

Contemporary Economy



Contemporary Economy
Electronic Scientific Journal
<http://en.wspolczesnagospodarka.pl/>

Vol. 9 Issue 4 (2018) 87-99
ISSN2082-677X
DOI [10.26881/wg.2018.4.08](https://doi.org/10.26881/wg.2018.4.08)

THE SITUATION OF POLISH HIGHER EDUCATION GRADUATES ON THE LABOUR MARKET IN THE FIRST YEAR AFTER GRADUATION

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Abstract

The literature highlights the present-day problem of misalignment between skills possessed by graduates and employer expectations. This has been shown to considerably affect the length of time spent by graduates on job seeking and – consequently – their earnings.

It is particularly interesting to compare the situation of graduates of various levels and fields of study in Poland among those surveyed by the MNiSW (Ministry of Science and Higher Education) – 2016. The study provides interesting conclusions confirming the thesis that an increase in the education level leads to increased income. Thus, those graduating with a Master's degree find work more easily and earn higher salaries.

The article analyses the MNiSW, OECD, EU, GUS databases. The work is analytical and descriptive.

Keywords: labour market, graduates, earnings, education

JEL classification: I21 Education and research institutions: analysis of education;
J01 Labor economics: general

Introduction

Recent graduates and students in the final stages of university are facing numerous problems on the labour market. These are caused by a variety of factors – among them, a large supply of graduates from institutions of tertiary education, who lack the skills required by employers. Another problem is the reform in the last two decades of the educational system in Poland and other Central and Eastern European countries, which has succeeded only in producing a large number of graduates, while failing to align course content with job markets. Globalization is another factor impacting on the labour market, as is the shifting role of work in today's fast-

paced world. In Europe, the negative impact has also been delivered by the recent crisis (Kwiatkowski, 2011; Zieliński, 2012).

As it reels from the recent crisis, the economy has produced high unemployment rates among graduates around the world. As a result, this is also affecting the professional activity of the population and its scale of income (Kata *et al.*, 2015).

The aim of this article is to show the situation of Polish tertiary education graduates of 2016 in the first year after graduation, based on the government database (ELA – The Polish Graduate Tracking System). The author puts forward the hypothesis that graduates of Master-level studies enjoy a better position on the labour market than graduates with a Bachelor's degree or holders of a long-cycle Master's degree. The article analyzes the MNiSW (The Ministry of Science and Higher Education), OECD, EU, GUS databases. The work is analytical and descriptive.

1. The role of higher education in acquiring professional qualifications

Education is a set of skills and qualifications obtained by a given person during the (formal and informal) learning process. Some of these (the more universal ones) have the effect of improving the probability of finding a job, while others (those of a more specific nature) mainly impact on productivity, and consequently the level of remuneration in a given profession (Kotlorz, 2007).

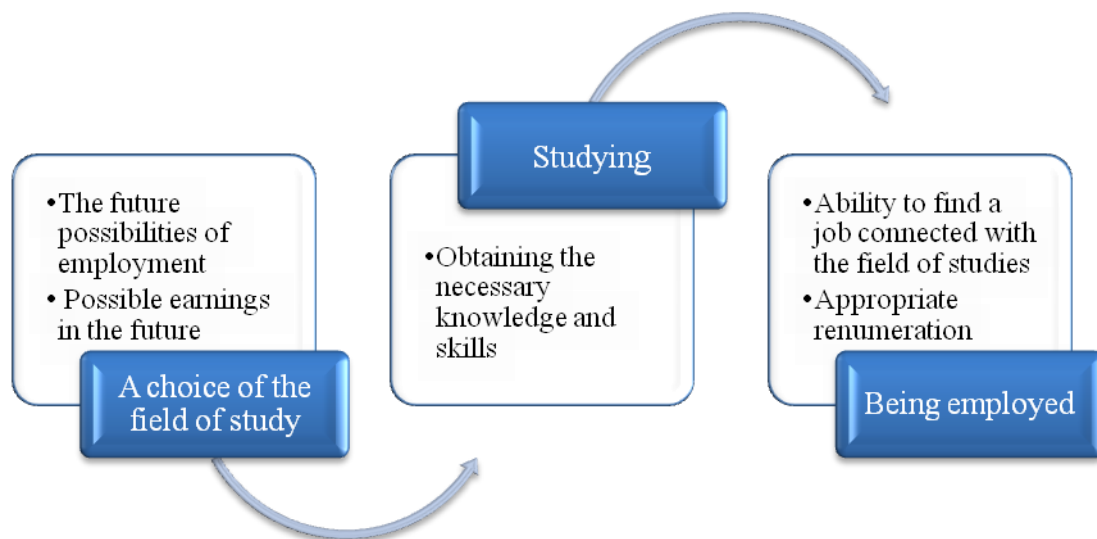


Figure 1. Relations between the education and labour market system

Source: The author's own work based on: Kotlorz, 2007, p. 95; Piróg 2011, p. 24, 30.

Even though the educational system and the labour market are independent from each other, the links that do exist between them are growing in strength, mainly through an alignment of college programmes with the situation on the labour market (Figure 1). When young people decide to continue their education, they think about the future prospects of employment. That means matching the profile of their studies with the needs and expectations of future employers. Another motivation behind the choice of a subject is provided by salary expectations in the future.

The main aim of higher education is to prepare students for work. This means that studies should give them the opportunity to gain specific knowledge associated with their future roles – as employees or employers – in the business world. The knowledge can be divided into two main groups – theoretical and practical.

As for theoretical knowledge, studies should provide students with a theoretical background of their chosen subject. That knowledge can be also useful for future graduates who might decide to work in the higher education sector and teach future generations of students.

As for practical knowledge, studies should give students an insight into their future work in a company, through practical classes featuring case studies, simulations of the decision-making process, field trips to companies, laboratory work and especially on-the-job training. Future graduates should possess the practical skills to help them build up a successful career working in the private or public sectors.

Some researchers indicate that employers looking to hire graduates expect competence in 3 equally important areas (Figure 2): theoretical knowledge, practical knowledge and social and communication skills, such as teamwork, inspiring leadership, foreign language skills, commitment, reliability and persistence.



Figure 2. Three equal components of competence expected by employers

Source: The author's own work based on Piróg, 2011, p. 24.

Moreover, in today's highly competitive labour market, the ability to navigate it is no less important than theoretical knowledge, broad expertise, formal competence and personality traits desirable for employers. This means that graduates should possess the ability to complete application forms and have the necessary interpersonal skills to secure the job they want (Piróg, 2011).

The educational services market is often distinguished by different levels of higher education. In the reports of international organizations (such as OECD reports), the levels of education are graded in order to allow international comparisons (Table 1), based on the International Standard Classification of Education (ISCED). As can be seen, the higher level of study means more advanced research skills and specialization.

Table 1: The classification of higher education levels according to ISCED

Level of education	Content	Short description
Level 5	<i>Short-cycle tertiary education</i>	Used to deepen the knowledge developed at earlier levels
Level 6	<i>Bachelor's or equivalent level</i>	Designed mainly to provide students with academic and / or professional knowledge
Level 7	<i>Master's or equivalent level</i>	Greater specialization and more complex content (compared to bachelor's level)
Level 8	<i>Doctoral studies</i>	Designed to provide advanced research qualifications

Source: OECD, 2017, p. 19.

The benefits of investment in education are very different and not always easily measurable. Some researchers believe that study time does not directly translate into the ability to make use of higher education to build social status and position oneself for the future.

The benefits can be divided into private (such as increased earnings) and social ones (with impact on the economy and tax system and consequently on society as a whole). The positive impact of higher education can be easily measured in financial terms, as an increase in earnings, productivity or economic development. On the other hand, education also brings many important non-material benefits such as better health, prestige or crime reduction (Król 2016).

Some researchers maintain that study time does not translate into the ability to make use of higher education to build social status and position oneself for the future. On the other hand, it determines the potential for cognitive benefits and, consequently, more forceful intellectual agency and advanced measured performance (Marginson, 2016).

On the other hand, entry into higher education is also associated for young people with the prestige attached to a Bachelor's or Master's degree. This is also the case with doctoral studies. The opportunity of holding a degree gives students an advantage on the labour market.

Moreover, when graduates complete their studies, they should find their place on the labour market. Employees also take part in very different courses which are necessary in the workplace. These courses are provided with much the same aim as higher education, but they are more practical and usually shorter.

In addition, when college graduates outnumber the supply of jobs, potential job candidates have to distinguish themselves as competent experts in their particular field. Nowadays, when education and professional experience are becoming increasingly global, graduates who have failed to acquire the minimum required level of international education will find it difficult to secure a position with a global dimension. In a world where the knowledge of foreign languages and international experience are needed, labour markets in cross-culture industries require highly specialized skills.

Furthermore, the chances of finding a good position are slim. This means that only the best prepared graduates will be selected for the most demanding posts. Universities should change their policy in order not only to select the most promising students, but also to produce highly qualified graduates. In this way universities can change their image (Schneider, 2014). Nowadays, qualification requirements are rising in all enterprises. At the same time it is necessary to remember that, while recognising that the character of jobs and the skills which they require are changing, we should take care not to overestimate the need for high skills (Cedefop, 2008).

On the other hand, graduates are facing a horizontal mismatch which normally occurs when there is a disparity between the education and skills possessed by school-leavers and those required by the job. A look at the Survey for Adult Skills (PIAAC) carried out in selected European Union countries shows a relatively high proportion of over-qualified but not over-skilled applicants. This could indicate that a fair proportion of the workforce continue their education without acquiring extra skills or competence in their learning process. This can also point out that tertiary education institutions are unable to provide graduates with skills necessary for occupational advancement. On the other hand, certain factors with impact on the labour market situation, such as periodical drops in demand, systemic imperfections of the labour market, discrimination, etc., cannot be effectively controlled by institutions of higher education (EACEA, 2015).

2. The higher education sector in Poland

There is a perceived overabundance of university graduates in Poland nowadays (PARP, 2012). Since 1989, the situation in the tertiary education in Poland has changed spectacularly. The time of communism in Poland provided few incentives for continued education. The salaries of university graduates were the same or even lower than those of employees with only secondary or lower education. After the changes in the government and economy, many people decided to study (OECD, 2016). There were a large number of middle-aged people who decided to gain extra qualifications as part of their college course. Moreover, the market gave the opportunity for private universities to grow very fast, which was one of the spectacular accomplishments of the Polish higher education sector.

Since the beginning of the 2010s, the number of graduates has started to decrease (Table 2). This is due to two main causes: a decrease in the population and lower educational aspirations. The latter cause can be associated with the situation of graduates on the labour market. The number of graduates in certain subjects exceeds demand from employers. That oversupply means that many young graduates have to look for another job and re-train in order to find any employment at all.

The economy, distressed after the last crisis, has led to high unemployment rates around the world, also contributing to a competitive job market for graduates. Consequently, the situation on the labor market impacts on the level of income earned by households as well as affects the professional activity of the population and the scale of poverty etc. (Kata, 2015, p. 72).

The gross scholarisation rate in higher education (Table 2) grew from 12.9% in the academic year 1990/1991 to 53.8% in the academic year 2010/2011, and then started to decrease, levelling out at 47.4% in the academic year 2016/2017. At the same time, the net scholarisation rate grew from 9.8% in 1990/1991 to 40.8% in 2010/2011, dropping again to 36.8% in the academic year 2016/17.

Table 2: Scholarisation ratios in higher education in Poland in the period 2000-2017 (selected years)

Academic year/ Scholarisation ratio (%)	<i>2000/ 2001</i>	<i>2005/ 2006</i>	<i>2010/ 2011</i>	<i>2014/ 2015</i>	<i>2015/ 2016</i>	<i>2016/ 2017</i>
Gross	40.7	48.9	53.8	48.1	47.6	47.4
Net	30.6	38.0	40.8	37.8	37.3	36.8

Source: GUS, 2017, p. 19. Notes: The gross scholarization ratio is the ratio of the number of all learners at a given level to the entire population of persons at the age nominally assigned to this level of education (for higher education 19-24, as of December 31st) expressed as a percentage. The net scholarization ratio coefficient, on the other hand, shows the percentage of learners at the nominal age of education at a given level in the entire population of persons in the age nominally assigned to this level of education.

The demand for educational services depends on the readiness to study at universities. As a result, the decrease in the demand for higher education services in recent years partly results from demographic changes and also in part from the decrease in the scholarization ratio (Grotkowska, Sztanderska 2015).

There is a perceived overabundance of university graduates in Poland, relative to employer needs (PARP, 2012). In recent years researchers have started to point out that it is necessary to provide an adequate quality of tertiary education, as it is more common than in the past. This fact has had different consequences, such as – most importantly –the reduced benefits for higher education graduates on the labour market. Higher education no longer guarantees a good position. The situation on the labour market does not match the aspirations of many young people who are leaving universities (Jasiński, Bożykowski 2017).

At the same time, it should be noted that the situation on the labour market is not the same for graduates of all fields of study. The possibility of finding a job by graduates depends not only on the demand reported by employers, but also on the supply of graduates of a given field of study.

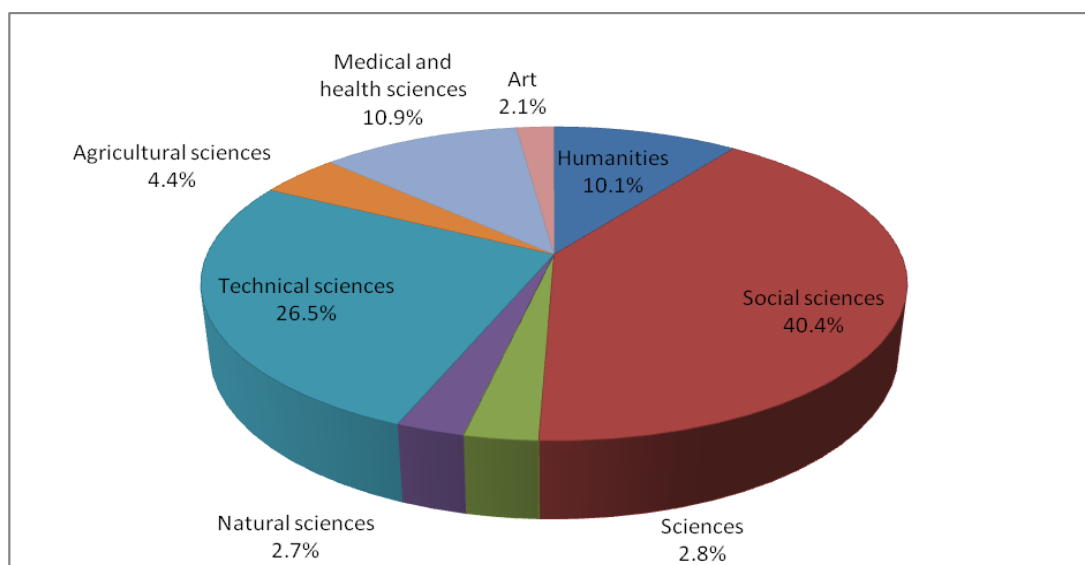


Figure 3. Graduates of Bachelor's studies in 2016, divided by area of study

Source: The author's own computation based on the Polish Graduate Tracking System.

In 2016, the largest number of university graduates in Poland (Figure 3) is completing Bachelor studies with a social sciences profile (40.4%). Next are graduates of: technical sciences (26.5%) and medical and health sciences (10.9%).

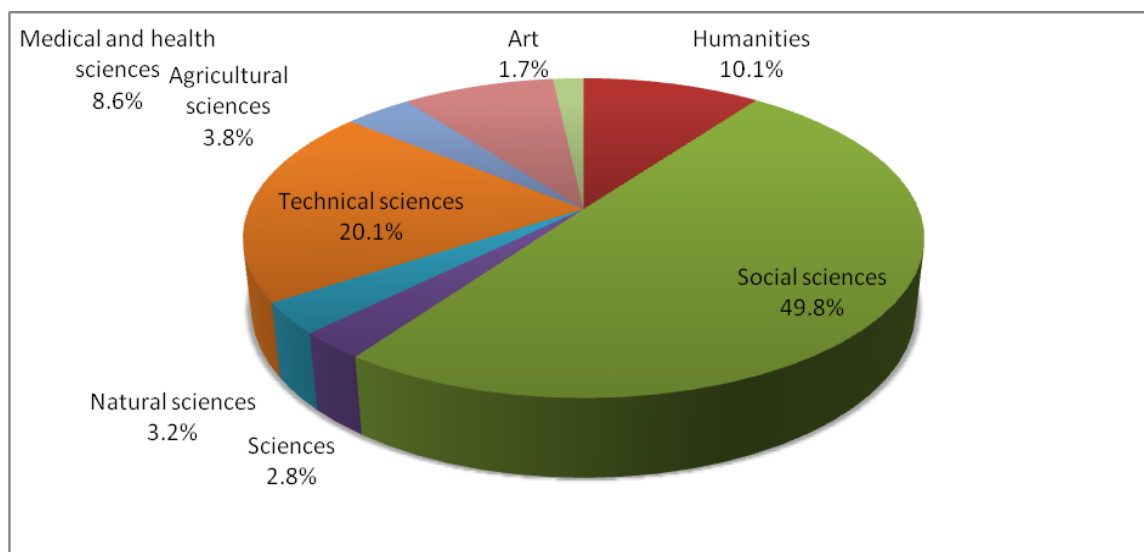


Figure 4. Graduates of Master's degree studies in 2016, divided by area of study

Source: The author's own computation based on the Polish Graduate Tracking System.

A similar situation is observed in the case of Master's degree studies – social sciences cover almost half of the population of graduates (49.8%) (Figure 4). Next are graduates of technical sciences (20.1%) and the humanities (10.1%). Comparable circumstances occur in long-cycle Master's degree studies where 55.86% college leavers graduate in in social sciences and 32.45% in medical and health services. The share of those two main groups is related to the regulations concerning studies offered only in the form of a one-tier Master's degree programme, such as medicine, psychology, etc.

3. Polish graduates on the labour market in the first year after graduation

This analysis is based on data from the ELA system. In the past, it was rare to track the situation of Polish graduates. The analysis provides a lot of information about graduates, based on MNiSW and ZUS data. The selected statistics on graduates in the ELA system are shown in Table 3.

Table 3: The situation of graduates in the first year after graduation – selected statistics

Level of studies/Indicator	Bachelor's degree	Master's degree	Long-cycle Master's degree
Percentage of graduates who are registered in the ZUS (Social Insurance Company) registers during the period of studies	67	93.1	89.1
Average monthly salary from all sources after obtaining a diploma	2491.53 PLN	2946.92 PLN	2658.99 PLN
Median average monthly salary for employment contracts in the first year after graduation	2389.51 PLN	2795.22 PLN	2432.81 PLN

Source: The author's own elaboration based on the Polish Graduate Tracking System.

The ZUS system keeps records of the largest number of Master's degree graduates (93.1%). There were definitely fewer graduates with a Bachelor's degree (67%), because a significant proportion (over 60%) continue to study, which indirectly influences their professional activity. The system failed to include employees hired on a short-term contract for specific work, persons working permanently abroad or currently unemployed.

The highest average earnings were recorded for graduates with a Master's degree (almost 2947 PLN), and the lowest for graduates of undergraduate studies (2492 PLN). A similar situation takes place in the case of the median remuneration (2795 and 2389 PLN).

A higher level of education usually gives access to better job offers and higher earnings, as shown by OECD research (OECD, 2017). Better qualified members of the workforce earn more with age. Therefore, the potential for higher earnings and faster growth of earnings may be an important incentive to continue education and training. Differences in earnings can also be connected with other factors, such as demand for specific skills in the labour market, the supply of employees supply etc.

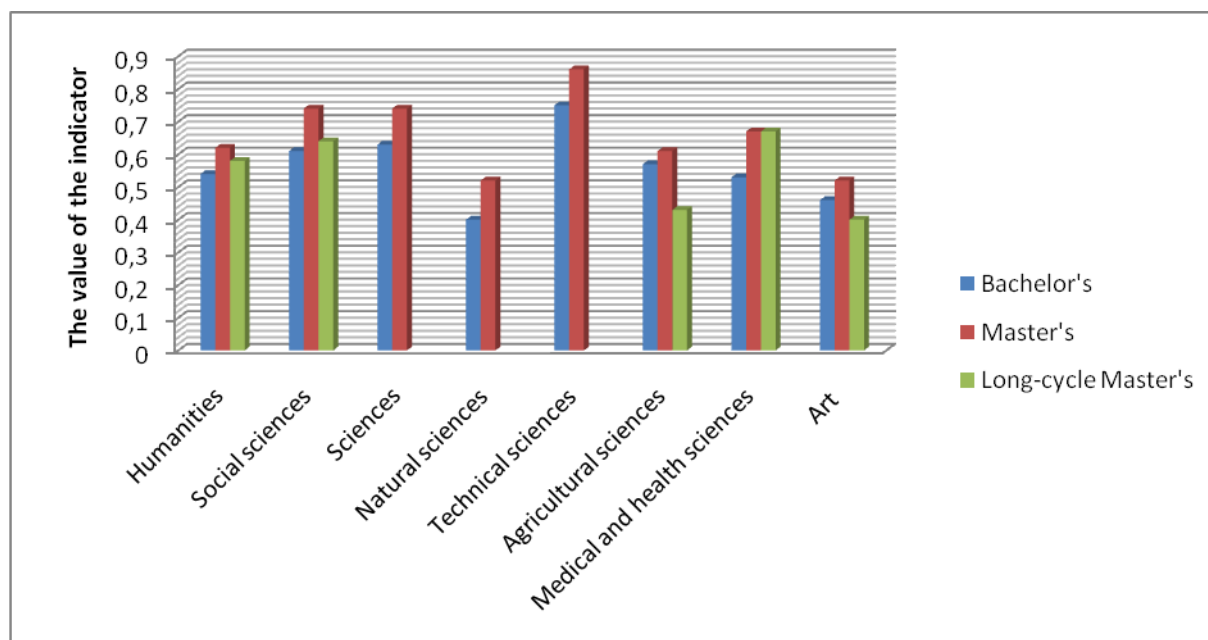


Figure 5. Relative earnings by the area of study (%)

Source: The author's own computation based on the Polish Graduate Tracking System. Notes: For every graduate, the ratio is calculated of the average income in comparison to average income in the county of residence. Values greater than 1 indicate that on average income of graduates is above the average income in the county of residence. Values below 1 indicate that on average income of graduates is below the average income in their county of residence. It can be expected that this ratio will often accept values below 1 for graduates mentioned in the study because they are generally at the beginning of their career.

As we compare the relative earnings of graduates divided by faculty (Figure 5), we can see that the highest relative earnings are characteristic of graduates with a Master's degree in technical sciences (0.86). A similar situation is observed in the same group of studies ending with Bachelor's degree (0.75). As we compare the long-cycle Master's degree programmes, graduates of medical and health studies earn the most (0.67). The least-paid are both graduates of long-term studies in the area of art (0.4) and Bachelor's graduates in natural sciences (0.4).

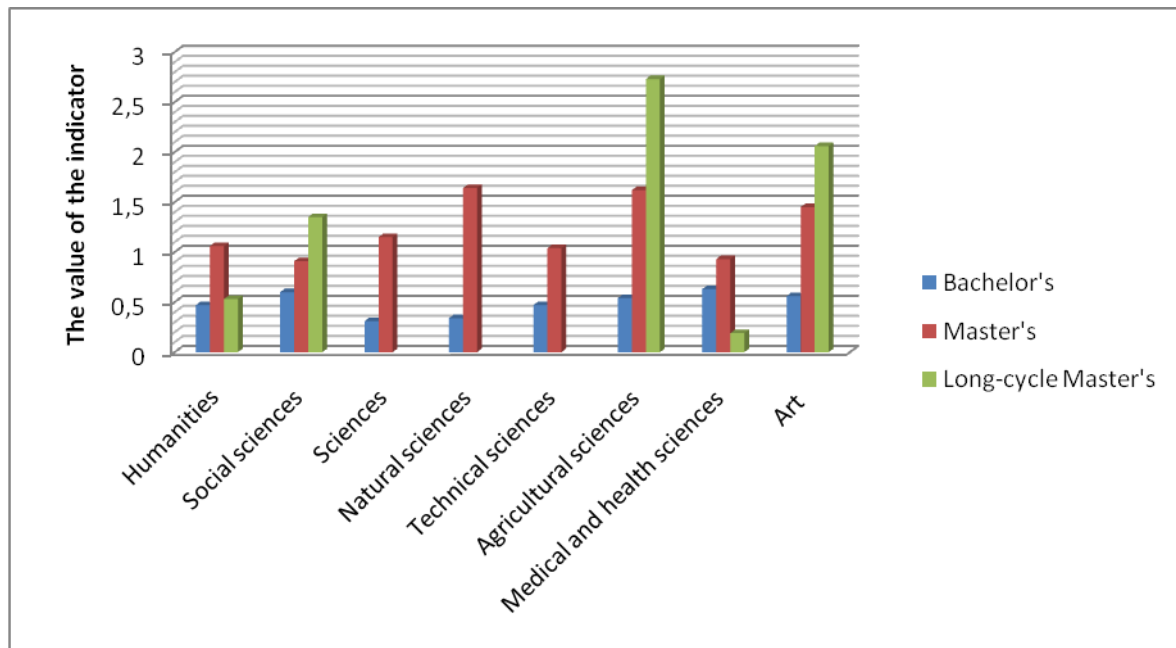


Figure 6. Relative unemployment rate by the area of study (%)

Source: The author's own computation based on the Polish Graduate Tracking System. Notes: For every graduate, the ratio is calculated of individual risk of unemployment to an average rate of registered unemployment in the county of residence during the survey period. Values less than 1 indicate that the average risk of unemployment among graduates is lower than the rate of unemployment in their county of residence, while values above 1 indicate that the average risk of unemployment among graduates is higher than the rate of unemployment in their county of residence.

The highest rate of relative unemployment (Figure 6) is characteristic of graduates of long-cycle Master's degree studies – agricultural sciences (2.73), art (2.06) and social sciences (1.35). The lowest value of the indicator was recorded for Bachelor's degree studies – a case in point being graduates in science (0.31) and natural sciences (0.34).

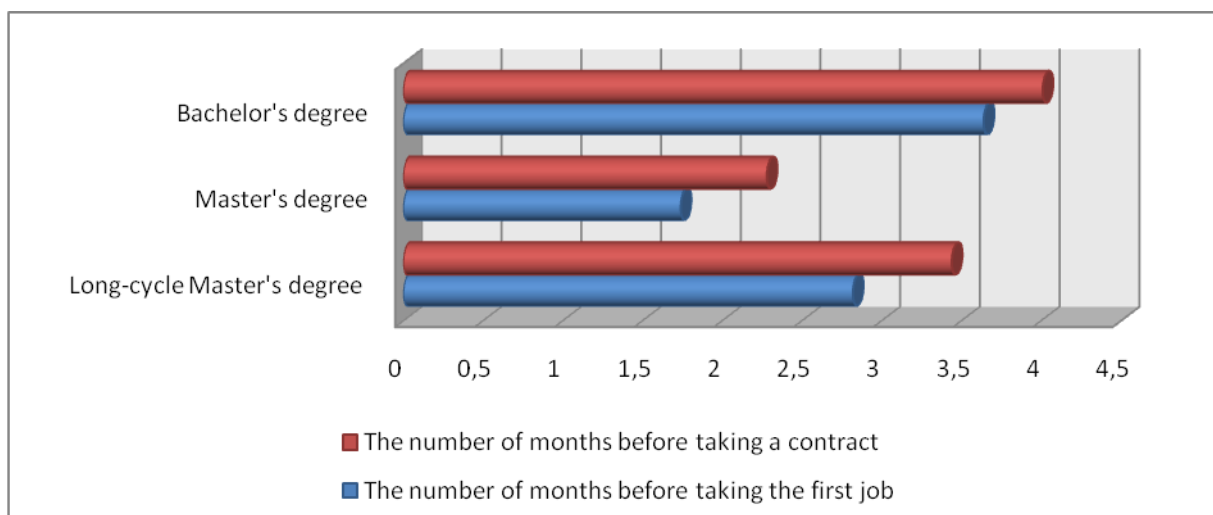


Figure 7. The average number of months before securing a contract, compared with months before taking the first job (in months)

Source: The author's own computation based on the Polish Graduate Tracking System.

Bachelor's graduates and contract workers have to wait for the first job – 3.64 months and 4.01 months, respectively. In this respect, Master's graduates are the best on the job market (respectively 1.74 and 2.28 months).

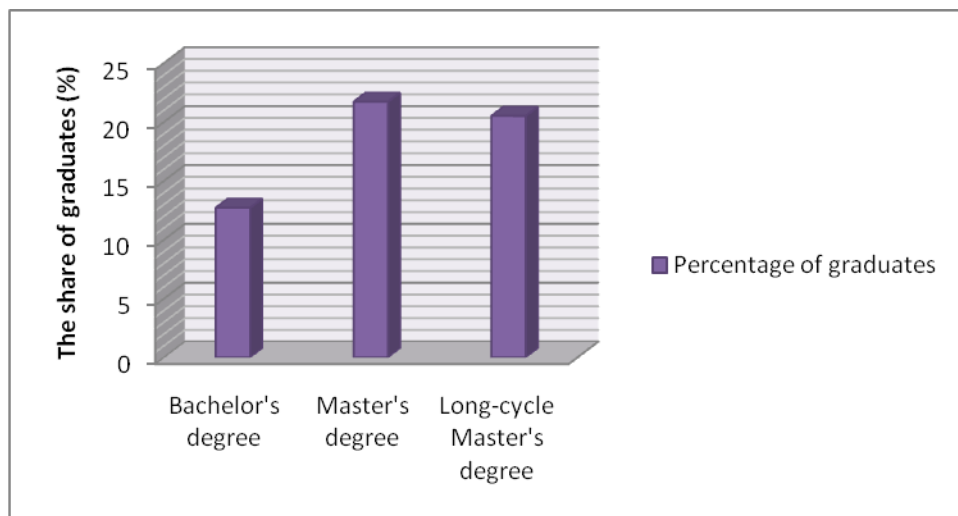


Figure 8. The share of graduates who have been unemployed, by the level of studies (%)

Source: The author's own computation based on the Polish Graduate Tracking System.

Another indicator shows what percentage of graduates was ever registered in the study period as unemployed, even if they were registered for a very short time. It turns out that the most graduates have a Master's degree (21.7%), and the fewest – a Bachelor's degree (12.7%).

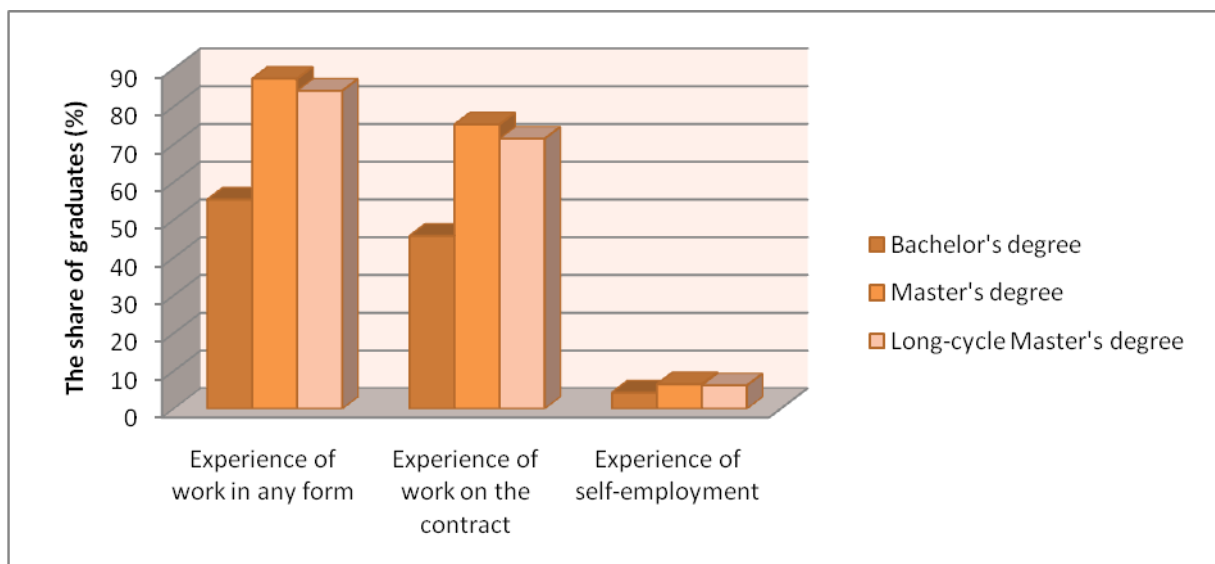


Figure 9. Share of graduates who had work experience of any kind in the first year after graduation (%)

Source: The author's own computation based on the Polish Graduate Tracking System.

The highest number of graduates started to work after obtaining a Master's degree (87.4%), and the lowest – after taking a Bachelor's (55.4%). The same applies to contract work (75.3% to 45.8%). Still few graduates are dedicated to starting their own business (between 4.3 and 6.5%).

Conclusion

The position of a university graduate depends not only on the field of study but also on its level. It has been proved that graduates with a Master's degree find their place in the labour market more easily – they find employment more quickly and earn more than graduates of other levels, although they register as unemployed more often. Thus, the hypothesis put forward at the beginning of the article has been proved.

At the same time, there are still too many graduates struggling with unemployment and too low earnings. In the majority of higher education systems in Europe, having higher education gives access to “better jobs” and better life chances. Nevertheless, there is always a “social overpopulation” in every society: the number of good jobs (such as prestigious jobs for white collars associated with high salaries and a stable middle-class lifestyle) is always limited and the best places of employment are difficult to access, no matter how well educated the workforce is.

In addition, different levels of additional income over a person's entire lifetime depend on the level of education achieved. This might be related not only to the type of diploma (the humanities are usually at the lower end of the scale while for medicine and engineering at the upper end) but also to open or closed access to professions based on social and economic background (including different aspirations regarding one's own place in the labour market and beliefs stemming from the social environment, at the stage of education preceding the higher education level).

A growing number of young Europeans are looking to improve their qualifications, although their economic value may be questionable. It can be said that in societies with a higher density of higher education graduates, the return on investment in higher education is lower than in societies which are not yet full of graduates. The democratization of higher education and its accessibility to a wide range of students – leads to a gradual decline in individual and private benefits, while maintaining large collective and public benefits (Kwiek, 2015).

A good idea for students is to integrate internships, which take at least half a year and more, with study programmes. Another solution can be the full funding of university education by business, as in Germany and the Netherlands where companies employ students during their studies. That kind of model may ensure alignment of study programmes with labour market demand and also match the needs and expectations of students who are less academically minded (OECD, 2016).

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