

Tracer study of HEI graduates

Report on the survey of Erasmus+ mobility participants

Jadwiga Fila

Karol Sobestjański



FRSE
Publications



FRSE RESEARCH
REPORTS

Tracer study of HEI graduates

Report on the survey of Erasmus+ mobility participants

Jadwiga Fila

Karol Sobestjański



FRSE
Publications



FRSE RESEARCH
REPORTS

Tracer study of HEI graduates

Report on the survey of Erasmus+ mobility participants

Authors: **Jadwiga Fila, Karol Sobestjański**

Research implementation and data analysis: **Jadwiga Fila, Karol Sobestjański**

Translation: **POLIGLOTA Biuro Tłumaczeń**

Proofreading: **Joanna Croisier, Bartosz Brzoza**

Production editor: **Tomasz Mrozek**

Layout: **Grzegorz Dębowski**

DTP, cover design: **Artur Ładno**

Printing: **Drukarnia KOLUMB Chorzów**

Publisher:

Foundation for the Development of the Education System

Erasmus+ and European Solidarity Corps National Agency

Al. Jerozolimskie 142a, 02-305 Warsaw, Poland

 www.frse.org.pl | kontakt@frse.org.pl

 www.erasmusplus.org.pl

© Foundation for the Development of the Education System, Warsaw 2022

ISBN 978-83-66515-97-0


DOI: 10.47050/66515970

This publication has been developed with the financial support from the European Commission in the framework of the Erasmus+ programme. The information and views set out in this publication are those of the authors and the European Commission may not be held responsible for the use, which may be made of the information contained herein.

Free copy

Citation: Fila, J., Sobestjański, K. (2022). *Tracer study of HEI graduates. Report on the survey of Erasmus+ mobility participants*. Warsaw: Foundation for the Development of the Education System.

DOI: 10.47050/66515970

FRSE publications are available on:  www.czytelnia.frse.org.pl

FRSE Publishing House periodicals and portals:

[języki: obce]
w szkole

europa
DLA AKTYWNYCH

eurodesk
Polska

EUROPEJSKI
PORTAL MŁODZIEŻOWY

4	Introduction
6	About the research
7	Research objective, research questions
7	Research subjects and research sample
10	Status on the labour market
11	Graduates taking up their first job
26	Current professional status
38	Continuation of education
39	Formal education
51	Non-formal education and informal learning
54	Combining further studies with work
56	Summary
60	Methodological annex
66	Bibliography

Introduction



Erasmus+ and its predecessors are major learning mobility initiatives developed by the European Union. The Erasmus+ programme offers opportunities for carrying out projects in the following sectors: School Education, Vocational Education and Training, Youth, Higher Education, Adult Education and Sport.

For 35 years, Erasmus+ has been primarily associated with cross-border cooperation and supporting students pursuing a part of their studies outside their home country, as part of mobility at a partner HEI (higher education institution). Hundreds of thousands of young people from Poland have seized this opportunity and, as numerous research show, they often consider it the best time of their studies. Under the previous financial perspective (2014–2020), around EUR 216 million was allocated for this purpose, which accounted for almost 20% of the programme's total budget assigned to Poland.

Learning mobility abroad conducted as part of their studies or serving an internship or work placement at a partner institution are experiences that, on the one hand, make CVs of graduates more attractive and, on the other – in line with the pan-European motto of the current programme – “change lives and open minds”.

The Foundation for the Development of the Education System, acting as the National Agency for the Erasmus+ and the European Solidarity Corps programmes in Poland, was one of the first institutions to trace educational and professional paths of HEI graduates who were beneficiaries of the Erasmus programme during their studies. This report is a summary of one of the project phases, which covers surveys conducted among HEI graduates between 2018 and 2020.

The report consists of four chapters. Chapter 1 presents the objectives of the research and a brief description of the research sample. Chapter 2 presents conclusions about career progress of HEI graduates, including an analysis of topics relating to their taking up the first permanent job¹. It also attempts to assess how the careers of those entering the labour market changed over the years. Chapter 3 outlines graduates' decisions on taking up further education – both continuing their studies and participating in non-formal and informal education. Chapter 4 includes a methodological annex detailing how the research was carried out.

1 In the research tool (survey) “first permanent job” was defined as employment under a contract for work (regardless of the number of full-time jobs).

1. About the research



1.1. Research objective, research questions

The main objective of the research was to trace professional and educational progress of HEI graduates who completed their studies between 2013 and 2019 and who participated in Erasmus+ mobility as part of their degree programmes. It was assumed that this objective could be achieved by answering the following research questions:

1. What share of graduates secured a permanent job? At what point did they take up their first job? Which factors turned out to be the most important during the respondents' search for their first permanent employment?
2. What was the professional situation of the respondents at the time of the research? What was the professional status of graduates who completed their studies one, three and five years before the survey? How does the situation differ with regard to the time passed since the graduation from a programme as part of which they participated in learning mobility?
3. What percentage of graduates who participated in mobility decided to continue their studies? How can one characterise those who have chosen to continue their formal education?
4. What was the level of respondents' participation in non-formal and informal learning? Which activities were undertaken most frequently?

1.2. Research subjects and research sample

Erasmus+ beneficiaries who participated in learning mobility for studies or traineeships (internship/work placement) abroad formed the subjects of the research. They were invited to participate in the survey after the formal completion of the study phase in which they had benefited from mobility. The date on which respondents obtained credit for all the courses forming the programme under which they benefited from Erasmus+ was considered the time of graduation, so students of all cycles (from Bachelor's to doctoral programmes) were included in the survey. The research included three waves of surveys of graduates conducted one year, three years and five years after graduation, respectively.

The survey data collection was carried out using a computer-assisted web interview (CAWI) on a non-representative sample of Erasmus+ mobility graduates. A total of 1386 questionnaires were completed in the three survey rounds carried out between 2018 and 2020. However, it should be noted that some of the respondents took part in more than one survey wave. Therefore, in order to avoid repeated observations when analysing activities carried out in the course of the studies (e.g. searching for the first job), two types of samples were



formed: cross-sectional and cohort one. Within the sample from which cross-sectional data was collected, each observation included in the collection relates to a single respondent. The possibility of duplication of answers given by one person in subsequent rounds of the survey was thereby excluded. The responses given in the last survey were taken as the baseline, which means that the collection is based on the results obtained three and five years after the respondent completed the study phase during which they participated in Erasmus+ mobility. The table 1.1. illustrates the structure and size of the population in the cross-sectional sample by type of mobility.



Table 1.1.
Structure of the cross-sectional sample by type of mobility (n = 1386)

	Type of mobility	n	%	% valid
Valid observations	studies	723	52.2	63.8
	traineeship	108	7.8	9.5
	studies and traineeship	303	21.9	26.7
Total valid observations		1134	81.8	100
Missing data	observations excluded from the cross-sectional research sample - system missing values	252	18.2	
Total		1386	100	

The cohort research sample was constructed slightly differently and details of this approach are described in the Methodological annex. Each cohort (subgroup) was distinguished based on the number of years since graduation from a programme in which a given respondent participated in mobility. As a result, three groups were formed: mobility participants who had graduated one, three and five years before the survey. As the aim was to assess the studied phenomena in terms of their change over time, it was deemed appropriate to use the responses of one respondent in more than one measurement. The size and structure of the population in each cohort by the type of mobility the respondent participated in is presented in Table 1.2.

Table 1.2.
Structure of cohort sample by type of mobility (n = 1356)

Type of mobility	Number of years since the study period during which the mobility was carried out					
	1 year (cohort I)		3 years (cohort III)		5 years (cohort V)	
	n	%	n	%	n	%
studies	300	57.3	280	64.4	279	70.3
traineeship	64	12.2	38	8.7	21	5.3
studies and traineeship	160	30.5	117	26.9	97	24.4
Total	524	100	435	100	397	100

More information on the methodological approach used and the implementation of the survey can be found in the annex presented at the end of the report.

2. Status on the labour market



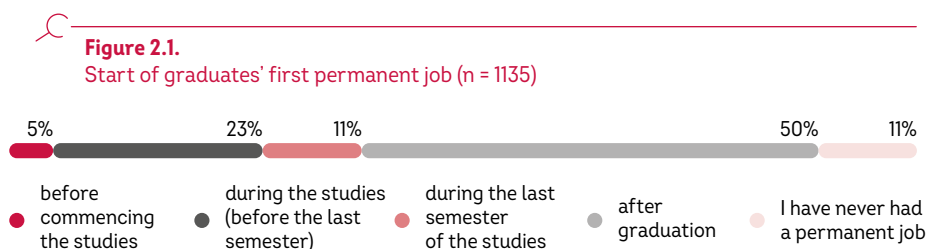
One of the most important aspects related to tracking university graduates who participated in Erasmus+ mobility is to look at how they forge their careers. This chapter consists of two sections. The first section focuses on the beginnings of graduates' careers. The second one illustrates current professional status of the respondents and shows how it has changed over the years.

2.1. Graduates taking up their first job

Firstly, issues related to graduates taking up their first permanent job were examined. The results include the commencement of employment and the length of their placement with the first employer, their job search methods and the factors that, according to the respondents, impacted their employment decision. The impact of participation in Erasmus+ mobility on finding the first job was also analysed. The data presented in this section of the report are based on an analysis of cross-sectional data collection from the survey (see Chapter 1).

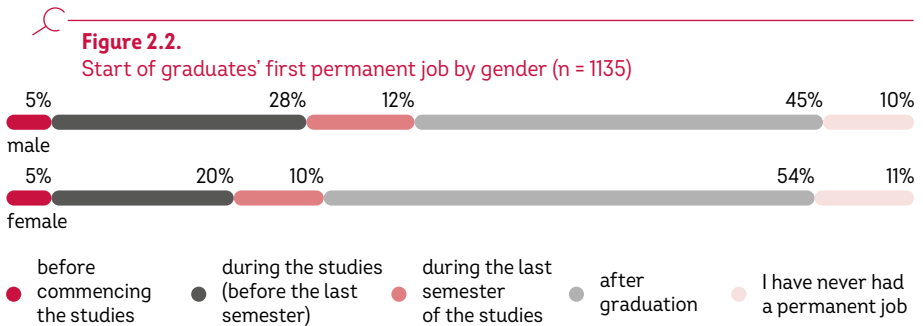
2.1.1. The timing of the first permanent employment

One of the fundamental aspects relating to career progression of university graduates is the time when they start their first permanent job. As the research results show, 50% of them took up permanent employment right after starting their studies. One in three respondents took up a permanent job during their studies (11% of survey participants during their last semester). Only 5% got their first permanent job before commencing their studies, while 11% of graduates never worked under an employment contract.



Timing of starting work varied between men and women. Women were more likely to take up permanent employment after graduation – more than half of them started work after completion of their studies (54%). 30% of female respondents took up a job during their studies (of which 10% in the last semester), and among men the percentage was

10 percentage points higher (40%, including 12% in the last semester). 45% of survey participants declared that they were employed under an employment contract after graduation.

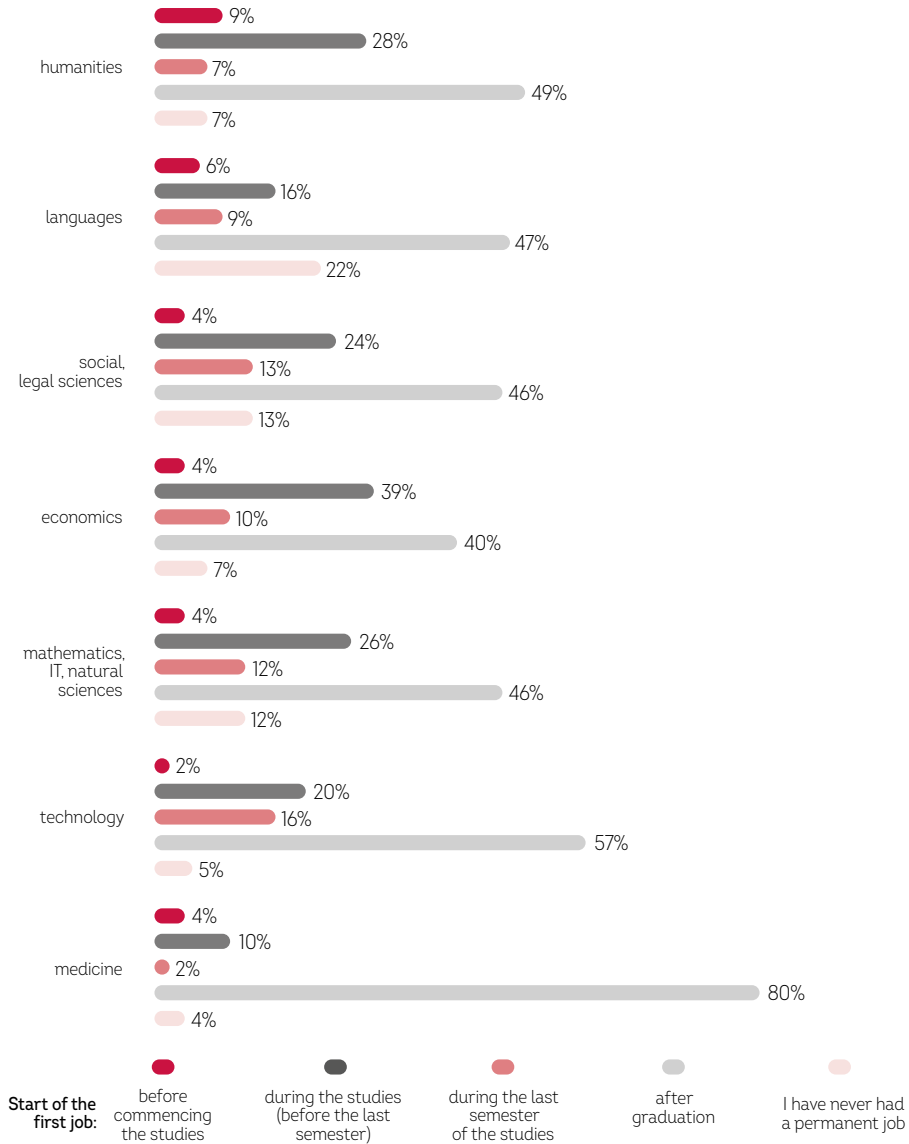


The higher proportion of male respondents taking up employment during their studies may be at least partly determined by the mode of studies they are more likely to undertake (Knapińska, 2021). It is therefore worth looking at the data for selected modes of studies.

The respondents who studied economics were most likely to start their first permanent job while still at university. This was the case for almost 50% of the respondents who completed programmes in this field. It was less common for students pursuing study programmes in mathematics, IT, natural sciences (38%), social sciences (37%), technology (36%) and humanities (35%) to have a permanent job while studying, while it was the least common for students of medicine (12%) and languages (25%). While graduates from medical studies formed the group with the highest percentage of respondents declaring that they took up a permanent job after graduation (80%), one in five students in language programmes did not work under a contract of employment even after graduation (22%). This situation is most likely due to the characteristics of individual study programmes and sectors in which graduates are recruited. The data shows that a significant proportion of respondents who graduated in medical sciences are employed under an employment contract, but, for example, translators or language teachers most often perform their professional duties based on forms of employment, e.g. civil law contracts, self-employment (Sochańska-Kawiecka et al., 2014).



Figure 2.3.
Time when graduates started their first job
- by degree programme completed (n = 852)*



* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

2.1.2. Duration of the first permanent job

When describing factors impacting starting the first permanent job by the respondents, it is also important to determine what proportion of them are still working in the place where they started their careers and how long respondents worked for the employer that offered them their first contract.

At the time of the survey, one in three respondents (34%) declared that they were still employed with their first employer. Almost 60% of the respondents in this group worked there for two years or more, and 19% worked there for five years or more. One in five respondents worked for their first employer for less than a year. Thus, a large group of respondents are employees with working experience with their first employer of at least two years (see Figure 2.4).



Figure 2.4.
Employment of graduates in their first permanent job (n = 1016)

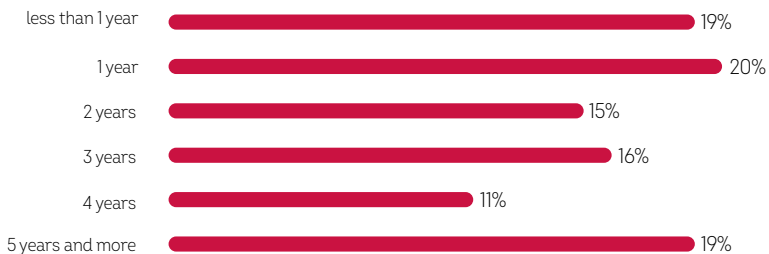
respondents who no longer
work for their first employer



respondents who still work
for their first employer



Figure 2.5.
Duration of employment in the first permanent job – respondents still working
for their first employer (n = 316)



The duration of work for the first employer looks differently for the respondents who at the time of the survey already worked somewhere else. In this group (comprising around two-thirds

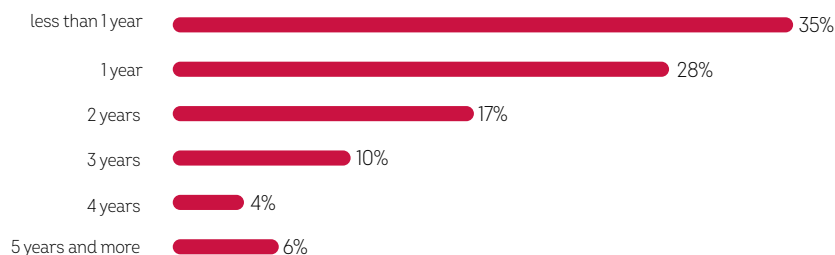
of the respondents who held a permanent job), 37% worked in their first job for two years or more, and almost two-thirds of respondents worked for one year or less.



Figure 2.6.

Duration of employment in the first permanent job

- respondents who no longer work for their first employer (n = 637)

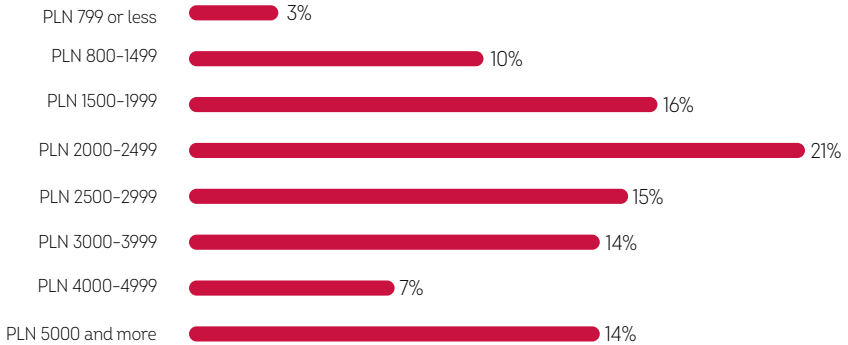


The survey results indicate that young workers who do not leave their first place of employment for at least two years are willing to stay there for longer. **The first two years are therefore decisive.** The reasons for which the respondents decided to change their jobs (whether or not it was with their first permanent employer) are discussed below. This gives a fuller picture of the situation.

2.1.3. Earnings in the first permanent job

In their first job, 21% of respondents earned a salary ranging between PLN 2000 and 2499 net. One in three surveyed graduates earned less, and 3% of respondents earned less than PLN 800. More than a third of respondents reported earnings ranging from PLN 2500 to 4999, and 14% of them declared a salary in the highest range included in the survey, i.e. PLN 5000 and more.

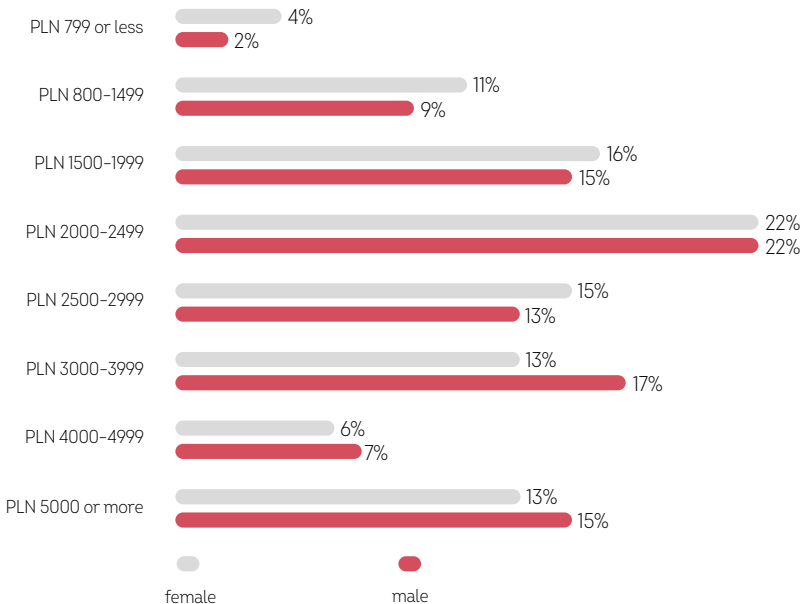
Figure 2.7.
Monthly net earnings in the first permanent job (n = 1014)*



* All respondents' answers included, regardless of the working time.

There was a slight difference between men's and women's pay in their first permanent job. All ranges above PLN 3000 net were more frequently indicated by men than women (the differences ranged from 1 to 4 percentage points). For ranges below this amount, slightly more indications were recorded among female graduates than male graduates (between 1 and 3 percentage points, with the exception of the most frequently mentioned amount: i.e. PLN 2000-2499, where the percentages were equal in both groups).

Figure 2.8.
Net earnings in the first permanent job by gender (n = 1014)



On the other hand, earnings in the first permanent job, varied significantly depending on the degree programme completed. The relatively highest number of indications in the highest range of earnings (PLN 5000 or more) was recorded among graduates in mathematics, computer science, natural sciences (25%), technology (21%) and medicine (15%). At the opposite end of the spectrum were graduates in social studies, law and humanities. The percentage of those earning less than PLN 1500 net in these groups was 23% and 21% respectively, and a relatively large proportion of respondents who graduated with a degree in languages (16%) also fell into this bracket.

Table 2.1.

Net earnings in the first permanent job by degree programme completed (n = 852)*

Remuneration	Degree programme						
	human	languages	social sciences, law	economics	mathematics, IT, natural sciences	technology	medicine
PLN 799 or less	5%	4%	8%	2%	0%	1%	1%
PLN 800-1499	16%	12%	15%	8%	8%	6%	6%
PLN 1500-1999	19%	21%	10%	17%	16%	11%	24%
PLN 2000-2499	22%	20%	23%	31%	15%	21%	24%
PLN 2500-2999	12%	20%	19%	13%	13%	16%	12%
PLN 3000-3999	14%	11%	14%	15%	17%	17%	7%
PLN 4000-4999	5%	7%	4%	9%	6%	7%	11%
PLN 5000 or more	7%	5%	7%	5%	25%	21%	15%

* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

Information on salary is important for assessing the situation of young people entering the labour market. However, we should bear in mind that these individuals – especially if they take up work during their studies – benefit from external financial or material support. In addition, combining work with studies may prevent full-time employment, which is not without its impact on salary. However, **the salary gap between men and women as well as the above-average situation of those who graduated in mathematics, computer science, natural sciences and**

technical sciences can already be seen at this stage². Data on the remuneration received by graduates in the subsequent years after graduation are presented in section 2.2.1.

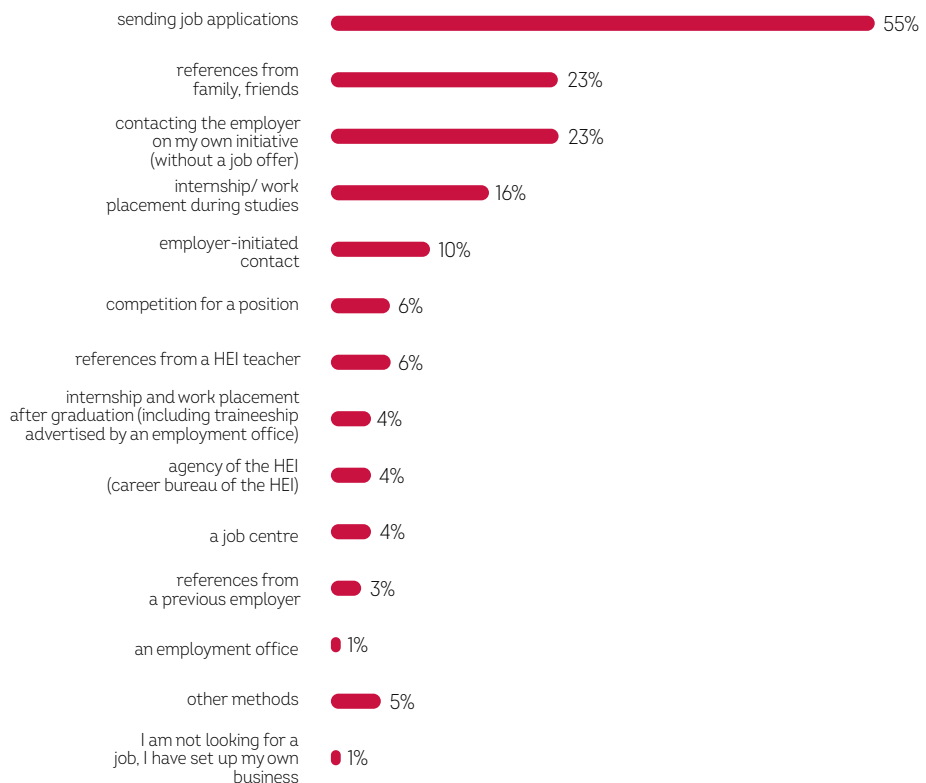
2.1.4. Ways to find the first job

As the survey results show, the vast majority of graduates (55%) got their first job by responding to **job advertisements and offers**. Almost a quarter of respondents (23%) declared that **references from family, friends and acquaintances** helped them find a permanent job. The same number of respondents also indicated **direct contact with the employer, without a previously published job advertisement**.



Figure 2.9.

Ways to find the first permanent job according to respondents
(multiple answers were allowed, n = 1015)



² These findings are consistent with data from Polish Graduate Tracking System (ELA). However, it should be noted that, due to the design of the tool used in this survey, it was not possible to identify a group of IT graduates who ranked highly in terms of the salary they earned (e.g. in the ELA ranking).

During search for the first permanent job, relatively high importance was also given to: internships or placements during studies (16%) and employer-initiated contact (10%). Other methods were far less important – they were indicated by less than one in ten respondents. It is noteworthy, however, that only one in 100 graduates declared that they were not looking for a permanent job at all because they had decided to start their own business – self-employment is a relatively uncommon way to enter the labour market.

2.1.5. Impact of Erasmus+ mobility on getting the first job

The survey included a question aimed at assessing the impact of Erasmus+ mobility on the search for the first job. **Seven out of ten respondents (73%) reported that participating in the programme had helped them get their first permanent job**, 37% of these respondents strongly agreed with the statement. The opposite view was held by more than a quarter of respondents (27%) and 7% of respondents felt that mobility experience did not help them get their first job³.



Figure 2.10.

Evaluation of the impact of Erasmus+ mobility on getting the first job by the respondents (n = 1015)



After adding up the positive responses (“strongly agree” and “somewhat agree”), it can be seen that male respondents attributed slightly more importance to participation in mobility than women (respectively: 71% and 65%). Significant differences were also observed between the evaluations of graduates in different degree programmes. **According to the vast majority of respondents (around three quarters) who graduated in technical, economic, social studies and law, educational mobility helped them get their first job.** A slightly smaller group (around two thirds) of graduates in languages, mathematics, IT, natural sciences and humanities agreed with the statement that the Erasmus+ programme made it easier for them to get the first permanent job. **Medical sciences graduates were the least likely to agree with this view**, as only 40% of them linked learning mobility experience with the signing of their first employment contract.

³ As the analyses presented in the previous sections also took into account the part of the population who had already obtained their first permanent job before participating in learning mobility under the Erasmus+ programme, in order to achieve better comparability with other results, it was decided to include in the basis of calculation those who marked the answer “not applicable”.



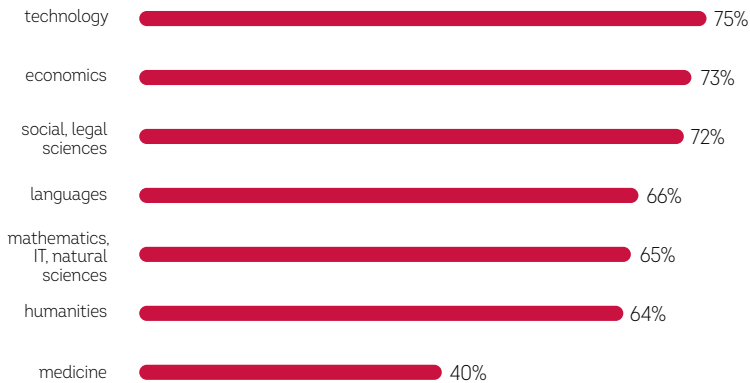
Figure 2.11.

Impact of participation in Erasmus+ mobility on getting the first job – by gender (the sum of “strongly agree” and “somewhat agree” responses, n = 1015)



Figure 2.12.

Impact of participation in Erasmus+ mobility on getting the first job – by degree programme completed (the sum of “strongly agree” and “somewhat agree” responses, n = 852)*



* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

2.1.6. Factors impacting on getting the first job

When analysing the issue of taking up the first job, it is also necessary to consider the factors that, according to students or graduates, were the most important when looking for permanent employment. An employment impact index (EII) was developed in order to assess this phenomenon. Methodology used in the development of the index is described in the note on the next page.

Development of employment impact index (EII)

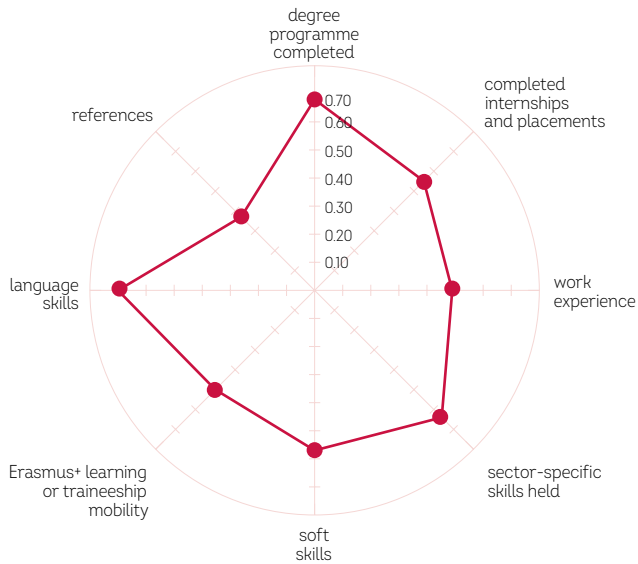
In one of the survey questions⁴ respondents rated individual factors by ranking them in order, from 1 to 8. The index was constructed by assigning points to each of the factors assessed, where the highest value (8) was assigned to the element that was indicated by the respondent in the first place, and each subsequent place was given a lower point. The factor indicated in eighth place was assigned 1 point.

The index value for each group of respondents was calculated by dividing, at observation level, the number of points ascribed to each factor by 8 (i.e. the number of all factors) and then calculating the average for each group of respondents. Consequently, the closer the index value is to 1 (the maximum value), the greater the importance of the factor during the search for a first job.

Among those who had started their career (i.e. had taken up a permanent job at least once), two factors were of the greatest importance: knowledge of foreign languages and completion of a relevant degree programme. The value of employment impact index for the two factors amounted to: 0.70 and 0.68 respectively.

⁴ The full wording of the question: "Please rank in order the factors that were the most and least important in your case when looking for the first permanent job. Please rank the most important factor in the 1st place and the least important factor in the 8th place".

Figure 2.13. Impact of selected factors on finding the first permanent job (EII value, n = 1013)

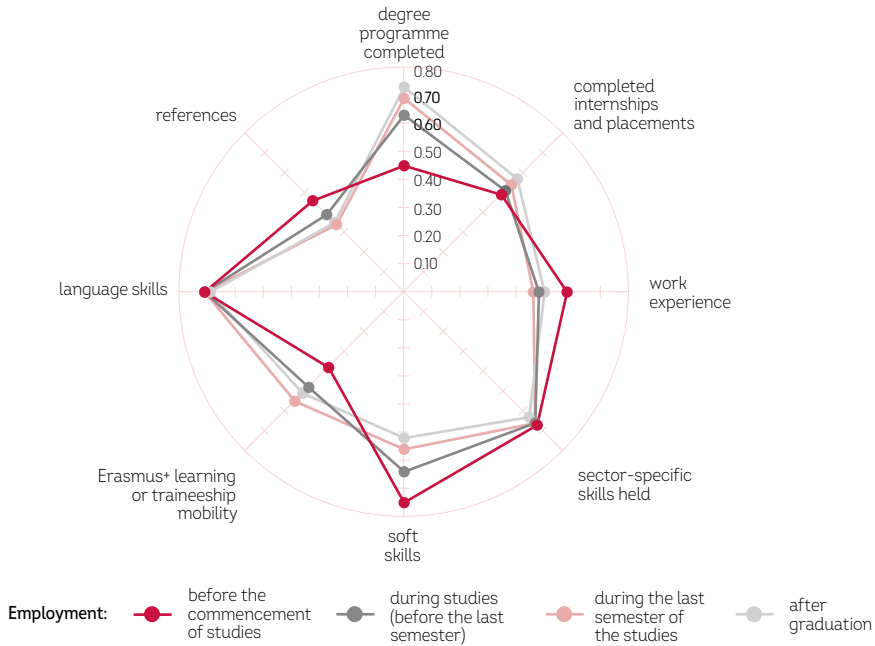


Relatively high importance was also attributed to professional and sector-specific skills held, where the index reached 0.64. Of lesser importance were: soft skills (0.57), completed internships and placements (0.55) and Erasmus+ mobility for studies or traineeship (0.50). Participation in Erasmus+ mobility was therefore considered by the respondents a factor having relatively little impact on getting the first job. In contrast, the assessment was very high when it took place irrespectively of other factors (see section 2.1.5). Such observations would require further qualitative studies. However, it can be assumed that in the case of an independent evaluation of mobility experience, respondents also indirectly took into account aspects specific to their degree programme and the competences they developed during mobility (including foreign language skills). When taken in relative terms, the mobility experience and some other factors were looked at by respondents together, and the real impact of the programme on finding the first job was dispersed among several response categories.

The lowest value of employment impact index was recorded for the factors whose role only becomes relevant after a certain period of service, i.e.: work experience (0.49) and references (0.37). However, as the analyses show, the values and the order of individual factors vary depending on when the respondents started their first permanent job and the degree programme completed.



Figure 2.14. Impact of selected factors on finding the first permanent job (EII value) with taking into consideration the time of taking up first employment (n = 1013)



Among the respondents who found employment before commencing their studies, the highest index value was recorded for soft skills (0.75). Foreign language skills (0.70), professional and sector-specific skills (0.68) were also ranked as important factors. In this group - for obvious reasons - it was mainly the experience and competences whose acquisition was not directly related to studies that came first. It is also interesting to compare the importance of individual factors assessed by the respondents who started their first permanent job before commencing their studies with other groups of graduates. In addition to soft skills, the index values for factors such as work experience and references were also significantly higher in this group. This may point to the important role of casual jobs previously undertaken, in which respondents gained experience and professional contacts. On the other hand, it should also be remembered that such index values may be to some extent the result of the way in which each of the surveyed elements, put in order by respondents in relation to other factors, is assessed.

Graduates who found permanent employment during or after their studies invariably place foreign language skills high on the list, but over time also recognise the growing importance

of completing the right degree programme. Among those who found their first permanent job after graduation from university, the last factor ranked first, with a value of 0.73.

It is interesting to assess the impact of individual factors according to the degree programme completed. Graduates in medicine, technology, mathematics, IT and natural sciences considered the following the two most important factors facilitating getting their first permanent job: the degree programme completed and their professional or sector-specific skills. Obtaining the right education was particularly valued by graduates in medicine – the EII value for this factor reached as much as 0.88 in this group. They also had high index for internships or work placements, which – in the context of the two factors described above – demonstrates the exceptionally high importance of studies and education acquired during this time for finding the first permanent job. Students of medical sciences do not usually start permanent employment before graduation, which makes this group of respondents stand out from graduates in other degree programmes.

The assessment of factors impacting on finding the first permanent employment by graduates in humanities, languages, social sciences, law and economics is different. Within this group, language skills and soft skills are rated as the most important. Only graduates in languages felt that completing the right degree programme was as important to obtaining their first permanent job as having soft skills. They rated language skills as much more important than graduates in other disciplines (the employment impact index value reached as much as 0.85).

Table 2.2.
Impact of selected factors on finding a first permanent job (EII value)
- by the degree programme completed (n = 852)*

Factors assessed	Degree programme completed						
	humanities	languages	social sciences, law	economics	mathematics, IT, science	technology	medicine
completing the right degree programme	0.56	0.65	0.60	0.63	0.70	0.75	0.88
internships/work placements served	0.54	0.49	0.57	0.57	0.51	0.54	0.65
professional experience	0.53	0.43	0.50	0.48	0.51	0.46	0.54
professional/sector-specific skills	0.60	0.54	0.58	0.57	0.73	0.69	0.66
soft skills	0.63	0.64	0.65	0.62	0.53	0.51	0.44
Erasmus/Erasmus+ learning/traineeship mobility	0.49	0.52	0.53	0.51	0.47	0.52	0.45
knowledge of foreign languages	0.76	0.85	0.72	0.76	0.67	0.69	0.49
references	0.39	0.39	0.36	0.34	0.38	0.35	0.39

* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

Of course, the results described and employment impact index itself are based on the assessments made by a selected group of graduates, i.e. those who participated in Erasmus+ mobility, but the conclusions drawn from the analyses can be considered more broadly. On the one hand, it can be seen how graduates differ in their assessment of the importance of completing the right degree programme for their career progression. **It can be assumed that for students of programmes in medical sciences and technology, a university diploma is a prerequisite for obtaining permanent employment in line with their education. For other groups of graduates, more attention is given to competences and experience, which in principle can also be acquired through other forms of education (not necessarily during studies).** On the one hand, this may reflect the lower level of specialisation of graduates in these disciplines, while on the other hand, it may reflect the openness of these groups to work in industries or areas that are not closely related to their degree programmes.

2.2. Current professional status

While the previous section of the report focused only on the first permanent employment of the respondents, this one will present findings on their career progression after graduation. As one of the research objectives is to show how graduates' careers have progressed with time that has passed since they completed their studies, a cohort approach was used for the analyses presented in this section. Three groups of respondents (cohorts) were identified depending on the number of years that passed since they completed the studies as part of which they participated in Erasmus+ mobility, i.e. graduates who at the time of the survey completed their studies one year, three years and five years earlier (cohort I, cohort III and cohort V respectively). Thanks to these assumptions, it was possible to assess how the careers of Erasmus+ mobility participants progressed over time. Due to limited size of individual cohorts, most of the data for each group of graduates is only presented at a general level.

In addition to general characteristics of the respondents' place of employment, this section presents data on, among other things, working conditions and plans for changing an employer. This provides - as far as possible - the complete picture of professional status of Erasmus+ mobility participants.

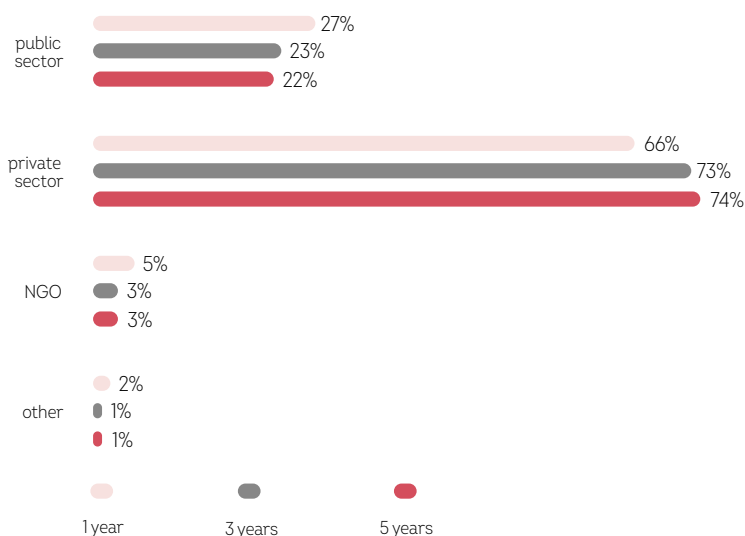
2.2.1. Description of the respondents' current workplace and conditions of employment

Among respondents who had graduated shortly before the survey, the share working in the public sector was higher than in other groups - in cohort I it reached 27%. In each subsequent group, the proportion was lower, falling to 22% among those who graduated five years before the research. With the passage of time, we can observe an exodus of workers from the public sector and NGOs to the private sector. About two-thirds of respondents who graduated a year earlier worked in the private sector (66%), and this percentage increases to almost three-quarters (74%) among those who completed their studies five years earlier. It can therefore be concluded that public sector organisations are perceived by respondents as suitable places to acquire work experience after graduation, but some graduates do not consider public institutions (and the sector as a whole) as the ideal place of work. Greater attractiveness of the private sector may be due, among other things, to the higher wages offered to specialists by entrepreneurs and to a greater availability of such job offers in the labour market⁵.



Figure 2.15.

Sector in which respondents currently work - by number of years since the study period during which the mobility was carried out (n = 1127)



The forms of employing graduates also change. In general, the longer the time that has passed since graduation, the more often respondents in the following groups were employed under a contract signed for indefinite time. This form of employment was reported by only

⁵ See, *inter alia*: GUS (2022a; 2022b).

37% of respondents who graduated a year earlier, but by more than 50% of respondents who graduated three years earlier, and as many as by 62% of respondents who graduated five years before the research. A similar trend, albeit on a smaller scale, was only observed for running a business. **Only one in 33 people who had graduated a year before (3%) and one in ten who had graduated five years before the survey (10%) launched their own businesses. As time goes by, the position of graduates on the labour market stabilises and it is less and less common for them to work under fixed-term or civil-law contracts. Importantly, there were only marginal cases of respondents who worked without a contract.** This was the case with 1% of respondents who completed their studies one year before the survey.



Table 2.3.

Forms of the respondents' employment in their current workplace
- by number of years since the study period during which the mobility
was carried out (n = 1127)

Form of employment	Time since graduation		
	1 year	3 years	5 years
employment contract of indefinite duration	37%	51%	62%
fixed-term employment contract (including replacement contract)	40%	29%	20%
employment contract for a trial period	4%	2%	2%
contract of mandate	8%	5%	2%
specific work contract	4%	1%	2%
other type of contract	3%	3%	2%
self-employment, running a business	3%	9%	10%
informal contract, work without a contract	1%	0%	0%

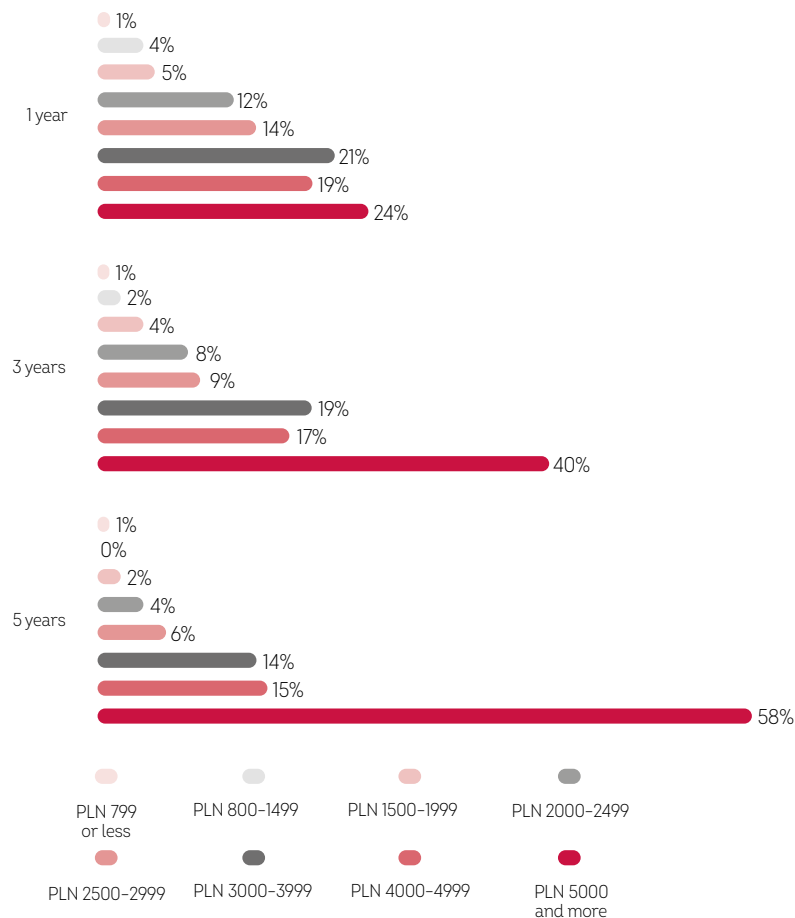
In the context of analysing professional status of the respondents, a very important factor is the assessment of financial conditions offered to the graduates. In each successive group of respondents, a significantly higher proportion of those in the highest salary bracket (i.e. PLN 5000 net or more) is easily noticeable. Only one in four people who graduated a year before the research received the highest remuneration (24%). Among those who graduated three years before the research, the percentage was already 40%, while among the respondents who graduated five years before the research it was 58%. A gradual increase in earnings is observed as work experience is broadened. It is also worth noting that the dynamics of salary growth is due, among other things, to specific nature of the studied group, which comprised

people who started their careers quite recently. In later years, the increase may no longer be as significant, even with the broadening work experience⁶.



Figure 2.16.

Monthly net remuneration of the respondents in their current workplace - by number of years since the study period during which the mobility was carried out (n = 1124)



2.2.2. Using professional competences acquired during studies

Survey respondents were asked to indicate the extent to which they use the knowledge and skills acquired during their studies in their current job. In general, irrespective of the group analysed, about one in five graduates assessed that they use the knowledge and skills

⁶ See, *inter alia*: Majchrowska, Roszkowska (2013).



acquired during their studies to a very small or small extent (in cohorts I, III and V respectively: 20%, 18% and 22%). **Therefore it can be assumed that around 20% of respondents perform professional tasks that are not at all or only marginally in line with the profile and scope of their studies.**

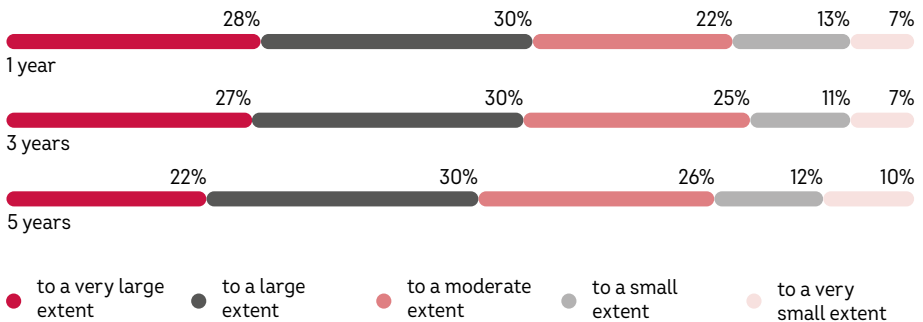
On the other hand, **with the passage of time since graduation, the number of respondents who claim to use the competences acquired at university at work gradually decreases.** The number of respondents who declare the use of knowledge and skills acquired during their studies to a very large extent amounted to 28% in the group of graduates from one year ago, 27% in the group who graduated three years earlier and 22% among those who graduated five years ago (the percentage of those assessing the use of competences to a large extent was the same for each group and amounted to 30%). **It can be assumed that, as seniority and experience grow, the knowledge and skills acquired during studies give way to competences acquired in the course of work.**



Figure 2.17.

Graduates' level of use of knowledge and skills acquired during their studies
- by number of years since the study period during which the mobility
was carried out (n = 1127)

To what extent do you use knowledge and skills acquired during your studies?



2.2.3. Workplace internationalisation

Due to the character of Erasmus+, graduates who participated in learning mobility were able to develop competences related to work in an international environment. It is therefore worth exploring the question if they were able to use these skills not only at university or in social contacts, but also in their professional life.

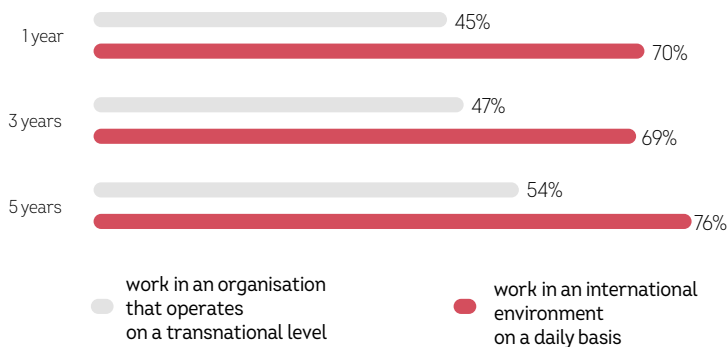
As the survey results indicate, a significant proportion of respondents worked in an institution with an international dimension. Among those who graduated one and three years before

the research, such declarations were made, respectively: by 45% and 47% of them, and by 54% of respondents who graduated five years before than the survey took place. **This means that about 50% of respondents, regardless of the time passed since graduation, work in organisations that operate on a transnational level.**

In addition, the majority of respondents in cohort I and III declared that they worked in an international environment on a daily basis (respectively: 70% and 69%). **In the group who graduated five years earlier, the percentage was even higher and reached 76%.** It therefore seems reasonable to conclude that participants in Erasmus+ mobility have the opportunity to work in a diverse environment after their studies, and, for example they have regular contact with representatives of other nations. This kind of data is at least to some extent indicative of meeting the objectives of the Erasmus+ programme, which include the development of social and intercultural competences of its beneficiaries⁷.



Figure 2.18.
Working in an international environment - by number of years since the study period during which the mobility was carried out (n = 1127)



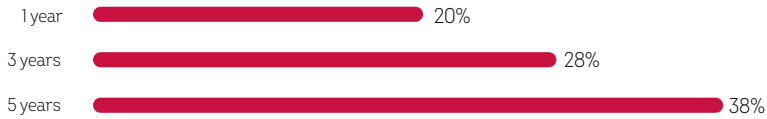
2.2.4. Taking up leadership roles

One of the aspects indicative of an employee's professional development is their leadership role, so the university graduates were also studied from this perspective. **The analyses show that 20% of respondents were managing the work of others one year after graduation. The percentage increases in each successive group, reaching 28% among those graduated three years earlier and 38% among those who graduated five years before the survey.**

⁷ Priorities of the Erasmus+ Programme: bit.ly/3TuVjgT [accessed 19/10/2022].



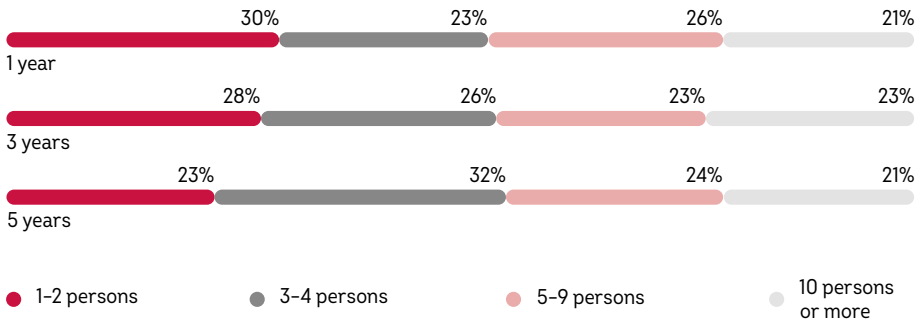
Figure 2.19.
Graduates in leadership roles - by number of years since the study period during which the mobility was carried out (n = 1127)



No significant differences were observed in terms of the size of the teams led by the respondents. About half of them in each of the tracked groups managed no more than four employees. When compared to other cohorts - the proportion of respondents who graduated five years before the survey managing 3-4 people (31%) increased slightly as compared to those who had two subordinates (23%).



Figure 2.20.
Size of teams led in current job by respondents - by number of years since the study period during which the mobility was carried out (n = 328)



2.2.5. Evaluation of selected aspects of the work

The previous sections of this chapter focused on selected aspects of work (form of employment, remuneration, use of acquired competences and leadership roles). However, it is also worth looking at subjective assessments of working conditions⁸. The vast majority of respondents, irrespective of the group, highly rated (as good and very good) both the form and stability of employment, as well as the opportunity to use the skills acquired. A positive opinion on each of these three aspects was expressed by 80%-90% of respondents belonging to each

⁸ The presented data was collected from the responses to a survey question: "How would you rate the following aspects of your work?". These relate to the aggregated responses: "very good" and "somewhat good" on a five-point scale (very good - somewhat good - average - rather bad - very bad).

of the monitored cohorts. Working hours were rated a bit less highly and, compared to other elements, remuneration and promotion opportunities were considered poor.



Figure 2.21.

Evaluation of selected working conditions - by number of years since the study period during which the mobility was carried out (n = 1114)



It is also interesting to compare the evaluations of individual aspects across separate groups of respondents. Those who graduated a year before the survey rated their remuneration and the form of employment less positively than other graduates. Those who graduated three and five years earlier rated the opportunity to use the skills acquired during their studies and job stability slightly more positively. Working hours constituted the only aspect that received slightly more positive ratings from the youngest graduates than in other groups.

These conclusions are consistent with the objective picture presented in the previous sections on the basis of questions about facts rather than opinions. In general, **as respondents gain work experience, a higher proportion of those working under permanent contracts, receiving higher salaries and holding managerial positions are observed in each group.**



2.2.6. Mobility on the labour market

Mobility on the labour market forms an important aspect of career progression. In general, it can be concluded that young people are ready to take on new professional challenges, including those that require relocation (Bednarska-Wnuk, 2014). Therefore, it is worth looking at the situation of former Erasmus+ mobility participants in this respect.

Recent graduates are more likely than other groups to declare that they plan to change jobs in the next few months. One in three respondents (33%) confirmed this. 30% of those who graduated three years and 27% of those who graduated five years before the research confirmed that they planned to change their job.



Figure 2.22.

Plans to change current job in the coming months – by number of years since the study period during which the mobility was carried out (n = 736)



However, a more relevant indicator of professional mobility is the actual, rather than planned, job change. As the results of the survey show, **recent graduates were more prone to change employers. Only one in four respondents who graduated five years before the research declared that they had changed employers in the past year (26%). For those who had graduated three years before the survey the figure was 38%, and 40% for respondents who graduated one year before the survey.**



Figure 2.23.

Job change in the year preceding the survey – by number of years since the study period during which the mobility was carried out (n = 1127)



This trend may be due to the low professional status of those who have recently left university, which impacts on greater willingness – of both employees and employers – to terminate the employment relationship. On the other hand, the search for employment elsewhere is probably also the result of graduates' growing expectations (due to their broadening

experience and increase in the length of service) – both in terms of financial matters and other factors that make up working conditions in a broader sense.

The answers to the question on reasons for changing job confirm the above hypotheses. The survey allowed for more than one answer and, just as importantly, only targeted those respondents who had decided to change employer.

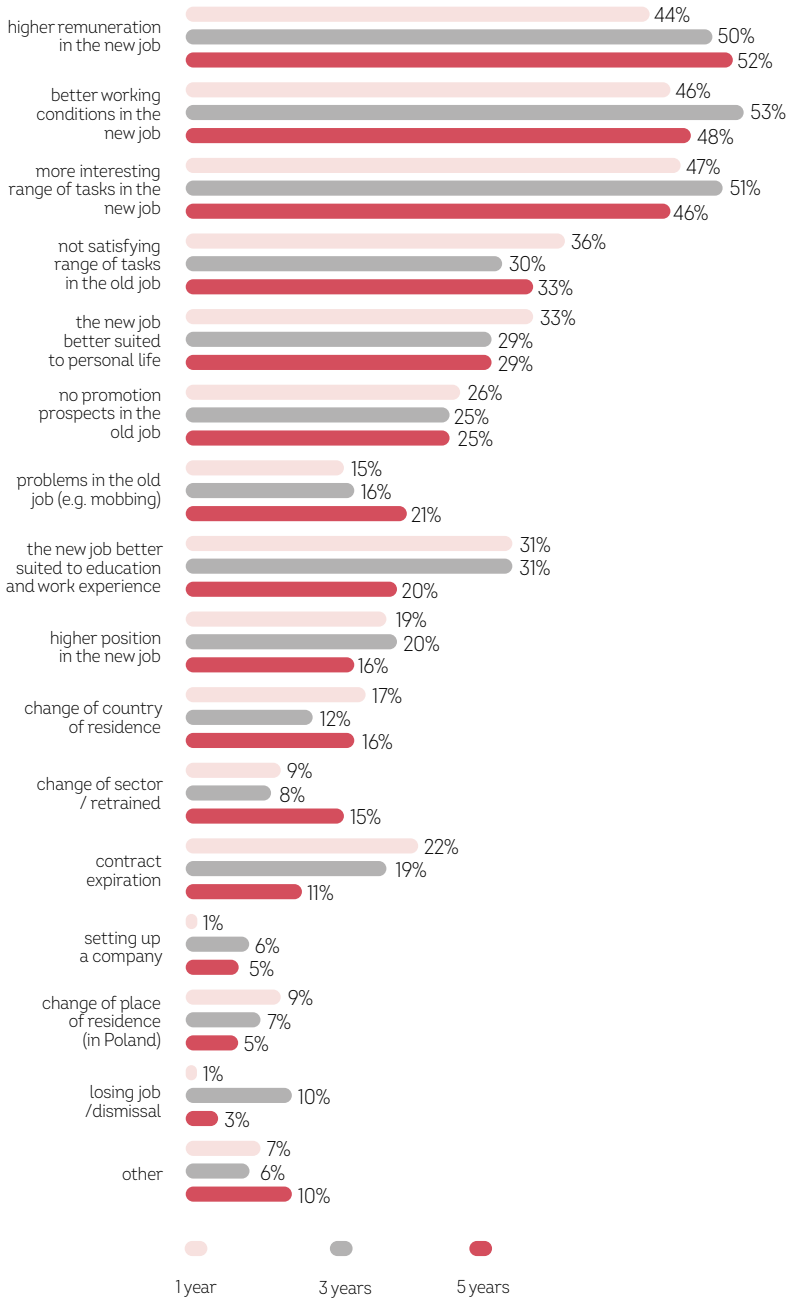
The most important reasons for changing job (in all analysed groups of respondents) were higher remuneration, better working conditions in the new place and a more interesting range of duties. Each of these responses was selected by 44% to 53% of respondents in each group.

However, some differences were also observed between graduates who had graduated relatively recently and representatives of other studied groups. Respondents who graduated three and five years before the research were more likely to mention improved financial conditions (higher salaries), personal problems (e.g. bullying), retraining and a desire to change industry or start a business⁹. Those who had achieved graduate status one year prior to the survey, when indicating the factors that prompted them to change jobs, were more likely to refer to issues other than remuneration and those not directly related to terms and conditions of employment, such as: a better fit with their education and experience, the expiry of their contract with employer and a change of place of residence.

⁹ Among those who had graduated three years prior to the survey, a high (compared to the other cohorts) percentage of respondents reported a job loss or being made redundant. This was the case for as many as 10% of respondents who said they had changed employers within the past year. Explaining this phenomenon would require in-depth research, but it should be borne in mind that such an indicator value may be due to the non-representative nature of the sample analysed.

Figure 2.24.

Reasons for changing an employer by graduates who changed their place of employment – by number of years since the study period during which the mobility was carried out (multiple choice question, n = 391)





Home

3. Continuation of education



A fuller picture of the situation of graduates participating in the Erasmus+ programme was obtained by tracing their choices in terms of continuing their studies and combining education with professional activity. The analyses presented in this chapter concern the respondents who, after completing the study cycle in which they participated in the programme, decided to continue their education and learning.

3.1. Formal education

Comparing the three groups of studied graduates (one, three and five years after the end of the study phase during which they benefited from the Erasmus+ programme), a clear downward trend can be seen in terms of the percentage of those continuing their studies. The research shows that over time respondents are gradually shifting their focus from education to the labour market.



Table 3.1.

Percentage of respondents continuing their studies – by number of years since the study period during which the mobility was carried out (n = 337)*

Number of years since graduation	Percentage of respondents continuing their education
1 year	39%
3 years	19%
5 years	12%

* The research sample included those continuing their studies and belonging to one of the three cohorts.

It is worth noting that of the group of those continuing their studies at the time of the survey, just over half of the respondents (52%) declared that they were working at the same time, while 48% were engaged solely in their studies.

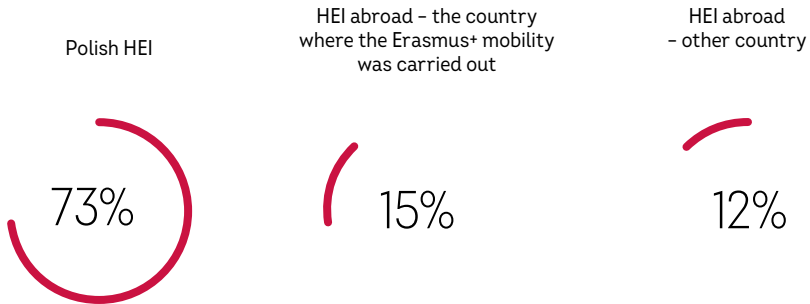
3.1.1. The chosen HEI, programme and cycle of studies

Respondents continuing their studies could do so at their current HEI or at other institution. Interestingly, in the surveyed group more than half of the respondents (52%) continued studies at a HEI other than the one at which they completed their previous degree programme. The continuation of studies often consisted of taking up the same or a related degree programme at a subsequent cycle of studies, which provided them with opportunity to change HEI.

Respondents continued their education at different HEIs. Almost three quarters undertook their studies at a Polish institution, but as many as 15% of respondents chose to study in the country they visited as part of the Erasmus+ programme and 12% in another country abroad.



Figure 3.1.
Place of continuing studies (n = 337)

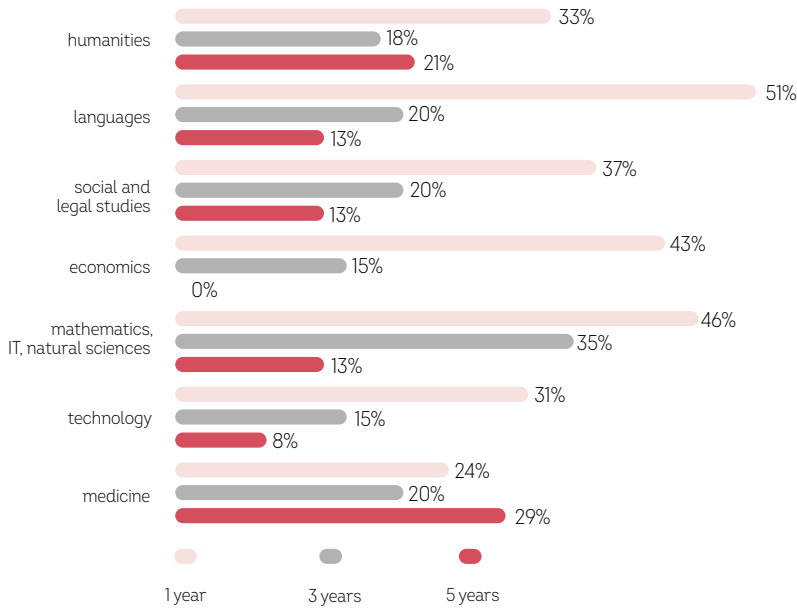


Of the respondents who continued their studies, 67% pursued the same degree programme as during an earlier cycle, while almost a third of respondents chose a different programme. It is worth noting, however, that this may have been a degree programme related to the previous field of study. Examining these issues in more detail would require a qualitative approach and was not covered in the quantitative research presented here.

Further analysis looks at degree programmes completed by the respondents who decided to continue their studies. Differences were evident between the different groups of respondents (those one year, three years, five years after studies during which the mobility was carried out).



Figure 3.2.
Percentage of respondents who continued their studies - by field of study
completed during which the mobility was carried out (n = 1122)*



* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

In the group that had completed their studies a year before the survey, those who had studied languages (51%), mathematics, IT and natural sciences (46%) were most likely to declare that they would continue their studies.

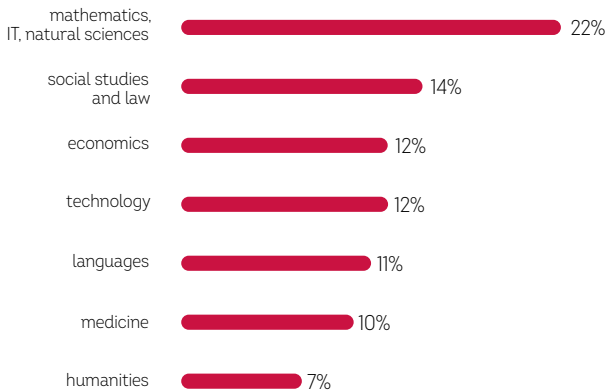
In the group of respondents from cohort III the share of those continuing their education fell sharply, with graduates in mathematics, computer science and natural sciences (35%) being the most likely to continue their education.

An even smaller percentage of respondents from cohort V declared continuing their studies. In the research sample, respondents who had completed a medical degree were most likely to declare taking up further studies (29%). At the other end of the spectrum were graduates in economics - none of them continued their studies (the only such case in the research). So it can be assumed with a high degree of probability that all respondents found their way into the labour market.

Further analysis looks at the most frequently chosen fields of study by the respondents who chose to continue their education. The research was carried out on a cross-sectional sample, so all participants were considered, regardless of the time that passed since they had completed their previous studies. This approach made it possible to identify which degree programmes were most frequently chosen by respondents as part of their continuing education. The most popular degree programmes were these relating to science (mathematics, IT, natural sciences – 22%), social studies and law (14%), with slightly smaller interest in economics (12%).



Figure 3.3.
Continuing studies – the most frequently chosen field of study (n = 300)*

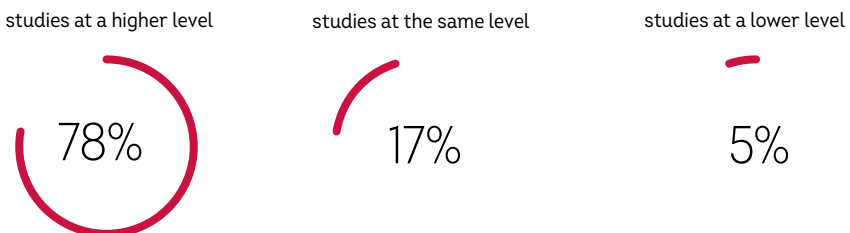


* Arts, agricultural, veterinary and forestry sciences graduates were excluded from the observations due to insufficient numbers of respondents.

The vast majority of respondents continued their education at a higher level than their completed cycle of studies (e.g. second- or third-cycle studies). Respondents also included those (17%) who took up a degree course at the same level (most often in a new field of study), and the smallest group (5%) were continuing their education at a lower level than their completed cycle of studies.



Figure 3.4.
Cycle of continued studies (n = 337)



3.1.2. Motivation to continue studies

Respondents who chose to continue their education were asked about the reasons for their decision. The aim of this part of the study was to identify groups of factors of decisive importance - respondents could mark any number of them.

The analysis identifies three types of motivation to continue studies, which was linked to the labour market, deepening knowledge and external factors. In each type, an index of statements within a multiple-choice question was created.

Type of motivation	Elective statements
Motivation linked to the labour market	<ul style="list-style-type: none"> • It was difficult for me to find a job. • The degree programme I completed did not give me the qualifications I wanted. • The degree programme I completed did not allow me to get a well-paid job. • I wanted to increase my chances of having a successful career. • The employer required that I continue my studies.
Motivation linked to deepening knowledge	<ul style="list-style-type: none"> • I wanted to take the opportunity to change my field of study. • I wanted to specialise in a specific field. • I am interested in my field of study and I wanted to continue it. • I am interested in an academic career. • I wanted to continue my personal development.
Motivation linked to external factors	<ul style="list-style-type: none"> • My colleagues continued their studies. • My teachers encouraged me to continue my studies. • My parents/friends encouraged me to continue my studies. • I wanted to be able to participate in an Erasmus programme mobility again. • I wanted to maintain my student status for longer.

For each of the three types of motivation, a separate index was created with a 0-1 scale, where a higher value indicated a greater impact of the factor on the continuation of studies.

Table 3.2.

Index values for each type of motivation to continue education (n = 337)

	Type of motivation to continue education		
	work-related motivation	motivation related to deepening knowledge	motivation related to external factors
average	0.21	0.44	0.17
mode	0.20	0.40	0

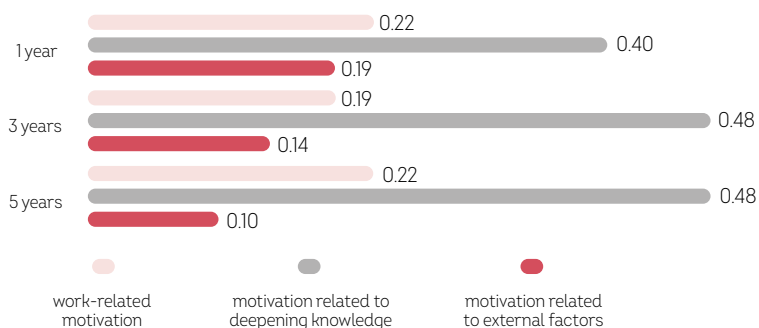
A comparison of average values from the three indices shows that, on average, the motivation directly linked to deepening knowledge in a particular field had the greatest impact on the decision to continue education. Respondents mentioned factors from this area most frequently, which is also confirmed by the highest mode. The average value of this index is 0.44.

The second most important factor was work-related motivation, i.e. continuing studies in order to be better prepared for meeting the requirements of the labour market or for specific requirements of a particular employer (average index value is 0.21). External factors, i.e. institutional factors or those related to the opinions of others, played the least important role. In this case, the mode was zero, meaning that none of the responses in this group were selected most often.

The analysis also covered individual motivations change with time passed since leaving HEI. In the group of respondents who graduated one year before the research was conducted (cohort I), motivation directly related to deepening knowledge was most important, with the value of this index increasing in the groups of respondents three and five years after graduation, approaching a value of 0.5. Motivation linked to the labour market remained at a relatively constant level (0.2), while a decreasing importance of the impact of external factors on continuing studies could be observed, with a decrease from almost 0.2 among the respondents one year after graduation to 0.1 among respondents who graduated five years earlier.

**Figure 3.5.**

Types of motivation to continue studies – by number of years since the study period during which the mobility was carried out (indices on a scale of 0-1, n = 337)



The values of these indices were slightly different among those pursuing third-cycle (doctoral) studies. For these respondents (n = 127), the factors directly related to deepening knowledge were the most important – the index value for this variable was 0.55 and was the highest. The other two types of motivation, i.e. those related to the labour market and external factors, were significantly lower at 0.16 and 0.19 respectively.

**Table 3.3.**

Index values for each type of motivation to continue studies – doctoral students (n = 127)

	Type of motivation to continue studies		
	work-related motivation	motivation related to deepening knowledge	motivation related to external factors
average	0.16	0.55	0.19
mode	0	0.60	0

3.1.3. Purpose of mobility and continuation of studies

Students can participate in mobility under the Erasmus+ programme to:

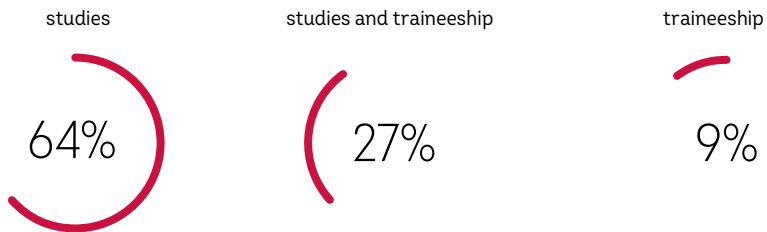
- carry out a part of their studies at a HEI abroad;
- serve an internship or work placement.

It is also possible to have a combined mobility, both for studies and traineeship.

Across the entire research sample, 64% of respondents completed a mobility solely for studies. Mobility for traineeship was completed by 9% of respondents, and 27% participated in mobility for studies and traineeship within the programme.



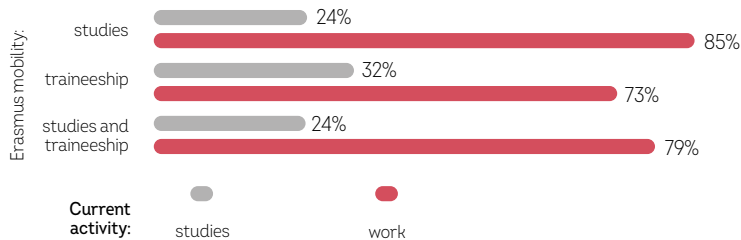
Figure 3.6.
Purpose of Erasmus+ mobility (n = 1134)



Of the group of respondents who participated in Erasmus+ traineeships only, 32% continued their education after the completion of their programme of study. In other two groups, the percentage was 24%.



Figure 3.7.
Educational and professional status of respondents
- by type of Erasmus+ mobility completed (n = 1134)*



* The figure includes the respondents who study and work at the same time.

The highest percentage of respondents who were professionally active (85%) was found among those who participated in mobility for studies. The share of respondents who benefited from a mobility for traineeship amounted to 73%. It is worth emphasising that some of the people surveyed combined further study with paid work, hence within each type of mobility the total exceeds 100% (the highest number of cases of this type is in the group of people who carried out a part of their studies abroad under the Erasmus+ programme).

The research did not show a significant relationship between continuing studies at the next stage and the length of studies or internships and placements carried out as part of international mobility.

When carrying out an analysis of educational and professional progression of graduates in the three cohorts, it is clear that the percentage of graduates decreases with time since leaving university. On average, 39% of surveyed from cohort I continued their education (Figure 3.8). Of those who pursued only studies as part of the Erasmus+ mobility, 43% undertook further education at university, and of those who were mobile both for studies and traineeship, 32% did so.

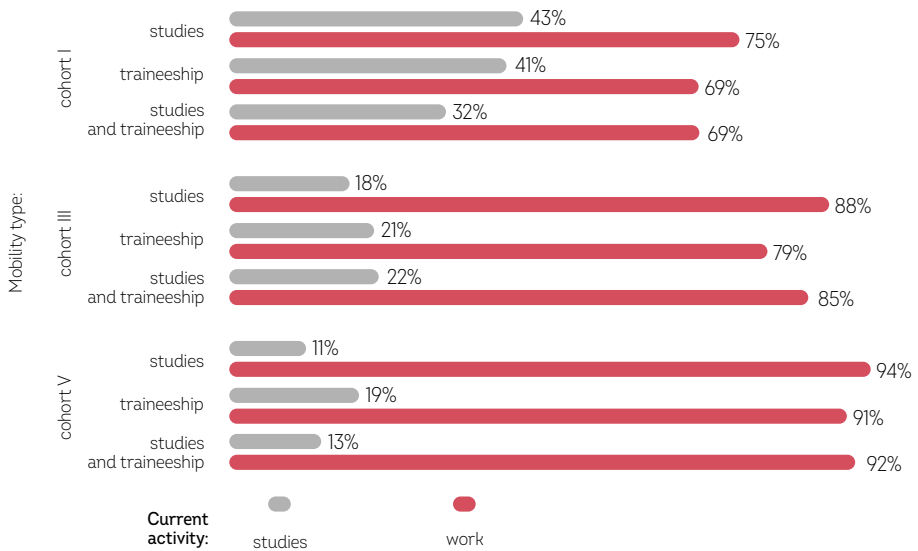
Among the respondents from cohort III an average of 19% continued their studies. The highest proportion of those still studying was among those who completed Erasmus+ mobility for studies and traineeship - 22%.

Among the respondents from cohort V the percentage of those continuing their studies naturally declined - in this group, further education was declared by graduates who had only completed traineeships abroad (19%).



Figure 3.8.

Type of mobility and current educational and professional status of graduates
- by number of years since the study period during which the mobility
was carried out (n = 1357)

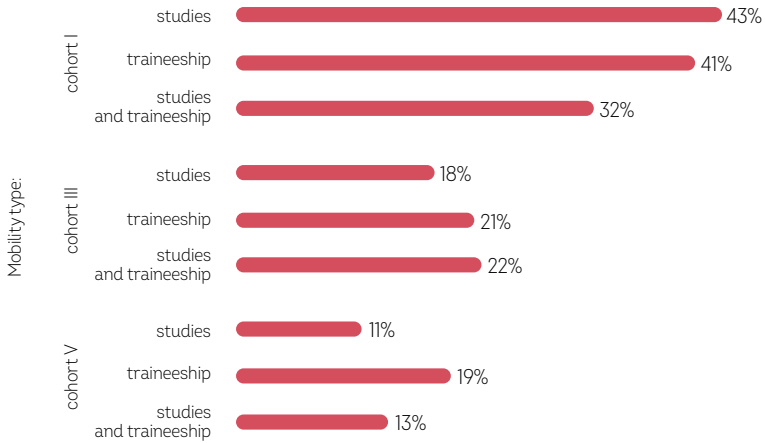


Analysing the pathways of graduates in all three groups (cohorts), it is possible to conclude that the greatest decrease in willingness to continue studies was seen among those who pursued studies only as part of the Erasmus+ mobility (a decrease of 32 percentage points over five years). The smallest decrease was observed in the group of respondents who participated in mobility both for traineeship and studies (drop of 18 percentage points over five years).



Figure 3.9.

Type of mobility versus continuation of studies - cohort comparison (n = 1357)



3.1.4. Participation in Erasmus+ mobility and the decision to continue studies

The decision to continue academic education is a product of many factors, including the cycle of studies completed, the degree programme, financial and family situation. Sometimes it is a result of previous educational experiences, including participation in the Erasmus+ programme. In some cases, mobility participants are interested in extending their study period and enjoying “student life” for as long as possible.

As part of the survey, respondents were able to assess (on a graphic scale) what impact the participation in Erasmus+ had on the decision to continue their studies. Responses were coded on a scale from 1 to 100.

Note 3.1.**Question from the panel survey questionnaire**

In your opinion, what was the impact of Erasmus/Erasmus+ on your decision to continue studies?

To answer the question, move the slider.



Both in cohort comparisons and in the analyses conducted on all research waves combined, the mode (the most frequently selected response) was the maximum value, i.e. 100 (23%). **This means that a significant proportion of respondents indicated that participation in Erasmus+ had a very significant (decisive) impact on the decision to continue their studies.** The lowest value, meaning that participation in Erasmus+ had no influence on decision on the continuation of the studies, was selected by less than 10% of all survey participants. In the comparisons between the cohorts, the average response of the indications ranges from 61-68 points, with 100 points being the dominant value.

Table 3.4.

Average and mode values for the Erasmus+ impact indicator on decisions to continue studies - by number of years since the study period during which the mobility was carried out (n = 337)

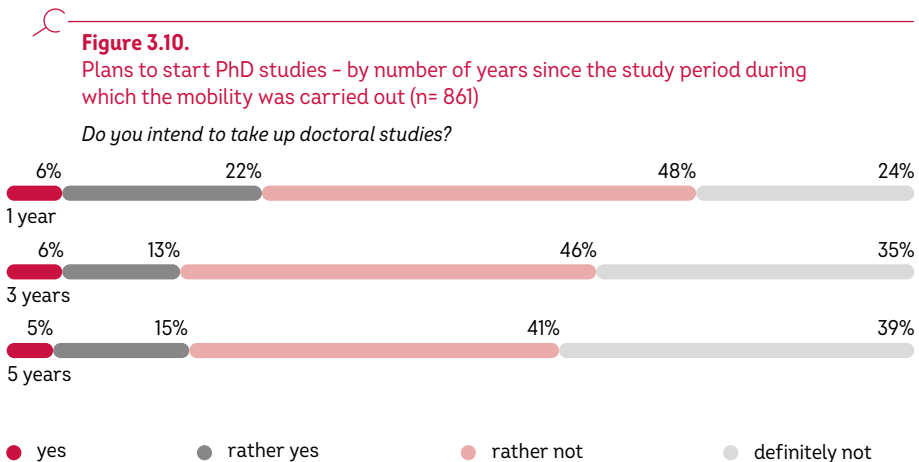
Time since graduation	Average	Mode
1 year	64.8	100
3 years	68.6	100
5 years	61.8	100

Only those respondents who were still students at the time of the survey (at further or different cycles of study and degree programmes than the one as part of which they had completed the mobility) were asked the question on assessing the impact of participation in the Erasmus+ programme on the decision to continue studies. Hence the significantly lower response rate among graduates three and five years after graduation - representatives of these groups predominantly had completed their education and moved their focus on the labour market.

3.1.5. PhD studies

As part of the survey, the respondents were also asked about their plans to start third cycle (doctoral) studies. The question was addressed to respondents who declared that they would continue their studies at further stages or in other fields of study, as it was assumed that starting a doctoral programme should be interpreted as a continuation of the previous stage of studies (people who have entered the labour market for good and have long since completed their university education are far less likely to return to academia to pursue third-cycle programmes).

In cohort comparisons, it is clear that interest in doctoral study was the highest among those who graduated a year earlier, i.e. relatively soon after completing the previous stage of their education. 6% of respondents in this group answered that they were 'definitely planning' to start a PhD programme and 22% indicated that they were 'rather planning'.



19% of respondents from cohort III indicated an intention to start a doctoral programme, of which 6% were determined to do so. In the group of graduates from cohort V the percentages were similar – they amounted respectively to: 20% and 5%.

3.2. Non-formal education and informal learning

The analysis of educational choices of Erasmus+ graduates also focused on non-formal education and informal learning, as graduates also continued their education outside formal education system. In order to analyse the learning activities undertaken by the respondents, an index of participation in learning, called the Lifelong Learning (LLL) index, was created.

The index was developed by aggregating the responses given to a number of questions on graduate activity in the area of learning and development. Respondents were given the opportunity to indicate up to 11 activities that they were undertaking at the time of the survey while continuing their education in various forms. The LLL index takes values from 0 (for those who did not indicate any of the suggested activities) to 1 (for those who marked 11 responses)¹⁰.



Table 3.5.

Questions and statements used to develop the LLL index

Question in the questionnaire	Type of activity	Type of learning
<i>Which forms of continuing education are you pursuing or have pursued since leaving university?</i>	1. studies (including doctoral studies)	formal education
	2. language courses	non-formal education
	3. courses/training in the workplace (optional)	non-formal education
	4. courses/training outside the workplace	non-formal education
	5. lectures, seminars, conferences	non-formal education
	6. workshops	non-formal education/informal learning
	7. internships, work placements	formal/non-formal education
	8. online courses/training (e-learning)	non-formal education
	9. post-graduate programmes	formal education
	10. distance courses / training	non-formal education
	11. self-study	informal learning

The statements used to develop the index include three types of learning – they relate to formal education, non-formal education and informal learning (the largest number of statements related to the latter form of education).

¹⁰ The index was created by adding up the number of indications of each statement listed by all respondents. The resulting values were proportionally converted into percentages and presented on a 0-1 scale.

The average value of the indicator was 0.34, and the majority of respondents chose three statements. Each respondent indicated at least one item from the list (there was no person who did not select any statements). In cohort comparisons, the LLL index values are slightly more varied.



Figure 3.11.
LLL index value by cohort (scale 0-1, n = 1321)



There is a noticeable growing trend between cohorts – with the number of years since the study period during which the mobility was carried out, the level of participation in education (LLL index) increased. Obviously, the nature of this participation was changing and the specific activities undertaken by respondents were also of a different nature – e.g. moving from pursuing studies (formal education) to participating in work-related training (non-formal education).

Regardless of the cohort, two activities – self-study and language courses – were by far most frequently selected.



Note 3.2.
The most frequently selected statements within the LLL index by cohort

cohort I	cohort III and V
<ol style="list-style-type: none"> 1. self-study 2. language courses 3. continuation of studies 	<ol style="list-style-type: none"> 1. self-study 2. language courses 3. (optional) courses and training in the workplace

In the group of respondents who had graduated one year prior to the survey, continuing studies was the third most common form of education (11% of all responses). In the other two groups analysed, the weight of this factor decreased significantly, reaching 5% (cohort III) and 3% (cohort V) respectively, indicating the shifting focus towards work-related activities. On-the-job (optional) courses and training were the third most frequently selected options in both cohorts (12% and 13% respectively).

3.3. Combining further studies with work

Very often, those who continue their studies are active on the labour market. They usually start with casual or temporary jobs, which they gradually and increasingly turn into permanent employment. Combining work and study is becoming more common with the passage of time since completing the previous stage of studies. This is a natural phenomenon, resulting from the transition from education and higher education to the labour market.



Figure 3.12.

Percentage of respondents who study and work - by number of years since the study period during which the mobility was carried out (n = 337)



In subsequent cohorts the number of people engaged solely in studying declined in favour of those working. Among the graduates continuing their studies, with each year of the study the number of respondents who were also active in the labour market was growing.

Summary



Based on the tracer study of university graduates who participated in Erasmus+ mobility, it can be concluded that they are active in both educational and professional fields. As the years pass since graduation, their formal education gives way to career progression. Of those who had completed their studies during which they mobility was carried out five years prior to the survey, only one in eight declared that they were still HEI students. At the same time, one year after graduation, around 90% of the respondents had solid work experience (based on an employment contract).

Among those who decided to continue their studies, a significant share were respondents who decided to change their HEI or a degree programme. They relatively rarely opted for taking up studies at a lower level or at the same level as the previously completed stage. This may indicate that, even though they have changed HEIs or majors, the respondents continued their education in areas related to their previous degree programmes.

The question of respondents' motivation to continue their studies is also relevant. The most frequently cited motivating factors included deepening knowledge in the field and being better prepared for the requirements of the labour market. In this context, those who decided to undertake doctoral studies stood out from other groups – the desire to explore a particular area of knowledge definitely dominated their motivation over other types of motifs. It is worth noting that the more time passed since graduation, the less likely a respondent is to undertake doctoral studies. The vast majority of respondents who declared plans to start third-cycle studies were those who had relatively recently completed their formal education.

Data on the labour market outcomes of graduates is also interesting. The vast majority of recent graduates had already had work experience a year after completing their studies, and it is worth emphasizing that around 50% of them had already taken up their first permanent employment after graduation. Research participants rated the impact of their studies on the search for their first permanent job in different ways – depending on the degree programme they completed. Graduates in medicine, technology, and mathematics, IT and natural sciences considered the degree programme they completed and their professional skills the factors that played the greatest role in finding their first permanent job. Respondents who graduated from other degree programmes attributed a greater role on getting a job to, among other things, knowledge of foreign languages and soft skills.

Optimistic conclusions can be drawn from the growing stabilisation on the labour market and the wide-ranging professional development of a large proportion of the respondents. Considering the time passed since graduation, the proportion of respondents who were

employed under indefinite employment contracts, received a relatively high salary and held managerial positions increased in each group of respondents. In addition, a higher proportion of people working in an international environment was observed in subsequent groups.

Graduates who have relatively recently completed their studies are more likely to change employers than those with more extensive work experience. Respondents from all surveyed groups, regardless of the number of years since the study period during which the mobility was carried out, ranked higher salaries, better working conditions and a more interesting range of tasks as the most important reasons for changing their employer.

The research captured the directions of respondents' professional mobility. With the passage of time since graduation, an exodus of graduates from the public sector and NGOs to the private sector can be observed. This indicates that the private sector is more attractive than the other two, which, taking into account the factors impacting the decision to change jobs, translates into greater opportunities for professional and financial progression in companies.

The vast majority of graduates assessed that participation in the programme significantly impacted the decision to continue their studies. In addition, more than two-thirds of respondents indicated that the mobility experience helped them to obtain their first permanent job (although it was not a key factor). Juxtaposing these opinions with other conclusions presented in this report (concerning, inter alia, education, professional development and future plans) may indicate that the motto of the current edition of the programme is not just a mere slogan – Erasmus+ does indeed “change lives” and “open minds”.



Home

Methodological annex



A.1. Cohort studies – theoretical overview

Cohort studies are most commonly used in medicine and epidemiology and usually aim to measure and compare morbidity in two or more groups. However, this method can also be used successfully in social analyses¹¹.

A cohort is nothing else than a subgroup in a sample or population identified on the basis of a defined common characteristic. Depending on the subject of the analysis, this could be: gender, age, ethnic group, occupation and type of education.

The cohorts can be divided into the following types:

- open – a set of individuals defined on the basis of a given status, which is not permanent (e.g. place of residence, political views),
- closed and established – a set defined by a characteristic permanently associated with an individual (e.g. date of birth, completion of military service).

In this research, a cohort approach was used when analysing differences between groups of respondents who one, three and five years prior to the study had completed their studies during which they participated in Erasmus+ mobility¹². Groups were constructed using the variable of time that passed since graduation – so these were closed cohorts. The size and population structure of the cohort sample is presented in section 1.2.

A.2. Research design

This report focuses on data from a panel survey. Each respondent also took part in a tracking (screening) survey as a prelude to further research. It covers all participants in Erasmus+ mobility one year following their return from the exchange. It is both an independent measurement and a prelude to a panel survey. By completing the tracking survey questionnaire, respondents agreed to be included in the panel survey group and provided their contact details, so that they are assigned to particular survey groups in subsequent waves of panel surveys. Moreover, as noted earlier, a cohort approach was chosen at the analysis stage due to the low numbers of observations in the individual panel subsamples.

¹¹ cf. Zieliński.

¹² In line with the research design, the first such comparison will be possible in 2022 after the panel survey data has been included in the analysis.

The results of the tracking survey to date, including the first findings of this long-term research project, are described in the report *Erasmus... and what next?* (Dąbrowska-Resiak, 2019). The first measurement was taken in 2017, and the first wave of the panel survey (as designed) took place in 2018 and included respondents who graduated one, three and five years earlier.

Table A.1.
Design of the panel tracer study of mobility graduates

		YEAR OF PANEL STUDY													Number of measure- ments
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
YEAR OF RESPONDENTS' GRADUATION	2011/2012	o	-	-	-	-	5								-
	2012/2013		o	-	-	-	4	5							1
	2013/2014			o	-	-	3	4	5						1
	2014/2015				o	-	2	3	4	5					2
	2015/2016					o	1	2	3	4	5				2
	2016/2017						o	1	2	3	4	5			3
	2017/2018							o	1	2	3	4	5		3
	2018/2019								o	1	2	3	4		2
	2019/2020									o	1	2	3		2
	2020/2021										o	1	2		1
	2021/2022											o	1		1
	2022/2023												o		-

A.3. Data collection technique

The main data collection technique was CAWI (Computer-Assisted Web Interview). It involves sending out links to an online survey questionnaire to respondents, which they complete on their own without the assistance of an interviewer. CAWI makes it possible to reach a wide range of respondents in a relatively short time and with low administrative costs. It is also the most commonly used data collection technique in graduate tracking studies.

The survey technique included two survey tools; the main questionnaire, which contained the largest number of variables, was targeted at respondents in the first wave of the tracking study. It was also received by those for whom each subsequent wave was the first measurement. The second questionnaire was addressed to the panel sample in the subsequent waves.

A.4. Research sample

The survey was carried out with a non-representative sample of graduates who had participated in Erasmus+ mobility. A total of 1,386 questionnaires were completed in the three study rounds carried out between 2018 and 2020. However, it should be noted that some of the respondents took part in more than one research wave. In order to avoid repeated observations when analysing phenomena that could have taken place while they were still students (such as the search for a first job), it was decided to include two samples: cross-sectional and cohort one. Within the sample from which cross-sectional data was collected, each observation included in the collection relates to a single respondent. The possibility of duplication of answers given by one person in subsequent rounds of the research was thereby excluded. The responses given in the last survey were taken as the baseline, which means that the collection is based on the results obtained three and five years after the respondents completed a study phase during which they participated in Erasmus+ mobility.



Table A.2.

Structure of the cross-sectional sample by type of mobility (n = 1386)

	Type of mobility	n	%	% valid
Valid observations	studies	723	52.2	63.8
	traineeship	108	7.8	9.5
	studies and traineeship	303	21.9	26.7
	Total valid observations	1134	81.8	100
Missing data	Observations excluded from the cross-sectional research sample - system missing values	252	18.2	
Total		1386	100	

The cohort sample was constructed slightly differently. Each cohort (subgroup) was formed based on the number of years since graduation from a programme during which a given respondent participated in mobility. As a result, three groups were created: mobility participants who had graduated one, three and five years before the survey. As the aim was to assess the studied phenomena in terms of their change over time, it was deemed appropriate to use the responses of one respondent in more than one measurement.

Table A.3.

Structure of cohort sample by type of mobility (n = 1356)

Type of mobility	Number of years since the study period during which the mobility was carried out					
	1 year (cohort I)		3 years (cohort III)		5 years (cohort V)	
	n	%	n	%	n	%
studies	300	57.3	280	64.4	279	70.3
traineeship	64	12.2	38	8.7	21	5.3
studies and traineeship	160	30.5	117	26.9	97	24.4
Total	524	100	435	100	397	100

A.5. Response Rate

From 2017 onwards, in the previous editions of the tracking measurement, 20–56% of respondents expressed their willingness to participate in the subsequent stages of the project (i.e. the panel survey)¹³. Each respondent was included in a specific group (depending on the year of graduation in which they benefited from mobility) and received or will receive an invitation to participate in a panel at appropriate time (i.e. one year, three years and five years after graduation).

Respondents are reminded to complete the surveys by regular e-mails. In the analysed waves of the panel survey, the response rate of the questionnaires was quite high, amounting to: 45% for the 2018 panel survey (total for all three respondent groups), 54% for 2019 and 52% for the 2020 survey.

¹³ Percentage of respondents who agreed to participate in the panel survey in consecutive years of tracking measurements: 2017 – 32%; 2018 – 20%; 2019 – 49%, 2020 – 48%, 2021 – 56%.



Home

Bibliography



Bednarska-Wnuk, I. (2014). Mobilność w optyce młodych osób – na przykładzie Polski i Portugalii. *Edukacja Ekonomistów i Menedżerów*, 31(1), 93-109. bit.ly/3EKuSj9 [accessed 12/07/2022].

Dąbrowska-Resiak, J. (2019). *Erasmus... and what next? Tracer study on education and careers of Polish students participating in Erasmus mobility projects*. Warsaw: Foundation for the Development of the Education System. bit.ly/3TD8e08 [accessed 12/07/2022].

GUS (2022). *Struktura wynagrodzeń według zawodów w październiku 2020 roku*. bit.ly/3c4zrIT [accessed 13/05/2022].

GUS (2022). *Zatrudnienie i wynagrodzenia w gospodarce narodowej w 2021 roku*. bit.ly/3NX4luq [accessed 13/05/2022].

Knapińska, A. (ed.), (2021). *Kobiety na politechnikach. Raport 2021*. Warszawa: Fundacja Edukacyjna Perspektywy. bit.ly/3yQjKxK [accessed 10/05/2022].

Majchrowska, A., Roszkowska, S. (2013). Czy wykształcenie i doświadczenie zawodowe mają znaczenie? Wyniki równania Mincera dla Polski. *Roczniki Kolegium Analiz Ekonomicznych*, 30/2013, 235-253. bit.ly/3P2g95m [accessed 26/06/2022].

Sochańska-Kawiecka, M., Makowska-Belta, E., Zielińska, D. A., Milczarek, D., Ziewiec, P. (2014). *Wykorzystanie elastycznych form zatrudnienia pracowniczego oraz organizacji pracy w województwie łódzkim. Raport końcowy*. Łódź: Wojewódzki Urząd Pracy w Łodzi. bit.ly/3aoA9A5 [accessed 7/07/2022].

Zieliński, A. *Analityczne badania kohortowe*. bit.ly/3P4QskJ [accessed 12/07/2022].

The tracer study on educational and vocational paths of Erasmus+ programme participants has been conducted by the Foundation for the Development of the Education System since 2017. The current report reflects on one of the project phases, spanning years 2018–2020. The authors analyse, inter alia, graduates' career choices, the process of obtaining their first job as well as their further education – continuation of studies and engagement in non-formal education and informal learning.

Foundation for the Development of the Education System (FRSE) operates since 1993. It is the Polish National Agency of the Erasmus+ Programme and the European Solidarity Corps for 2021–2027. Since 2014 it has participated in the implementation of the Operational Programme Knowledge Education Development. FRSE is also responsible for other European educational and informative initiatives in Poland, such as eTwinning, Eurodesk Polska, Eurydice, Europass, EVET and EPALE. The Foundation supports cooperation with countries in the East via the Polish-Lithuanian Youth Exchange Fund, the Polish-Ukrainian Council of Youth Exchange, SALTO-EECA Eastern Europe & Caucasus Resource Centre. One of the most important educational events in Poland – the Education Congress – is organized by FRSE.