

## ON THE IMPORTANCE OF A “DIPLOMA” ON THE JOB MARKET

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**Purpose:** The purpose of this article is to contribute to the ongoing discussion on the role of higher education in the job market by analyzing the risk of unemployment for individuals with higher education, the wages they receive, as well as qualitative aspects such as personal development and self-fulfillment, in the context of evolving attitudes towards the concept of lifelong learning.

**Design/methodology/approach:** In the article an analysis of the literature on the subject and selected methods from the field of descriptive statistics were used. During analysis, data from public surveys, such as Labor Force Survey and Survey of Wage Structure by Occupation, as well as from the Polish Graduate Tracking System, were used. The analysis considered the time series from 2010 to 2020.

**Findings:** The risk of unemployment is notably influenced by a person's level of education. College degree holders face the least risk, with job search duration influenced by the level and field of study, and work experience gained during studies. Individuals with higher education earned more than the average market economy wage over the observed period. However, an analysis of these wages relative to the average market wage and a comparison of wage growth dynamics against minimum wage growth reveal unfavorable trends. When assessing the significance of higher education in the labor market, it's important to consider also elements tied to broadly defined well-being or personal happiness. HEIs are formal education institutions which foster general cognitive and transferable competencies. Additionally, they facilitate non-formal and informal education for students. Such approach in current world is essential for young people to be on the way of self-improvement, self-realization and create personal well-being.

**Originality/value:** The article contributes to the discourse on higher education's role in the labor market, analyzing unemployment among college graduates and their wage trends, with special attention to the graduates' situation. It also highlights the positive impact of the educational process on personal well-being and happiness. The paper is addressed to all interested in higher education policy and management of higher education institutions.

**Keywords:** higher education, higher education institutions, labor market.

**Category of the paper:** research paper.

## 1. Introduction. Modern Labor Market

The labor market is a dynamically changing environment encompassing all aspects of employment and unemployment. Numerous interdependent factors influence it, and they cannot be evaluated in isolation.

Notably, demographic changes present significant challenges. Negative trends such as depopulation, a decreasing working-age population, and a sharply increasing demographic burden<sup>1</sup> result in dwindling labor market resources and an increasing worker deficit in certain sectors (specifically healthcare, the TSL sector, construction).

Shifts in economic and technological paradigms, such as the knowledge based economy, sharing economy, inclusive growth, Industry 4.0, and digital transformation, signify a move from an industrial civilization to an information-technology civilization. This new civilization is built on information, knowledge, innovation, and continuous education. Consequently, the value of today's workers is determined in the labor market across three dimensions: cognitive, technological, and social. Employers expect specific competencies related to a given industry and profession, as well as transferable competencies such as communication skills, conscientiousness, teamwork, analytical thinking, and organizational skills. These competencies are integral to an employee's effectiveness in a variety of professional contexts, with their key characteristic being transferability. This means they can be applied and utilized across different employers, sectors, or industries.

In evaluating changes in the labor market, it is also important to consider phenomena related to the COVID-19 pandemic (e.g., issues related to the Great Resignation and Great Rotation), the Russian-Ukrainian conflict (the influx of migrants into the Polish labor market), or high inflation (which causes a decrease in real wages for workers). Concurrently, we are observing deep social transformation and cultural change. Researchers refer to a VUCA-type reality or its extension, the BANI world, to define the current human condition and associated challenges (e.g. Jeruszka, 2023). Frequently observed phenomenon among young people is also the so-called prolonged transition, i.e. delaying decisions characteristic of the period of maturity (Maksim, 2021, p. 9).

Young people often encounter difficulties when planning their educational and professional careers as they struggle to fully anticipate the consequences of their decisions and remain uncertain about the validity of their educational choices. They frequently question established truths and cause-and-effect relationships. Common questions they pose to themselves and others include: is self-education worthwhile, is pursuing studies beneficial, and what is the value of a higher education degree in the job market?

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<sup>1</sup> From 2020 to 2022 alone, the total age dependency ratio increased from 68.3 to 70.4; comparatively, in 2010 it was 55.2 (GUS, BDL).

Longstanding media narratives like “Polish higher education institutions educate the unemployed” (e.g. Guza, Klinger, 2010), “Polish higher education institutions do not know why and for whom they educate” (Dudzik, 2011), and “studies are becoming less and less profitable” (INN Poland, 2021) exacerbate this problem. This topic often comes up in family discussions<sup>2</sup> and forms the questions prospective college applicants ask their senior peers.

In scientific research and analytical works by various institutions, this issue is addressed in terms of the so-called higher education premium (e.g., Goraus-Tanska, Osika, 2020; NBP, 2015; Rocki, 2021), indicators of graduates' success in the labor market (e.g., Pacuska, 2014), the impact of characteristics of HEI on the situation of graduates on the labor market (Grotkowska, Gaik, 2019; Rocki, 2022) or factors differentiating the wages of college graduates (e.g., Rocki, 2018). Researchers strive to determine the relationship between education and wages (level, number of years of education) and the rate of return on higher education. Survey research, in contrast, attempts to chart long-term trends relating to the factors influencing young people's educational decisions — the type of high school completed, the financial status of the family, the size of the town or city the candidate hails from, parental influence and educational background, or the candidate's self-esteem (e.g. CBOS, 2017; CBOS, 2019).

The purpose of this article is to contribute to the ongoing discussion on the role of higher education in the job market by analyzing the risk of unemployment for individuals with higher education, the wages they receive, as well as qualitative aspects such as personal development and self-fulfillment, in the context of evolving attitudes towards the concept of lifelong learning. In the article data from public surveys, such as the annually conducted Labor Force Survey (LFS) and the biennial Survey of Wage Structure by Occupation, as well as from the Polish Graduate Tracking System (ELA) were used. The ELA system, developed and maintained by the National Information Processing Institute - National Research Institute on behalf of the Ministry of Education and Science, provides annual data on the status of graduates of Polish universities in the job market. Importantly, this system relies on data from administrative sources (POL-on and the Social Insurance Institution records<sup>3</sup>), not opinions, ensuring the reliability and accuracy of the data. The analysis considered the time series from 2010 to 2020 (the most recent year with available data for most metrics). In the article an analysis of the literature on the subject and selected methods from the field of descriptive statistics were used.

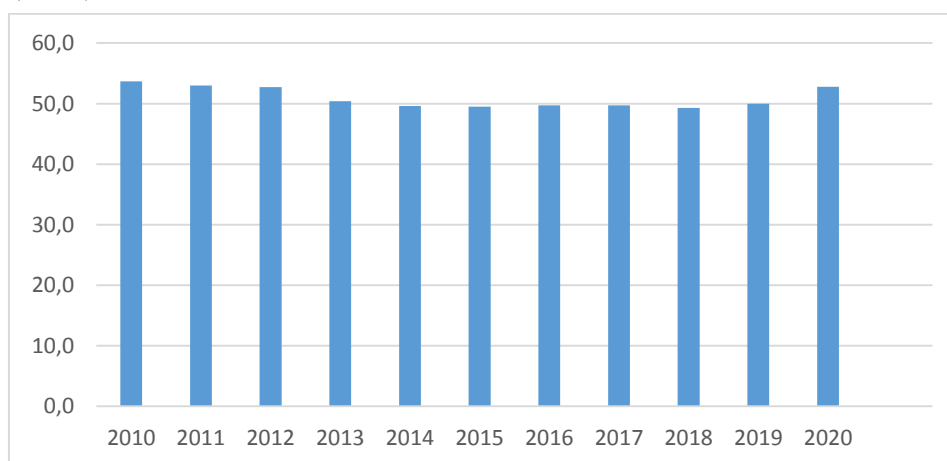
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<sup>2</sup> According to a CBOS survey, about 80% of young people frequently or occasionally discuss their educational plans with their mothers; this percentage is slightly lower for discussions with their fathers, at less than 60% (CBOS 2019, p. 4).

<sup>3</sup> The results of this study are reported at t+2 years.

## 2. The risk of unemployment among people with higher education

As highlighted in the introduction, demographic factors primarily shape the labor market and, concurrently, the functioning of higher education institutions (HEIs). Since 1989, Poland has experienced a consistent decline in the fertility rate, falling below the level necessary to ensure generational replacement. This leads to population decrease and unfavorable changes in the structure of biological and economic age groups within Polish society. A drop in the population aged 20–24, the age generally associated with entering higher education, has been observed since 2006. According to the official demographic forecast, this statistic is projected to decrease by over 100,000 by 2040 compared to 2022 (GUS, BDL). Despite the decreasing number of students in Poland<sup>4</sup>, the gross enrollment rate at the tertiary level, often used as a measure of educational universality, has been stable and hovering around 50% for a considerable time (Figure 1). This trend is also apparent in survey results. According to a 2018 CBOS survey, 62% of students planned to pursue further studies in their chosen fields after completing their current level of education. This figure was slightly lower in 2013 and 2018 at 59% (CBOS, 2019). Some labor market experts interpret these data as the massification of education and the subsequent devaluation of a university degree. However, this perspective is overly simplistic and doesn't align with the developmental priorities of modern societies and economies. Indeed, tertiary enrollment rates are included in many composite indexes on the development of human capital (GUS, 2021), quality of life, or general well-being (e.g. OECD), treating them as stimulants of the aforementioned processes and phenomena. As A. Murawska highlights — in modern societies, education is not just a private affair for individuals; the level and type of education in a society impacts the economic, cultural, or political development of a country (2017).

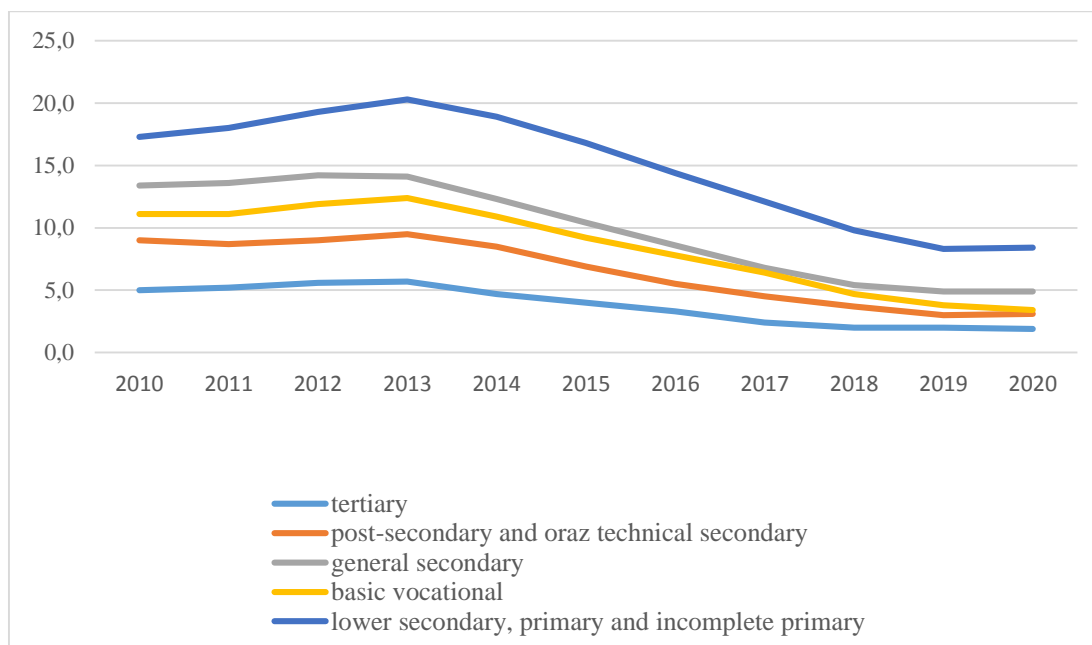


**Figure 1.** Ratio of students to population aged 19-24 from 2010 to 2020.

Source: own elaboration based on BDL, GUS.

<sup>4</sup> The number of students per 10,000 population in Poland has decreased from 472 to 319 in the analyzed time series (GUS, BDL).

Even though the unemployment rate in Poland has progressively decreased<sup>5</sup>, a certain segment of the population remains unemployed and seeking work. The risk of unemployment is notably influenced by a person's level of education. Those with higher education are least at risk (Figure 2). The unemployment rate (according to LFS) among people with tertiary education in 2020 was 1.9%, 3 p.p. lower than among people with general secondary education.



**Figure 2.** Unemployment (LFS) rate by education level from 2010 to 2020.

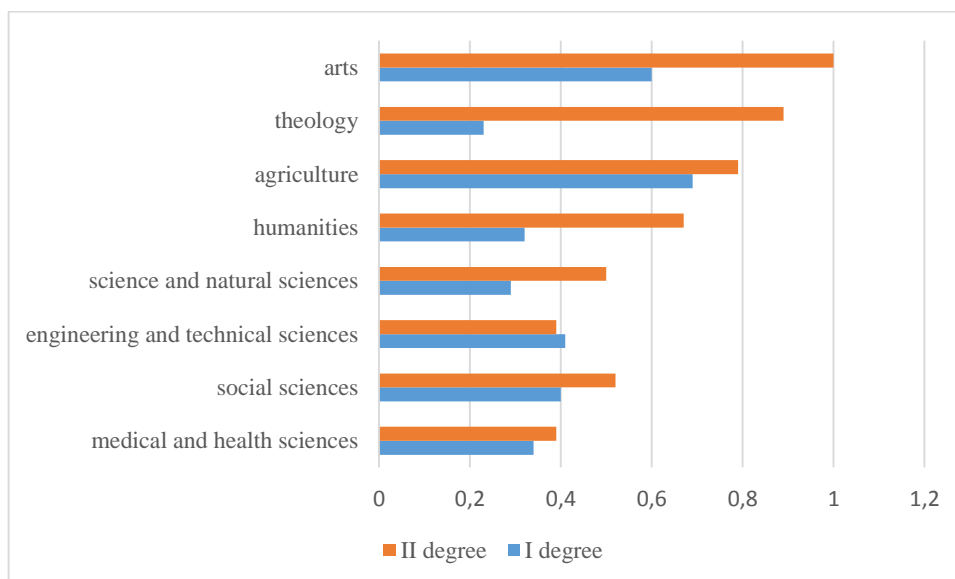
Source: own elaboration based on data: GUS, BDL.

The risk of unemployment among college graduates is significantly determined by their field of study. Despite the widespread availability of information on occupations in demand in the labor market, popular university campaigns (e.g., “Girls to Technical Universities”, “Girls to the Sciences”) and the apparent rationalization of young people's educational preferences (in terms of labor market demand), there are still young people who choose “easier” or locally “available” fields of study. This choice often aligns with the financial capabilities of the prospective student and their family.

The ELA survey provides data on the unemployment risk of college graduates by field of study in relation to their place of residence. The study introduced the so-called relative unemployment rate (RUR). This represents the average value of the quotient of a graduate's unemployment risk and the registered unemployment rate in the graduate's country of residence. The interpretation of this indicator is straightforward — RUR values below 1 imply that, on average, the risk of unemployment among graduates was lower than the unemployment rate in their countries of residence during the survey period. The lower the RUR values, the better. For 2020 graduates from virtually all groups of study fields, RUR values were below 1.0 (Figure 3). The notably lower values for bachelor's degree programs are influenced by the fact

<sup>5</sup> Poland's registered unemployment rate fell from 12.4% to 6.3% in the analyzed time series (BDL, GUS).

that many graduates proceed to second-degree programs. Within this group, graduates of theology<sup>6</sup>, life sciences, humanities, and medical and health sciences fared the best. On the other hand, the lowest RUR among second-degree graduates was observed in the fields of engineering and technical sciences, and medical and health sciences.



**Figure 3.** Relative unemployment rate of 2020 graduates<sup>7</sup> by field of study.

Source: own elaboration based on data: ELA, 2020.

The ELA survey also provides information on the average time it takes graduates to look for a job<sup>8</sup>. Second-degree graduates typically secured full-time jobs faster than first-degree graduates. 60% of undergraduates found a job within 4 months, 20% within 4 to 18 months, and 20% took longer than 18 months. In contrast, among level II graduates, 60% were already employed, 20% found a job within 3 months, and 20% took 3 months or longer. The duration of the job search was strongly influenced by previous work experience (Table 1).

**Table 1.**

*Average time to secure a contract job post-graduation for 2020 graduates (in months)*

Degree of study	Experience of full-time employment or self-employment before obtaining a diploma	
	yes	no
I degree	3,47	13,8
II degree	1,44	6,76

Source: own elaboration based on data: ELA, 2020.

First-degree graduates who worked based on an employment contract or were self-employed during their studies typically took an average of four times less time to find a full-time job compared to graduates without such experience. For level II graduates, this disparity was even greater.

<sup>6</sup> However, it should be noted that the graduates in this group constituted a small collective (N = 73).

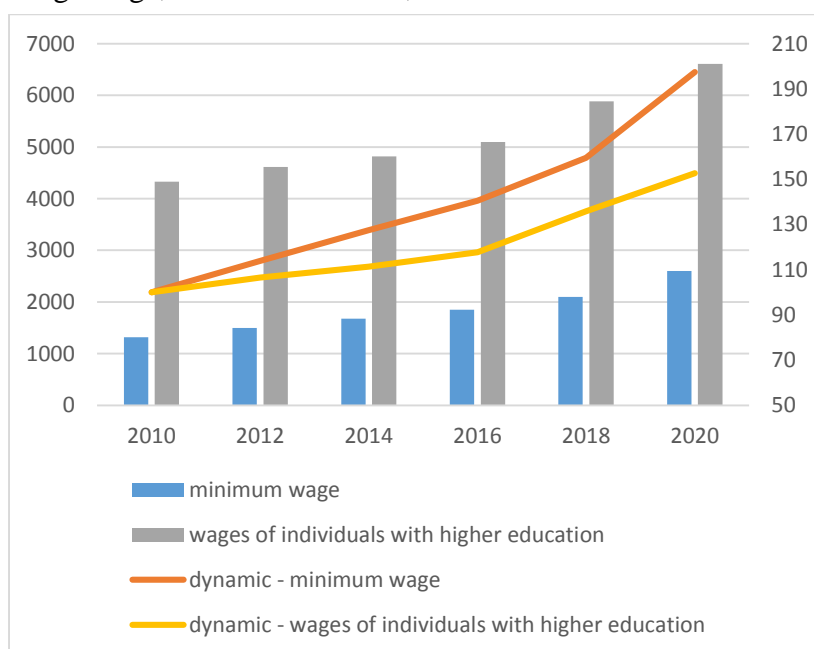
<sup>7</sup> In the second year after obtaining the diploma.

<sup>8</sup> For this edition, the study covers the period up until 12/31/2022.

### 3. Wages of individuals with higher education

Wages of individuals with higher education play a critical role in the analysis of the value of higher education in the labor market. Considerations include wage levels, wage growth, and relationships to relative quantities (like minimum wage or average wage in the market economy). The drive to gain material benefits from skill improvement is undeniable and serves as the primary motivator.

Throughout the studied time series, the average salary of college-educated individuals has risen and remained significantly higher than the minimum wage. However, the growth rate was notably lower compared to the minimum wage (Figure 4). This disproportion was particularly evident during the 2018-2020 period. It's worth noting that in Poland, the minimum wage is growing faster than the average wage in the market economy. In 2010, the minimum wage was 40.8% of the average wage, and a decade later, it was 50.3%.



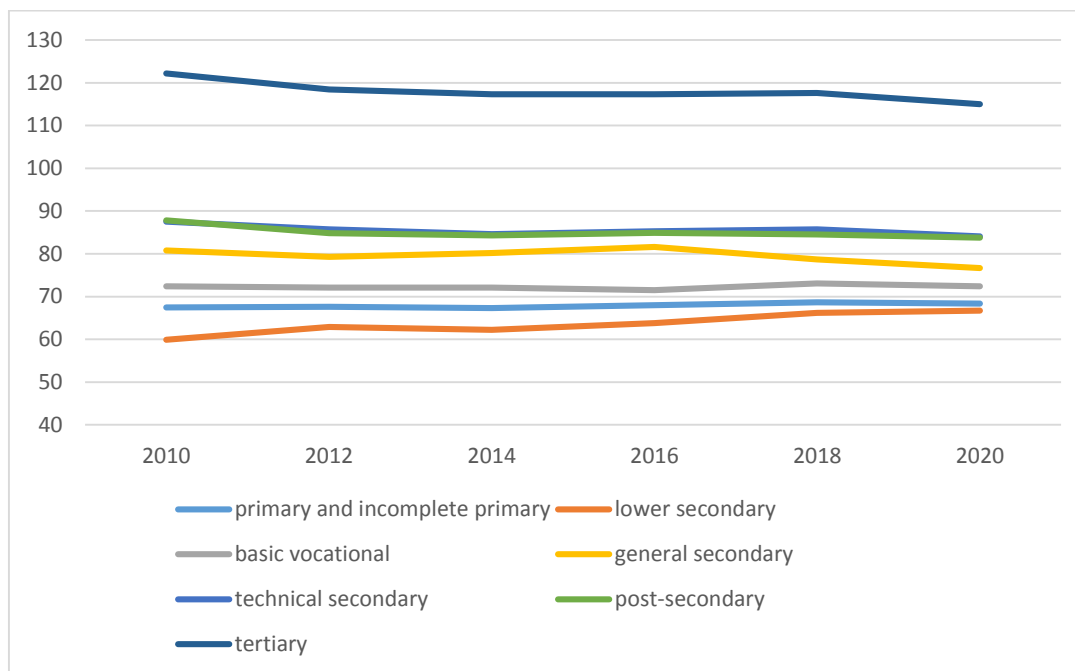
**Figure 4.** Level (left axis, in PLN) and dynamics (right axis, 2010 = 100) of the average gross salary of individuals with higher education and the minimum salary from 2010 to 2020.

Source: own calculations and elaboration based on data: GUS, BDL.

Therefore, it's worth analyzing the relationship of the salaries of workers with higher education to the average salary of workers in the national economy, in comparison to the average salaries of people with other education levels (Figure 5).

Analysis of statistical data from 2010 to 2020 reveals that the average salaries of individuals with higher education consistently exceeded the average salary in the market economy. However, the ratio of the average gross salary of college-educated workers to the average salary in the market economy (= 100) fell from 122.2 in 2010 to 115 in 2020. This implies that by 2020, the average salary of individuals with higher education was only 15% higher relative to

the average salary in the market economy. A similar downward trend is observed concerning the salaries of individuals with post-secondary, general secondary, and secondary vocational education.

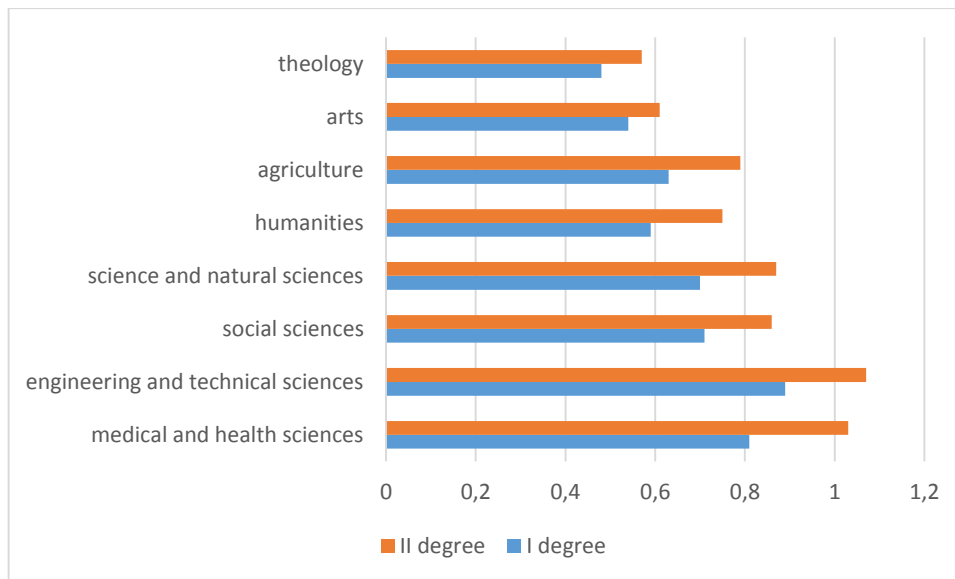


**Figure 5.** Relation of the average gross salary of employees by specific education levels to the average salary of employees in the national economy from 2010 to 2020.

Source: own elaboration based on data: GUS, BDL.

The ELA survey provides information on the salaries of college graduates by field of study in relation to the graduate's place of residence. The study introduced the so-called relative earnings index (REI). This index represents the average value of the ratio of the graduate's average monthly salary to the average monthly salary in their county of residence. Interpreting this index is straightforward: REI values above 1 imply that, on average, the salary level of graduates exceeded the average salaries in their counties of residence during the survey period. Hence, the higher the REI values, the better. For 2020 graduates from each group of majors, the REI showed higher values for second-degree graduates (Figure 6), suggesting that continuing education is associated with higher post-graduation salaries.





**Figure 6.** Relative earnings rate of 2020 college graduates<sup>9</sup> by field of study.

Source: own elaboration based on data: ELA, 2020.

Regarding bachelor's degree programs, the most successful graduates were those from engineering, medical and health sciences, and social sciences. Among second-degree graduates, the highest REI values were observed in the fields of engineering and technical sciences and medical and health sciences (REI above 1).

#### 4. College education and the concept of lifelong learning

The transformations mentioned at the start of the article have led to changes in the approach to lifelong learning. This shift has moved from education aimed at supplementing, improving, or changing one's qualifications to learning throughout the life cycle for conscious self-realization and improved quality of life.

When assessing the significance of higher education in the labor market, it's vital to consider not only quantifiable aspects but also elements tied to broadly defined well-being (including mental well-being) or personal happiness. Z. Niśkiewicz contends that mental well-being is crucial in human life, asserting that a sense of fulfillment and satisfaction is developed throughout our lives across six dimensions: purpose in life, personal development, self-acceptance, positive relationships with others, autonomy, and mastery over the environment (2016, p. 149). The accumulation of knowledge and wisdom plays a significant role in this process, gained through expanding our knowledge, interacting with others, and observing our own and others' behaviors in various contexts. A. Mirski viewing well-being as a social and economic category, points to studies that confirm the indisputably positive

<sup>9</sup> In the second year after obtaining the diploma.

impact of education and employment on an individual's sense of happiness (2009, p. 179). According to the latest research – psychological and social well-being for young people are extremely important. More than half of them think that individual well-being is more important than high earnings (PwC, Well.hr, Absolvent Consulting, 2022, p. 4).

HEIs are formal education institutions. They primarily foster general cognitive competencies, providing a foundation that graduates continually broaden with additional skills needed in the job market, acquired through other non-formal or informal learning activities. Formal education can be viewed as a baseline, not a process with a definitive end. Transferable skills such as collaboration, punctuality, work organization, and patience are also honed during higher education.

Additionally, HEIs facilitate non-formal and informal education for students. While non-formal education may not alter educational achievement levels, it fosters the development and acquisition of skills relevant to various professional and social aspects of life. Commonly conducted through courses, training (like micro-certification or certification programs), instruction, seminars, conferences or lectures (like open lectures), it also encompasses distance education, such as webinars. Furthermore, personal growth through social interactions is crucial. This includes interactions with lecturers, fellow students, administrative staff, or internship supervisors. This aspect is part of non-formal education, a lifelong process that unfolds intentionally and unintentionally.

In curricula, alongside directional and specialized modules designed to prepare students for specific professional roles, general education subjects exist. Interestingly, students sometimes call these as “fillers”. These subjects aid students in their learning journey and personal development. In essence, these subjects are intended to help young individuals understand themselves, set and achieve not only educational but also “life” goals, manage stress, connect with their environment, and foster their overall well-being.

## 5. Conclusions

The labor market and education are intricately linked. HEIs' educational endeavors largely cater to the needs of their two main beneficiaries — students and employers. The labor market presents a growing array of challenges for HEIs, but it's important to note that changes in the education system usually lag behind those in the labor market (Jeruszka, 2023).

This article contributes to the discourse on higher education's role in the labor market, analyzing unemployment among college graduates and their wage trends, with special attention to the graduates' situation. It also highlights the positive impact of the educational process on personal well-being and happiness.

The risk of unemployment is notably influenced by a person's level of education. College degree holders face the least risk, with job search duration influenced by the level and field of study, and work experience gained during studies. A review of statistical data shows that individuals with higher education earned more than the average market economy wage over the observed period. However, an analysis of these wages relative to the average market wage and a comparison of wage growth dynamics against minimum wage growth reveal unfavorable trends.

When assessing the significance of higher education in the labor market, it's important to consider also elements tied to broadly defined well-being or personal happiness. HEIs are formal education institutions which foster general cognitive and transferable competencies. Additionally, they facilitate non-formal and informal education for students. Such approach in current world is essential for young people to be on the way of self-improvement, self-realization and create personal well-being.

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