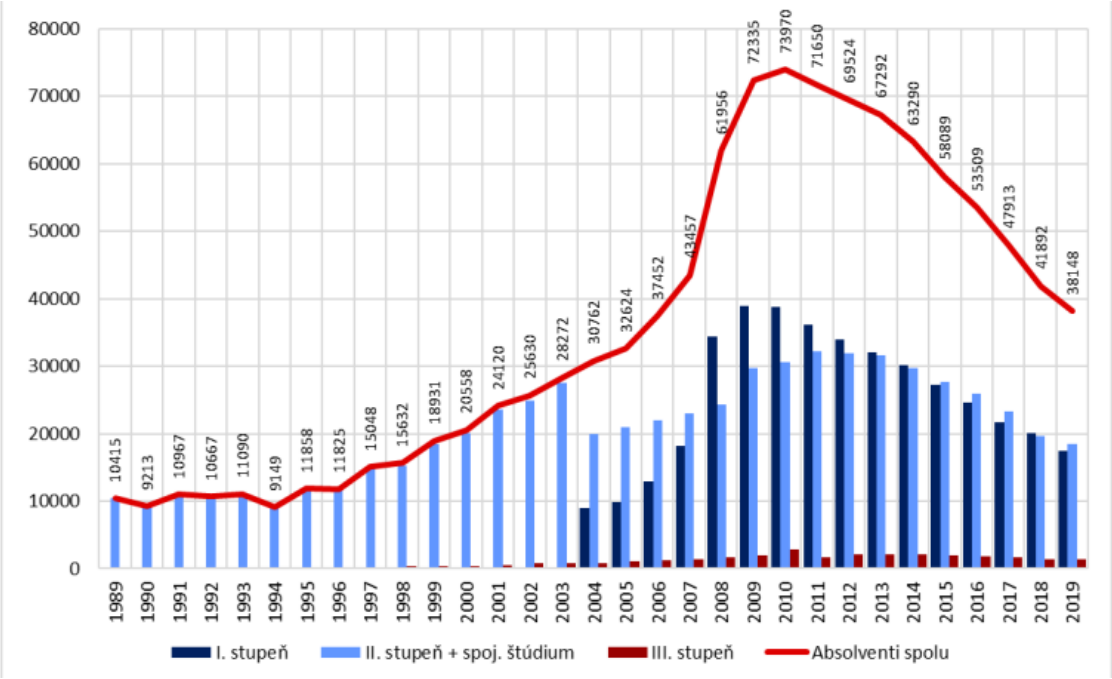


Fig. 7. Development of the number of graduates of Slovak universities in 1989 – 2019

Source: Slovak Accreditation Agency for Higher Education, p. 13.

In addition to the favourable demographic development, the increase of numbers of students was also associated with the establishment and expansion of public and private universities in the 1990s and early 21st century. The reason for the establishment of new higher education institutions should have helped to solve the situation that Slovakia lagged significantly behind developed countries in terms of the population with higher education.

Private higher education institutions were established mainly between 2002 and 2006, some earlier as the City University in Trenčín (1999) and some later as the Academy of Music and Arts in Banská Štiavnica (2011). Since the end of the 1990s, the development of universities has also been stimulated by a funding system that has linked subsidies primarily to the number of students.

At the same time, following the requirements pursuant to the accession of the Slovak Republic to the EU in 2004, universities began to harmonize the education system with the requirements of the European educational area and the European qualifications framework. Several professions began to require higher education, for example in public administration, health care, etc. However, as forecasted, as many as 70 % of current professions will soon be threatened by production automation, while the Slovak Republic ranks first (!) in terms of risk and threat in comparison with OECD countries.

4. DISCUSSION

The aging of the population and the ratio of the working-age population and post-productive age population, which currently represents a ratio of 10:2, also pose a major risk to the Slovak economy. The development projection until 2060 states that the ratio will increase to 10:6, ie to 10 employed and 6 people of unproductive age. The OECD Skills Strengthening Strategy for the Slovak Republic (2019-2020) relates both to young adults and working-age workers. The aim is to acquire, renew and improve the skills needed to perform tasks in current professions, but in particular to prepare the workforce for new professions.

These skills, marked as foundational, should contribute to higher adaptability and resilience of employees. Higher education in Slovakia contributes to the partial fulfilment of these goals. In the period

2005-2015, the number of higher education graduates aged 25-34 doubled. In 2018, the share of the population in this age group with a university degree was 37 %, which is significantly less than the OECD average of 45 % (in this age group). One response to the COVID-19 global pandemic is to challenge in a new way the changes in the world of work that require the workforce to learn new skills and to strengthen the ability to adapt to new occupations that are emerging in the labour market.

The labour market is becoming a place where the ability to cope with automation, digitization and job dynamization dominates in the selection of employees. Foundational skills are intended to help equip employees so that they can work in multiple sectors and professions. They are generic by nature and employees should obtain higher added value through training, be able to operate and work in a digital environment and adapt to emerging professions.

In June 2021, the McKinsey Global Institute conducted an analytical study, "56 DELTA skills," focusing on 56 fundamental skills that can be identified and developed in individuals. DELTA is an acronym for "distinct element of talents", ie it is a clear, distinct and distinctive element in the intellectual equipment (talents) of an individual. Foundational skills can be divided into 4 areas: (1) cognitive skills, (2) interpersonal skills, (3) self-management (and entrepreneurship), (4) digital skills.

The level of proficiency of some selected skills in the statistical analysis presented in the DELTA study correlates with education. For example, digital literacy (with individual components) achieves the highest correlation with education. It is digital literacy that is acquired and developed in formal education, non-formal education and informal learning. The integration of digital literacy into higher education in individual study programs is therefore becoming a necessity for current higher education system.

Human potential is one of the very important components that contributes significantly to the development of the country and the regions. It is the ability of people and their capabilities or competencies that have a significant impact on the successful development of the region and countries. Prusáková and Matúšová (2019) state that the economic development of regions increasingly depends on continuous investments in education, human resources development, basic research and the capacity to create innovations of various types and put them into practice. The development of the regions should not be identified solely with economic development, but especially with the quality improvement of the economic structure and all aspects of the quality of life of population. Education, knowledge and cognition in combination with various other factors have long been an important part of economic development.

As Dudová, Stanek and Polonyová (2018) emphasize, human development is moreover a development paradigm that goes beyond the increase or decrease of national income and is based on creating an environment in which people can fully develop their potential and lead a productive, creative life in accordance with their needs and preferences.

5. CONCLUSIONS

The results of the analysis and assessment confirm several conclusions. Firstly, the economic development of the regions also increasingly depends on investment in education, human resources development, basic and applied research, and the capacity to create innovations of various types and put them into practice.

Secondly, for the development of each area, including corporate and regional, it is extremely important to emphasize the development of human potential, important for further development, as it brings new solutions, ideas and values. Therefore, population needs to be taken care of and fully supported to come up with new ideas and continue to develop them, and to take care of their environment.

Thirdly, the development of the regions should not only be identified with economic development, but above all with a quality improvement in the economic structure and all aspects of the quality of life of population. Prusáková and Matúšová (2019) bring to the fore education, knowledge and cognition, as in combination with various other factors they have long been an important part of economic development.

Fourthly, EU regional policy seeks to eliminate inequalities in five key areas, namely investment in people by promoting access to education, employment, and social inclusion opportunities, support for the development of small and medium-sized enterprises, promotion of research and innovation through investment and job creation in research, improvement of environment through major investment projects, modernization of transport and energy production to combat climate change, with the focus on renewable energy and innovative transport infrastructure.

Fifth, the European Commission published the 8th Cohesion Report on 9 February 2022. The report made the assessment of economic, social and territorial cohesion in the European Union, where less developed regions are gradually catching up with developed regions. At the same time it also points to growing disparities in innovation and innovation potential. At EU level, employment rates are currently higher than before the economic crisis in 2008, but regional disparities are still higher than before the crisis. Demographic change will affect all regions in the coming decades. Regions will have to adapt to a shrinking workforce and a student group, and a growing population aged over 65 years.

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