



EUROGRADUATE Pilot Survey

*Technical assessment and
feasibility of a full rollout*

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EUROGRADUATE Pilot Survey

Technical assessment and feasibility of a full rollout

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0. Executive Summary

To help reaching a good match between the competences developed in education and the skills needed on the labour market, there is a need to improve data availability on what graduates do after their qualification. This is essential to support policy makers and educational establishments to ensure the employability of graduates, tackle skills gaps and mismatches, as well as to promote social inclusion. In the recommendation on tracking graduates of the Council of the European Union of 2017, the member states of the European Union committed to collect graduate tracking data in higher education and vocational education and training that is comparable at European level, with the support of the European Commission.

In line with the Council Recommendation, the EUROGRADUATE pilot survey, conducted in eight countries (Austria, Czechia, Croatia, Germany, Greece, Lithuania, Malta and Norway), aims at laying the ground for a sustainable European-wide graduate survey. It has been complemented by extensive expert interviews on the interest in and the data collection conditions of the Erasmus+ countries regarding a potential future European-wide graduate survey. This work has been compiled in the "Technical assessment of the EUROGRADUATE pilot survey and feasibility of a full rollout", in short EUROGRADUATE technical report.

The objective of this report is to give record of the technical aspects of the pilot survey data collection conditions, including lessons learned and recommendations for a potential European graduate survey and gives a feasibility assessment. This executive summary outlines the main findings of the technical report.

0.1. Overall conclusions and recommendations

The results of the EUROGRADUATE technical report, jointly with the EUROGRADUATE pilot survey, lead to the conclusion that a European graduate survey could and should be initiated in order to address the interests of most Erasmus+ countries in enhancing their graduate tracking capacities by a comparative dimension.

The EUROGRADUATE pilot survey exemplifies that it was possible to collect comparable data on higher education graduates across eight European countries yielding interesting results relevant to policy agendas.

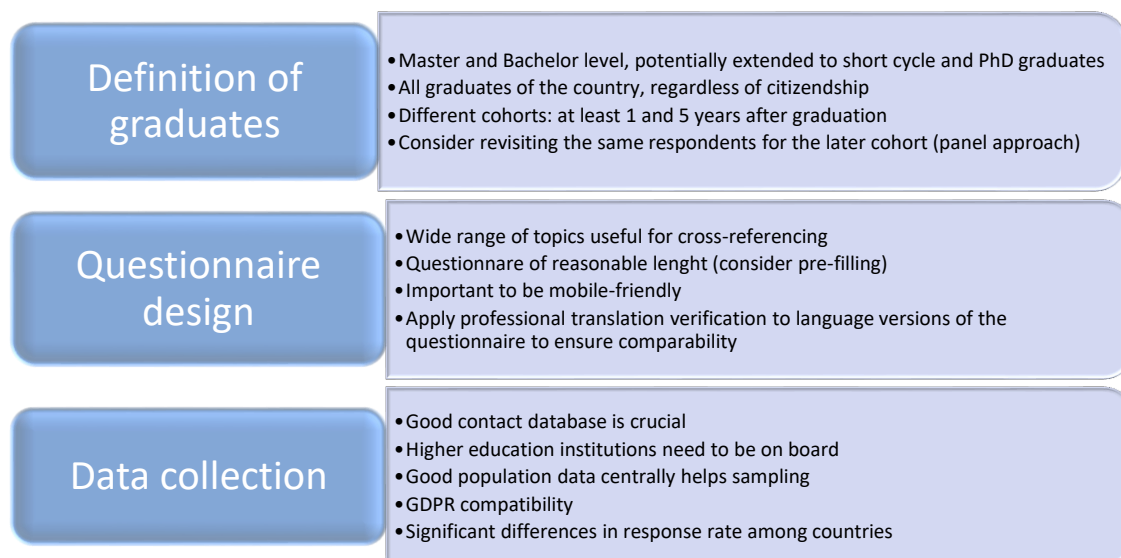
The key recommendations are timely preparation to ensure the support of higher education institutions, improve the availability of up-to-date contact information, and to coordinate a European graduate survey with existing surveys.

The feasibility assessment has shown that a full rollout of a European graduate survey would be feasible in 18 countries and thus in the clear majority of the Erasmus+ systems with available information¹. Further countries could join this group if known problems are overcome.

There is an interest for participating in a European graduate survey in the vast majority of the Erasmus+ countries. Many countries with existing tracking systems see a European survey as an important complement to national level information by comparing themselves with neighbouring European countries for mutual learning and benefit. For countries without regular graduate surveys, a European survey would provide the opportunity to develop graduate tracking capacities that are strongly needed for an efficient and effective steering of higher education.

¹ Information was received from 29 of the 34 education systems. No expert was available for interview from Turkey, North Macedonia, Greece, Italy, or Portugal.

0.2. Pilot survey in eight countries: lessons learned and recommendations



0.2.1. Target group of the survey

The definition of graduates for the EUROGRADUATE pilot survey covered all graduates of both private and public institutions on ISCED levels 6 (BA-level) and 7 (MA-level or long degree programmes)², graduated in the respective pilot country regardless of their country of birth and nationality. It also involves graduates of all ages and graduates from international joint-degree programmes if part of their degree was issued from a higher education institute within the country participating in the pilot survey.

The definition of the graduate and the cohorts surveyed by the EUROGRADUATE pilot survey proved to be valuable and of high importance. It, however, could also be considered to include graduates with a doctoral degree (ISCED 8).

To give a comprehensive picture of the graduate population, all graduates should be included, regardless of their current place of residence, their location of prior education, their previous enrolment status (e.g. full-time, part-time, or correspondence studies). The sampling design needs to ensure that adequate numbers of graduates who continue to study and who enter the labour market directly are included.

The results of the EUROGRADUATE comparative report (Meng et al. 2020) show that it is useful to compare graduates at an early stage in the labour market with graduates that had some years' time to further develop their career. Thus, a future European graduate survey should target at least two cohorts: one year after graduation (t+1) and five years after graduation (t+5). In the EUROGRADUATE pilot survey the latter group has proven to be less easy reachable than the t+1 cohort. To improve on that, we recommend a panel survey approach for future European graduate surveys: i.e. graduates that in the t+1 survey have agreed to be contacted again would be surveyed for a second time five years after graduation. This may also offer the possibility of more in-depth analysis of changes occurring between the two points of data collection. For a panel to work the number of respondents in the first survey needs to be large enough to ensure enough participants in the panel. In smaller countries, it is recommended to query

² ISCED 5 programmes (short courses) are very heterogeneous across countries. Thus, ISCED 5 programmes are only included, when they are regarded as part of the higher education system that plays a significant role in the respective country.

supplementary graduates five years after graduation without having participated in the t+1 survey.

0.2.2. Questionnaire design and delivery

The core topics of the EUROGRADUATE pilot survey are relevant for policy makers and have yielded interesting results. These topics are: course and characteristics of higher education, previous and further education, transition to the labour market and labour market relevance, skills, (international) mobility, and social outcomes.

The EUROGRADUATE pilot survey was administered in eight different national languages as well as in English. To ensure that the survey instruments are linguistically equivalent to the version in the master questionnaire the translation process was managed by an organization specialized in translations of scientific surveys. The purpose of this verification is to maximize comparability across different cultural, educational, and professional contexts. It is strongly recommended to guarantee enough time in the planning of any future European graduate survey to carry it out.

No significant technical difficulties were encountered by using the computer-assisted interviewing framework for the questionnaire. A relatively large portion of the respondents left the survey during completion, which might be due to the length of the survey in combination with many respondents using mobile devices. Therefore, it is strongly recommended to have a questionnaire as short as possible and to look at options for pre-filling information from other sources (e.g. administrative data). Pre-filled information could allow shortening the questionnaire or shortening the time needed for completing the questionnaire (respondents need to explicitly agree³ on the use of pre-filled information).

0.2.3. Implementation of the data collection in the pilot countries

For the EUROGRADUATE pilot survey almost 140,000 graduates in eight countries were contacted. This has generated 16,582 usable questionnaires from the two graduate cohorts 2012/13 and 2016/17 and from both Bachelor and Master graduates. Given that it was a pilot survey that had to face many challenges and was partly carried out in difficult environments, the return rate of 12% is satisfactory.

The starting conditions and challenges in the eight pilot countries differed strongly. Main challenges encountered include:

- In some countries, the population data (needed for sampling and weighting) was not optimal, e.g. because needed information was missing or because it could not be flexibly adapted. Thus, it is recommended to improve the databases on population data in the Erasmus+ countries and bring them to a similar level of detail and flexibility.
- Contact information on graduates was often heterogeneous, did not cover the entire graduate population, or was outdated. High quality and complete contact information (e.g. postal addresses and private e-mail addresses) should be available at higher education institutions, collected in a similar manner across the higher education system. If possible, central databases in countries should be expanded by up-to-date contact information.
- Readiness of higher education institutions to support the data collection varied strongly across and within countries. In most countries, the support of higher education institutions is indispensable for conducting graduate surveys. Therefore, it is strongly recommended to allow for a sufficiently long period of time for negotiating with higher education institutions to guarantee their support. To ensure the participation of higher education institutions, a European graduate survey should be prepared to provide

³ GDPR-compatibility is a specific aspect that needs to be considered when developing the survey.

relevant information and if possible, to offer the option of collecting institution-specific data for the (non-public) use of the respective higher education institution.

- Sampling was challenging in some countries, especially if it had to be done by the higher education institutions themselves. EUROGRADUATE designed an easy-to-use sampling tool for institutions' administrations which worked very well.

The data was centrally cleaned, checked on plausibility, labelled, and weighted. This central data management improves comparability and quality of the data and facilitates the preparation for further research. Despite problems encountered and a moderate response rate, the data quality is satisfactory. The results generated with the data, the country and group differences observed resemble differences known from national graduate surveys or general population data (e.g. the unemployment rates calculated by the EUROGRADUATE data are very much in line with the unemployment rates provided by EUROSTAT for similar groups).

0.3. Feasibility assessment of full rollout and data collection conditions in the Erasmus+ countries

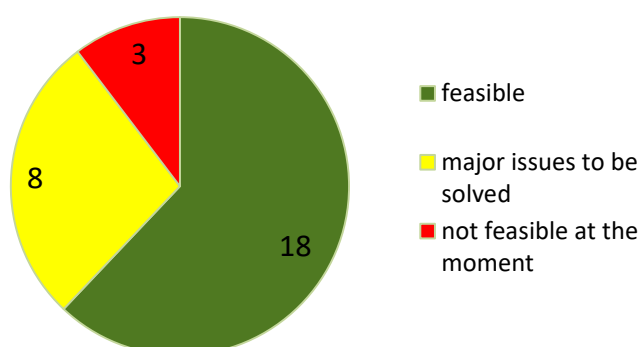
Based on in-depth interviews, 29 country sheets⁴ were prepared to provide a feasibility assessment of a Europe-wide graduate tracking survey, looking at four criteria: (1) interest in participating in a European graduate survey, (2) feasibility of identifying and sampling graduates of the target cohort, (3) contacting graduates of the target cohort, as well as (4) potential conflict with existing surveys and ways to coordinate with a European graduate survey. The evaluations of the four criteria lead to an overall assessment⁵.

Interest in participating in European graduate survey	<ul style="list-style-type: none"> • Three quarters of countries confirmed interest • Only three systems were not interested
Feasibility of identifying and sampling graduates	<ul style="list-style-type: none"> • Identifying and sampling of graduates is feasible in all systems • Data quality and especially updating of contact details of graduates could be improved
Contacting graduates of the target cohort	<ul style="list-style-type: none"> • 90% of systems assessed feasible • Migrating graduates are challenging to contact
Potential conflict with existing surveys	<ul style="list-style-type: none"> • Three quarters of systems have no conflict • Two systems have major problems with coordinating national surveys with a European survey

⁴ The Eurograduate team consulted all 34 Erasmus+ education systems' representatives (two systems for Belgium), but did not receive verified information from the following five countries: Turkey, North Macedonia, Greece, Italy, and Portugal.

⁵ As all four criteria need to be fulfilled for a graduate survey to be feasible, the overall assessment corresponds to the least favourable assessment among the four criteria.

0.3.1. Overall feasibility assessment.

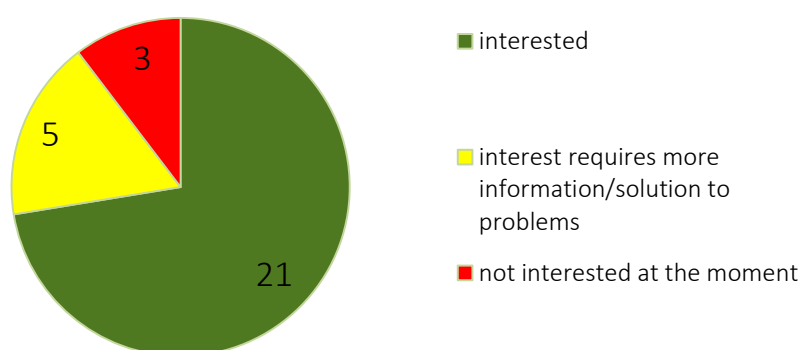


Source: EUROGRADUATE experts' interviews

For 18 of the 29 Erasmus+ systems it is feasible to join a European survey. For 8 systems, major obstacles would need to be overcome to facilitate participation. While realistic solutions for these obstacles were identified, it is not yet possible to say whether they really work. For five countries, coordinating existing graduate tracking systems with a potential European survey is the main obstacle. For three of the eight countries, contacting of graduates is currently not assessed as feasible and capacities would need to be improved in this respect.

Only for three systems (Belgium-Flanders, the Netherlands, and the UK) the feasibility of participation is assessed negatively without being able to identify promising solutions. These countries do not see much added value in participating in a European graduate survey as compared to the tracking system in place and/or have strong concerns that a European graduate survey could harm existing national level graduate surveys.

0.3.2. Interest in participating in a European survey



Source: EUROGRADUATE experts' interviews

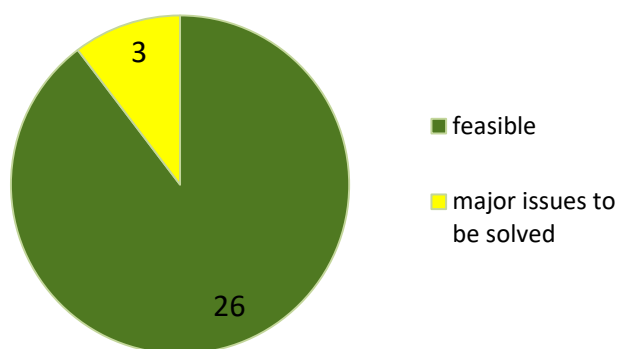
Among those 29 higher education systems with approved information, 21, or close to three quarters, did confirm that they would be interested to participate in a full rollout of a European graduate survey, should it be done. A further five countries would be interested if certain problems in their countries would be overcome, e.g. the coordination with existing graduate surveys. Only representatives from three systems (Belgium-

Flanders, the Netherlands, and the UK) stated that they would currently not be interested.

0.3.3. Identifying and sampling of graduates

For all the countries, identifying graduates is possible, either through a central database, by the higher education institutions, or both. Sampling of graduates is a more demanding task but was also not seen as a major problem by representatives of middle-sized or larger countries. Representatives of smaller countries preferred considering all graduates rather than a sample in order to attain an adequate number of respondents. It is important to note that “feasible” does not mean “perfect”. I.e. problems may still be encountered and, in fact, the EUROGRADUATE pilot survey had to manage such problems by providing higher education institutions with a sampling tool in countries where central sampling was not possible.

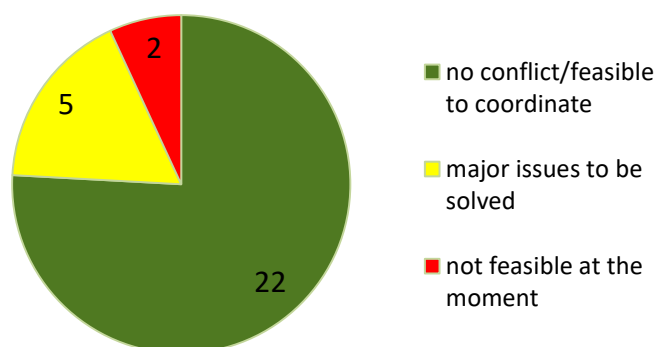
0.3.4. Feasibility of contacting graduates



Source: EUROGRADUATE experts' interviews

For almost 90% of the systems assessed it was concluded that contacting graduates is feasible. Conditions for contacting graduates, however, could vary strongly. Some countries have excellent, up-to-date contact information of different kinds while other countries need to rely on postal addresses only. Whatever the starting point may be, representatives from most countries confirmed that the availability of up-to-date contact information could be improved. A group specifically hard to reach but also specifically interesting is graduates living abroad. Thus, it is strongly recommended to strive for improving contact information of graduates before a full rollout.

0.3.5. Possible conflict with existing surveys



Source: EUROGRADUATE experts' interviews

For three quarters or 22 higher education systems there is no conflict with existing surveys or it was seen as feasible to solve this conflict. At the same time, it needs to be acknowledged that for seven systems this problem is not (yet) solved and that this could be decisive for non-participation of these countries. For five of these seven systems, potential solutions for coordinating existing surveys were identified. For two countries no realistic solution could be specified. In preparing for a potential full rollout of a European graduate survey, these options would need to be further explored if countries want to participate.

1. Introduction

The EUROGRADUATE pilot survey is a unique survey of recent graduates in eight European countries that was launched with the intention to lay the ground for a sustainable European-wide graduate research. The EUROGRADUATE pilot survey countries were Austria, Czechia, Croatia, Germany, Greece, Lithuania, Malta and Norway. As the preceding feasibility study confirmed in 2016, there is a strong demand for EU-wide graduate tracking: Research on graduates' pathways is important for guiding higher education institutions in assessing and improving their programmes and teaching methods. Policy makers have better and more comprehensive information for taking decisions on funding and legislation. The recommendation of the Council of the European Union on tracking graduates (Council of the European Union, 2017) asserts that, to date, the systems for tracking graduates of higher education are not very well developed in many countries of the European Union. Moreover, it is highlighted that limitations of existing cross-country data makes it difficult to draw conclusions from country differences and limits mutual learning. Improved data is needed to help policy makers in addressing at national and European levels the challenges of higher education as described in the renewed EU agenda for higher education, e.g. ensure employability of graduates, tackling skills gaps and skills mismatch, or promote social inclusion and mobility. The EUROGRADUATE pilot survey is one of the measures taken by the European Union to improve graduate tracking capacities in the member countries and the availability of comparable data.

Aiming at high quality data and high comparability across the participating European countries, the project's consortium conducted a pilot survey to prepare and test-run a full rollout in the future. In this report, recommendations on whether a full rollout of the European graduate survey is feasible and should be undertaken, will be provided based on experiences from the data collection in the pilot countries and the report on data collection conditions in all Erasmus+ countries. The report is structured along these two targets.

The first part (Chapters 2-3) contains an explanation of the technical implementation of the online questionnaire (definition of graduates, cohorts to be surveyed, development of master questionnaire, and translation of questionnaire and technical online implementation). Each section not only discusses the approaches used and the experience gathered throughout the pilot but also provides where deemed necessary, recommendations for a future extended rollout of a European Graduate Survey.

The second part (Chapter 4) discusses step by step the data collection approach and provides the field reports of the data collection for each one of the eight pilot countries. The field reports serve as national descriptions of the sampling, contacting and surveying, but also highlight country-specific idiosyncrasies and limitations in the data collections and show the final response rates. Finally, Chapter 4.3 delves deeper into the question of who answered the survey by using the case of Croatia and presents an extended data response analysis for the Croatian pilot.

The third part (Chapter 5) is a presentation of the results from a comprehensive enquiry and extensive expert interviews on the interest in and the data collection conditions of the Erasmus+ countries regarding a potential future European-wide graduate survey. It gives insights into the Erasmus+ countries' perspectives on graduate tracking at a European level and the data collection conditions in the countries for a potential full rollout. Moreover, questions of potential conflicts with existing surveys and coordination strategies will be raised. Besides showing cross-country results, it gives a very brief description of the situation in each Erasmus+ countries separately in the form of country

sheets. Chapter 5 provides a feasibility assessment of conducting the data collection for a potential full rollout of European graduate survey in the Erasmus+ countries.

The final chapter (Chapter 6) of this report summarizes main conclusions. What is more, it will present general recommendations for implementing a future EUROGRADUATE survey wave and provides a planning to prepare for such a wave in 2022.

2. Definition of graduates, timing of survey and questionnaire design

2.1. Introduction

This part of the technical report will analyse three crucial aspects of the EUROGRADUATE pilot survey, namely, the target group (what graduates to approach), the timing of the survey (one or five years after graduation) and the questionnaire (length and topics). For each of these aspects, the chapter briefly discusses the approach taken in the EUROGRADUATE pilot survey and provides recommendations for a full rollout.

With respect to the target group, this will be relevant for the question if graduates from Bachelor level programmes are relevant to be included. With respect to the timing of the survey, we discuss in particular if the current cross-sectional approach for the t+5 survey is to be replaced by a panel approach. And finally, with respect to the questionnaire, we discuss the impact of the length of the questionnaire on the dropout rate as well as provide recommendations to improve and shorten the questionnaire for future use.

2.2. Target group

2.2.1. Target Group: EUROGRADUATE pilot survey approach

A clear, consistent and internationally applicable definition of the target group represents a crucial first step in survey design. This is even more important in an international comparative study. In the case of EUROGRADUATE, the question of the target population coincides with the main purpose of the project. In order to achieve its goals, the EUROGRADUATE project must provide a clear and comprehensive overview of the returns to European higher education, and more particularly the returns for graduates of tertiary short-cycle, Bachelor (BA-level) and Master (MA-level) programmes. Driving questions in the definition of the target group of EUROGRADUATE are: "Who counts as a graduate?", "Which degree levels are to be included?", and "What are considered crucial returns to higher education?".

The consortium together with the European Commission (and confirmed by the Advisory Board) decided on starting with the following definition of the target group: *The pilot survey, taking place in autumn 2018 will cover graduates one and five years after graduation to cover the short-term and the mid-term development of graduates. That means the target group covers all graduates of the academic years 2012/13 and 2016/17.*

This includes all graduates on ISCED-2011 levels 6 (BA-level) and 7 (MA-level or long degree programmes). ISCED 5 programmes (short courses) are very heterogeneous across countries. Thus, ISCED 5 programmes are only included, when they are regarded as part of the higher education system that plays a significant role (i.e. have a minimum number of graduates per year) in the respective country. Moreover, they must be offered by institutions, which are also offering at least BA-level (ISCED 6) programmes. In the EUROGRADUATE pilot survey, only ISCED 5 graduates in Malta were included.

The EUROGRADUATE pilot survey comprises all graduates of the above-mentioned programmes that graduated in the respective pilot country regardless of their current place of residence (in or outside of the pilot country), their location of prior education (school or first degree), their previous enrolment status (e.g. full-time, part-time, correspondence) and their country of birth or nationality.

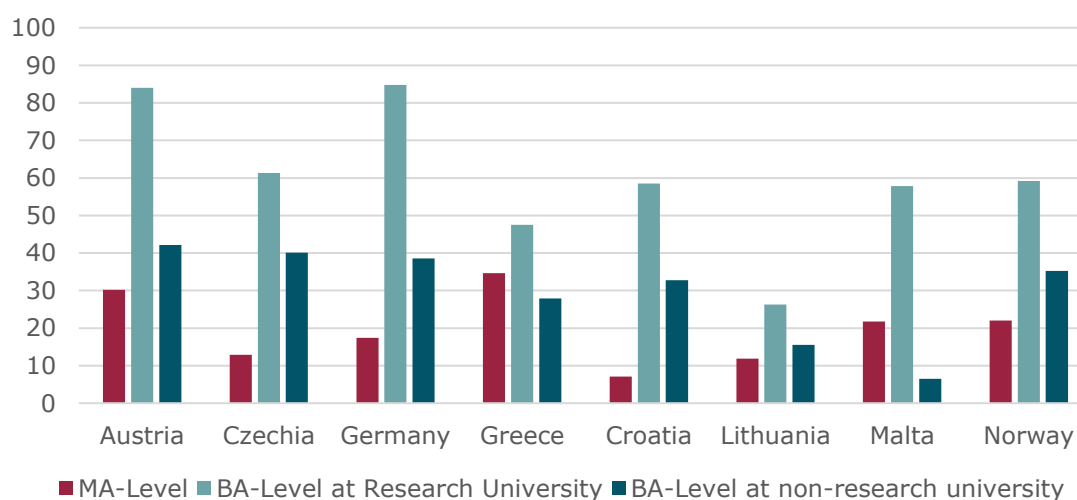
EUROGRADUATE also involves graduates of all ages and graduates from international joint-degree programmes if part of their degree was issued from a higher education institute within the country participating in the pilot survey.

In principle, all institutions (public and private) in a country offering programmes on ISCED 6 or 7 were included in the EUROGRADUATE pilot survey. However, it was reasonable to exclude institutions at which students are employed and that are run by an employer. That was the case with 'corporate universities' but also with military or police universities. The reason for this exclusion is that the transition to the labour market, which is a key topic of the survey, is part of the admission to those institutions, and is therefore very specific. Beyond that, different questions would have been needed in the questionnaire, which would have further extended the already extensive questionnaire.

2.2.2. Target group – Programme level: Lessons learned

Defining which programme levels should be included in future waves of EUROGRADUATE is closely related to the returns to higher education. This is highly relevant since graduation does not necessarily mark the end of a graduate's educational career. For those graduates who proceed directly to the labour market, the returns to education are quite straightforward: they strive for a good transition to the world of work, for a successful career, and for a satisfying and respected place in society. For those who continue with further or higher education, the returns are indirect and to some extent delayed. A large part of the returns to higher education – particularly at the BA-level – consist of access to the educational qualification at a higher level, since graduates are expecting that these higher degrees will open additional and more rewarding labour market and societal opportunities. To address the returns to higher education, these indirect returns must be considered.

Figure 2.1a % of graduates that continued to study: Cohort 2016/17.

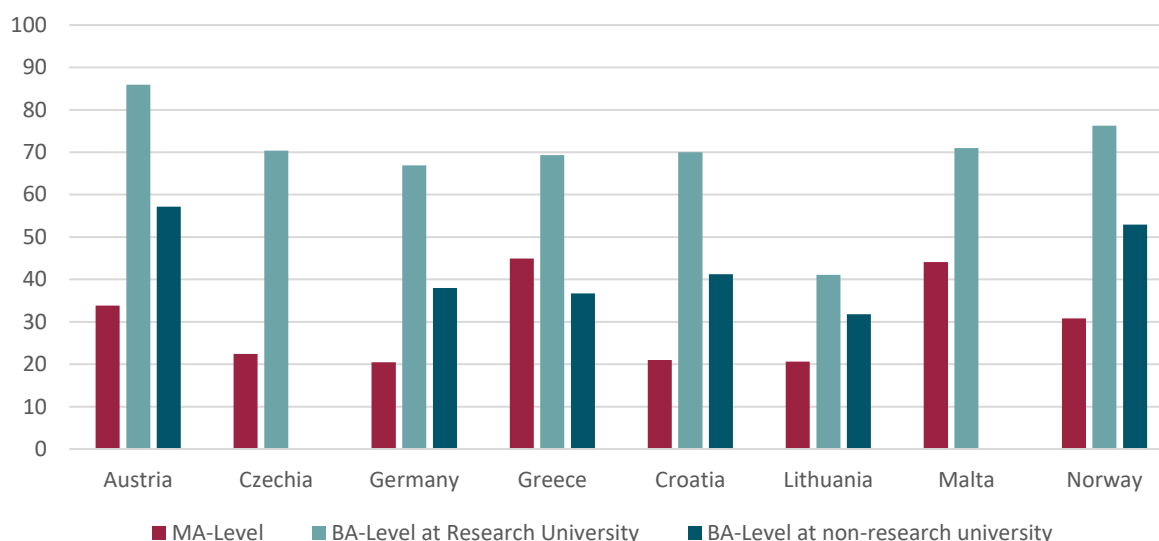


Source: EUROGRADUATE pilot survey 2018, cohort 2016/17.

Based on the EUROGRADUATE pilot survey data for the cohort 2016/17, Figure 2.1a shows that between 16% (Lithuania: BA-level at non-research university) and 85% (Germany: BA-level at research university) continued to study after a first graduation with a BA-level degree. The shares are slightly higher for the 2012/13 cohort (see Figure 2.1b), indicating in particular that the time between graduation from a BA-level degree and the time of survey is longer. Hence, the probability to have started with a follow-up study is increased. Figure 2.1a and 2.1b also show that there is generally a strong difference between graduates from research universities and graduates from non-

research universities (e.g. Universities of Applied Science). Among the former, the share that continues to study is significantly higher. A BA-level degree obtained from a non-research university is therefore much more likely the entrance ticket to the labour market. For MA-level graduates, the shares that continue to study are in general significantly smaller.

Figure 2.1b % of graduates that continued to study: Cohort 2012/13.



Source: EUROGRADUATE pilot survey 2018, Germany cohort 2012/13: DZHW graduate panel, Czechia (BA-level at non-research university) and Malta (BA-level at non-research university = not available (too few cases)).

The significant share of BA-level graduates that continue to study raises the question of whether they should be included in a future wave of the EUROGRADUATE survey. For a decision, the following points seem relevant:

- A BA-level degree from a non-research university is most likely an entrance ticket to the labour market. Hence, establishing the labour market relevance of this group of BA-level graduates is relevant.
- A relatively small number of graduates from a BA-level program at a research university enter the labour market directly. Moreover, this group might be a selective group (e.g. graduates that already had a job during study period, graduates that are offered a job and decide therefore not to continue). Subsequently, the measured labour market relevance of their degree might be biased.
- Excluding BA-level graduates from a EUROGRADUATE survey restricts the value of the data. Questions such as: *"Who continues to study and who enters the labour market?"*; *"Do graduates that continue to study differ in their experiences during the Bachelor programmes from those graduates who proceed directly to the labour market?"*; *"Are the two groups different with respect to their social background?"*; *"What are the motivations for continuing in education?"*; *"What role do the prevailing conditions in the graduate labour market play in the decision?"* cannot be addressed sufficiently without including BA-level degrees.
- Assessing the labour market value of a BA-level degree with a subsequent MA-level degree by including a limited set of questions to the questionnaires for MA-level graduates in order to assess key features of their preceding BA programme, will not fully provide comparable outcomes. The graduates will be 1-2 years older than the BA-level graduates who proceeded directly to the labour market and they will have 1-2 years less labour market experience. Both differences impinge on comparability.

- Addressing study continuation in a retrospective questionnaire, by including a set of questions for MA-level graduates in order to assess key features of their preceding BA programme, will provide biased results since BA-level graduates that did not continue to study are not included. Thus, the comparison group is missing.

2.2.3. Target group – Programme level: Recommendation

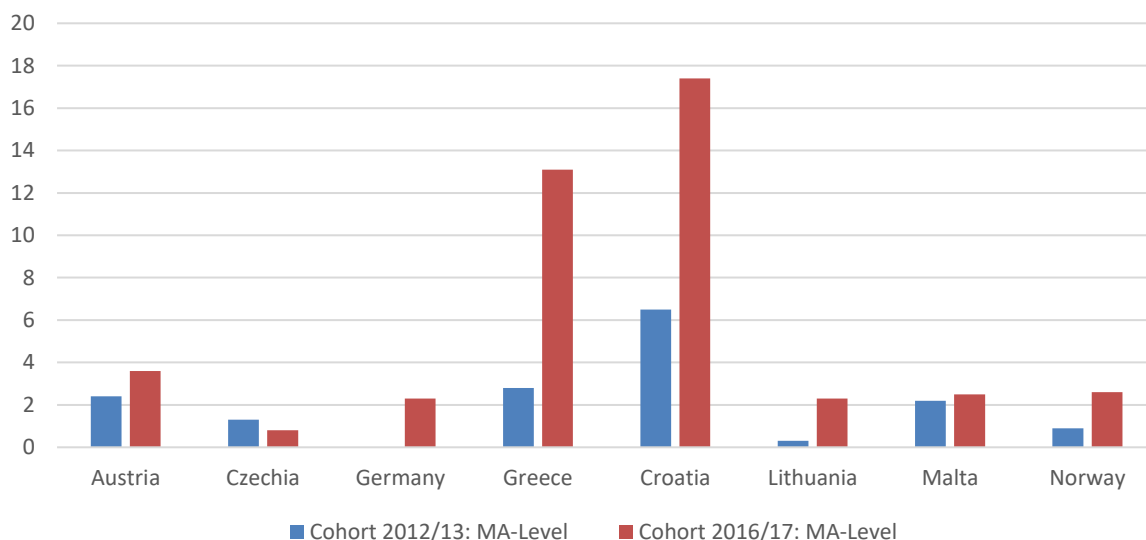
Based on the above discussion, we recommend the following procedure for a future EUROGRADUATE wave:

- Graduates with BA-level degrees should be included, both from research universities as well as from non-research universities.
- The sampling of BA-level graduates needs to be carried out in a way that for both groups of BA-level graduates, the group that continues to study and the group that enters the labour market directly after graduation, the number of respondents is high enough to provide results on a detailed aggregation level. Thus, depending on the specific country situation one of the following sampling approaches is required:
 - *Ideal option*: If register data is available, this can be used to divide graduates into two subgroups: a) BA-level graduates that have enrolled in a further study after graduating; b) BA-level graduates that have not enrolled in a further study after graduating. Stratified sampling within these two groups has to take place. For each group, the sample thereby must be high enough to guarantee results on a detailed aggregation level within the group. This is the most cost-efficient approach.
 - *Second best option*: If register data is not available, but a clear division is available between a) BA-level graduates from research universities and b) BA-level graduates from non-research universities, stratified sampling within these two groups is necessary. For each group, the sample size must be large enough to guarantee results on a detailed aggregation level within the group and for both possible outcomes (further study and labour market). This requires both an oversampling (compared to MA-level graduates) of BA-level graduates from research universities (to guarantee a minimum number of graduates entering the labour market) and from non-research universities (to guarantee minimum number of graduates continue to study). This option is more cost intensive than option 1.
 - *Fall-back option*: If no register data is available and no information on the type of higher education institution is available in advance, a large oversampling (compared to MA-level graduates) of BA-level graduates is required to guarantee results on a detailed aggregation level. This is the most cost intensive option.

2.2.4. Target group – Cohort: Lessons learned

Labour market outcomes differ depending on the time elapsed since graduation. Figure 2.2 shows e.g. that the unemployment rate among the EUROGRADUATE pilot survey respondents differ in some countries clearly between MA-level graduates one year and five year into the labour market.

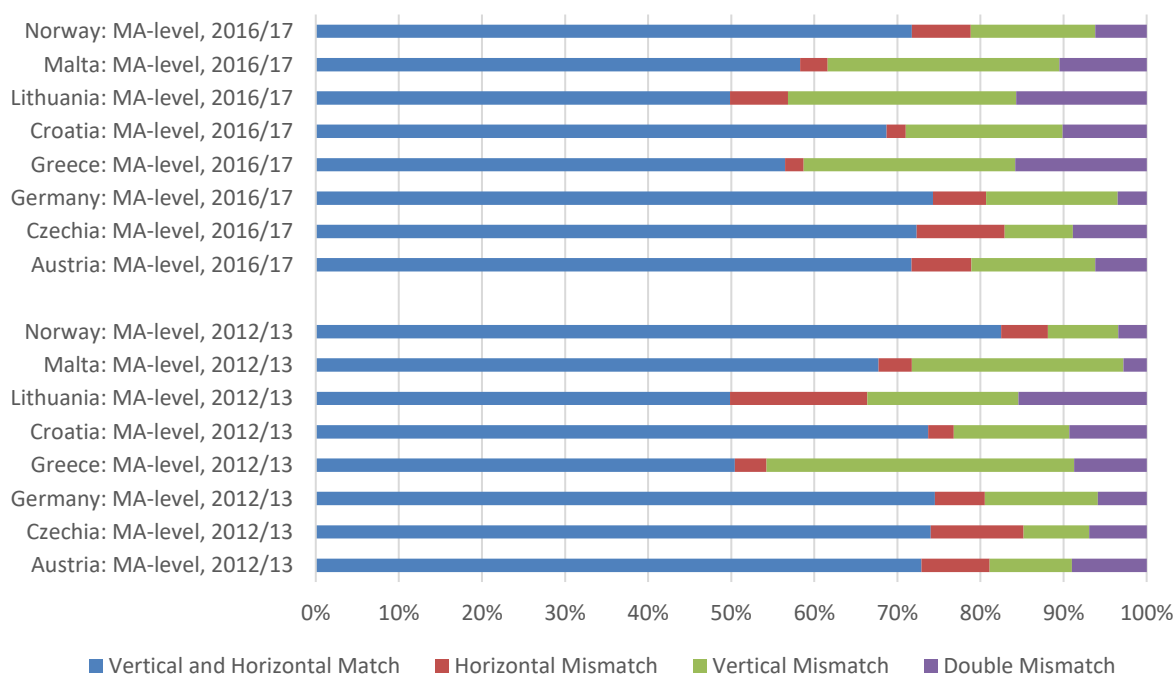
Figure 2.2 Unemployment rate (%)



Source: EUROGRADUATE pilot survey 2018, Note: As the EUROGRADUATE labour force definition is not fully comparable to the definition in the DZHW graduate panel, results for Germany cohort 2012/13 are not shown.

Similar, the education-job match shows clear differences between the two cohorts in some countries that were surveyed in the EUROGRADUATE pilot study (see Figure 2.3).

Figure 2.3 Education-job match (%)



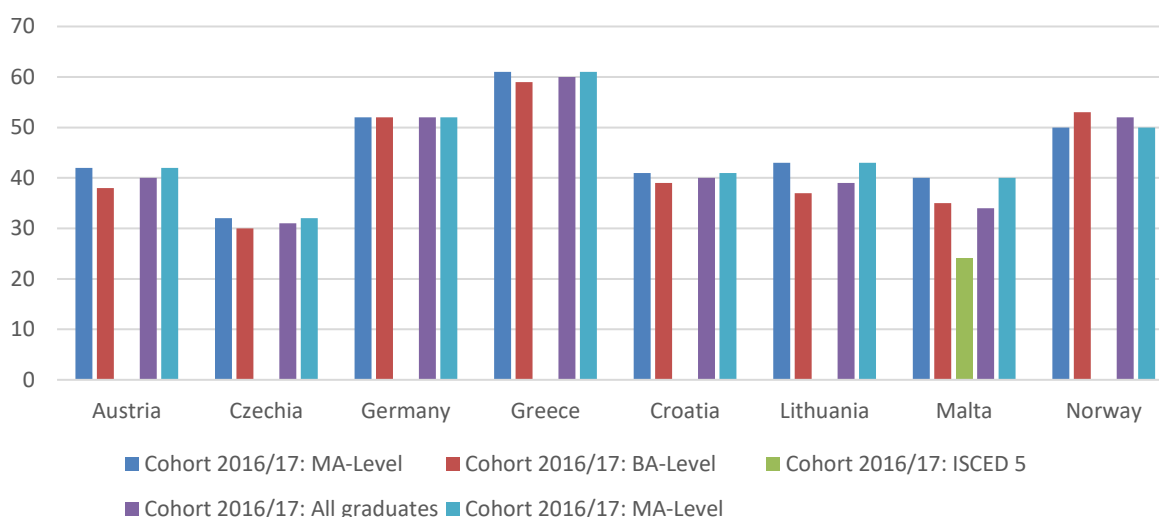
Source: EUROGRADUATE pilot survey 2018, Germany cohort 2012/13: DZHW graduate panel.

Although further analyses (see comparative report) confirm that the employment situation of graduates one year after graduation is a strong predictor for the situation five years after graduation, it is crucial to measure both, the immediate labour market placement and the mid-term situation on the labour market. By observing the same cohort at two time points, it is possible to see whether this group of graduates was able to improve its labour market situation in time.

The earlier published feasibility study suggests that a EUROGRADUATE study should be based on a panel survey approach, in which the same respondents are surveyed repeatedly, indicatively at one, five and nine years after graduation. The data collection of the current EUROGRADUATE pilot study took place at a single point in time. Thus, it was not possible to exploit the advantages of a longitudinal research design. A panel design is generally much more powerful in terms of analysing changes across the individual labour market career than a simple time-series design in which samples are drawn independently at different points in time. In contrast, a panel approach has its drawbacks such as (selective) panel mortality.

To address the question if a future EUROGRADUATE wave should be based on a panel approach, the respondents in the pilot study were asked in a final question if they were willing to participate in further graduate surveys carried out by the European Commission and if they provide their e-mail address for that reason. Figure 2.4 shows for the 2016/17 cohort (split by degree level) the share of graduates that indicated to be willing to participate in further surveys. The share varies strongly across countries, between 61% in Greece (MA-level) and 30% in Czechia (BA-level) and 24% in Malta (ISCED 5).

Figure 2.4 % of respondents that indicated to be willing to participate in further study



Source: EUROGRADUATE pilot survey 2018; cohort 2016/17.

The response rates (see Chapter 4) in the EUROGRADUATE survey can be described as rather low. Thus, the share of graduates that was initially approached and is willing to participate in further research ranges between 4% in Lithuania and Malta and 11% in Norway. Before being able to estimate if a panel approach is technically visible, it is necessary to consider the potential response rate among graduates in a panel. Based on EUROGRADUATE, this is not possible, but we can partially rely for that on the German graduate panel. The German graduate panel has a response rate of 63% in the follow up survey five years after graduation. In Table 2.1, we use two more conservative response rates (40%/20%) for a panel approach to calculate minimum samples for the

EUROGRADUATE pilot countries, while assuming that a panel approach five years after graduation intends to yield a minimum of 1.000 fully filled-out questionnaires in each country.

The results presented in Table 2.1 indicate that, taking the current response rates and targeting a minimum of 1.000 respondents five year after graduation (based on a 40% response rate in the t+5 survey), the samples for a cohort one year after graduation that are required range from 22.166 cases in Norway up to 69.105 cases in Lithuania. In two countries (Lithuania and Malta) the sample is higher than the available population. In Croatia a 100% sample would be required. Considering a response rate of 20% in the panel five years after graduation, also in Austria, Czechia and Croatia the available population would not be sufficient to reach the final target of 1.000 respondents in a panel wave five years after graduation.

Table 2.1 Minimum number of graduates to be approached one year after graduation

	Austria	Czechia	Germany	Greece	Croatia	Lithuania	Malta	Norway
Panel r.r. 40%	37.673	50.241	28.844	n.c.	33.590	69.105	65.262	22.166
Panel r.r. 20%	75.347	100.482	57.688	n.c.	67.181	138.209	130.524	44.332
Available population	50.268	69.947	417.312	61.096	33.004	26.821	4.492	48.427

r.r. = response rate; n.c. = not computable.

Before considering alternative approaches to a full panel approach, we briefly estimate if an increase in the response rate one year after graduation would improve the situation. We take the probability that a graduate is willing to participate in a further panel wave thereby as given (see Figure 2.4). Table 2.2 presents the response rates required in the initial survey one year after graduation to setup a panel study yielding at least 1.000 respondents in the survey four years later, given the available population. Figures are only presented for countries for which Table 2.1 shows that the available population is insufficient.

Table 2.2 Minimum response rates in t+1 survey

	Austria	Czechia	Germany	Greece	Croatia	Lithuania	Malta	Norway
Panel r.r. 40%						24%	160%	
Panel r.r. 20%	25%	23%			38%	48%	328%	
Current r.r. t+1	16.8	16.0			18.7	9.3	11.3	

r.r. = response rate; Source for current r.r.: EUROGRADUATE pilot survey 2018; cohort 2016/17.

The picture emerging from Table 2.2 is rather straightforward. Given the share of graduates that are willing to take part in a follow up study as fixed, a panel study will not be possible in Malta. In Lithuania, the response rate in the t+1 survey needs to be nearly 3 times as high as current (in case of a 40% response rate in the panel survey) or even more than five times as high (in case of a 20% response rate in the panel survey). This seems to be rather unachievable. In Croatia, the current response rate is sufficient in case the panel study survey reaches a 40% response, in case of a 20% response rate, the current t+1 response rate needs to be doubled. In Austria and Czechia, assuming a 20% response rate in the panel survey, the current t+1 response rate need also to be increased but with only around 9%-points.

Given the above considerations, a full panel approach for a survey five years after graduation seems to be impossible in at least three of the eight pilot countries, difficult in two of the pilot countries, and only sensible in Norway and Germany. For a final recommendation, we need to take into account the following considerations:

- The current questionnaire in the EUROGRADUATE pilot survey was of extensive length and required a rather long time to fill out for the respondents. Given that the length of the questionnaire yielded a significant dropout between first and final question (see also Chapter 2.3.2), a significant share of respondents dropped out before they were asked if they are willing to participate in further surveys. Hence, the estimates above underestimate the probability of a sample approach in case the questionnaire will be shortened.
- A panel approach yields significant improved explanatory power of the data with less information due to repeated questioning. A repeated questioning allows for distributing the number of questions that were now included in one questionnaire for the pilot survey across several waves (one year, five years and potentially nine years after graduation). Thus, in a panel approach it would be possible to reduce the number of questions per survey wave. This might increase the response rates and hence improve the likelihood that a sample approach is achievable. Moreover, it is possible to cover specific topics not in all but only in one wave (e.g. social outcomes).
- Collecting private e-mail addresses during the survey one year after graduation for use in the survey four years later will reduce the costs of the study significantly in countries where private e-mail addresses are not stored at higher education institutions or in a central register.

2.2.5. Target group – Cohort: Recommendation

Based on the above discussion and considerations, we recommend for a future EUROGRADUATE wave the following procedure:

- Continue to collect private e-mail addresses of graduates willing to participate in future research during the first inquiry one year after graduation.
- Include incentives to increase the likelihood of graduates to be willing to participate in future research and to provide private e-mail addresses (e.g. provide the graduates that are willing to participate in future research with short factsheets on the outcomes of the survey or by being able to participate in a lottery).

Given that the full panel approach is in many countries not feasible or difficult to be achieved, a survey five years after graduation will require a mixed approach:

- Graduates that took part in the survey one year after graduation and indicated their willingness to participate in a future research are addressed through the panel setting.
- In countries where the panel setting will not allow reaching the minimum target with respect to the number of final respondents in the repeated wave, the panel needs to be supplemented by a cross-sectional approach. Here, supplementary graduates are queried five years after graduation without having participated four years before.

2.3. Questionnaire

2.3.1. Questionnaire: EUROGRADUATE pilot survey approach

The following key considerations formed the basis for the EUROGRADUATE pilot survey questionnaire:

- The goal in developing the questionnaire was to ensure reliable, valid, and equivalent measurements of constructs relevant for understanding short-term transition (one year) from higher education to the labour market as well as mid-term transitions (five years).
- Both questionnaires for the one-year and five-year cohort needed to be suitable for:
 - a) BA-level and MA-level graduates with the option to include graduates from short cycle programmes, if appropriate.

- b) Graduates from different types of study programmes such as full-time, part-time, study programmes on a dual basis and long-distance programmes.
 - c) Graduates from different types of higher education institutes (e.g. universities, universities of applied sciences, private, public).
- The questionnaire needed to capture changes taking place in modern societies that graduates experience in their daily lives, for example, changes in their working environment, their family context, and in society at large.
- Although the core of a European Graduate Survey lied in the analysis of the transition from higher education to the labour market and in career trajectories in the first five years on the labour market, it was crucial to recognize other outcomes of education such as democratic values and social outcomes.
- In order to understand and to be able to compare short-term and mid-term transitions from higher education to the labour market, the questionnaire required a core set of identically measured indicators one year and five years after graduation for all types of graduates.
- For reliable and valid measurement of constructs, the questionnaire largely deployed survey instruments that have been tested in other surveys. Specific attention was paid to instruments used in graduate surveys in the pilot countries to ensure a high degree of compatibility with previous national-level graduate surveys. Moreover, instruments of existing international surveys, such as the European Values Survey or the European Social Survey, were considered as they provide for comparability of the EUROGRADUATE pilot survey with other international data sources. Beyond that, it was referred to pre-existing surveys on the transition to the labour market, such as REFLEX or HEGESCO.

During the first meeting, the EUROGRADUATE Advisory Board confirmed that the pilot survey should cover the following topics: Transition to the labour market and employment status, skills, (international) mobility, social outcomes, previous and further educational experiences, as well as explanatory factors. For the full English Master questionnaire, see Annex 2 and Annex 3.

2.3.2. Questionnaire - length: Lessons learned

Given the above considerations and the desire to cover 6 different topics, the questionnaire for the t+1 cohort included in total 151 questions and the questionnaire for the t+5 cohort included in total 167 questions. Note that not all questions were relevant for all different groups of graduates, and hence, not all respondents were presented all questions.

Table 2.3 presents for different groups the median time the respondents needed to fill in the questionnaire. Except for Lithuania, the median time to fill in the questionnaire is rather comparable between the pilot countries. For the BA-level cohort 2012/13, the median time ranges between 22 minutes in Lithuania and 37 minutes in Malta. The median time for respondents from a MA-level programme ranges for the 2012/13 cohort between 24 minutes in Lithuania and 37 minutes in Malta. The longer time needed for MA-level respondents to fill in the questionnaire reflects mostly the fact that larger shares of BA-level graduates continue to study and hence were not asked questions regarding their labour force status.

Respondents of the 2016/17 cohort needed in general between 20 minutes (BA-level Lithuania) and 34 minutes (MA-Level Malta) and hence from 2 to 9 minutes less than the respondents from the 2012/13 cohort. The shorter timespan needed for the 2016/17 cohort reflects thereby the fact that employed graduates of the 2012/13 cohort were asked next to questions with respect to their current workforce status also questions with respect to their workforce status in 2014. Finally, Table 2.7 shows that the longest

median timespan to fill in the questionnaire is found for the group that is *employed*, whereas the two groups *unemployed* and *not part of labour force* have generally a shorter required timespan to fill in the questionnaire.

Table 2.3 Median time to fill in questionnaire (in minutes)

	Austria	Czechia	Germany	Greece	Croatia	Lithuania	Malta	Norway
Cohort 2012/13								
ISCED 5*							36	
BA-Level*	31	32	35	31	31	22	37	33
MA-Level*	32	35	36	33	33	24	37	35
Employed	32	34	36	34	34	29	37	35
Unemployed	27	22	30	26	22	30	30	29
Not part of labour force	25	28	27	22	25	24	26	27
Cohort 2016/17								
ISCED 5*							37	
BA-Level*	25	29	26	28	25	20	31	30
MA-Level*	29	31	33	30	30	25	34	33
Employed	30	33	34	32	33	26	36	34
Unemployed	21	27	21	24	22	20	27	30
Not part of labour force	20	23	23	23	22	20	23	24

Source: EUROGRADUATE pilot survey 2018; * including graduates for which the workforce status could not be defined.

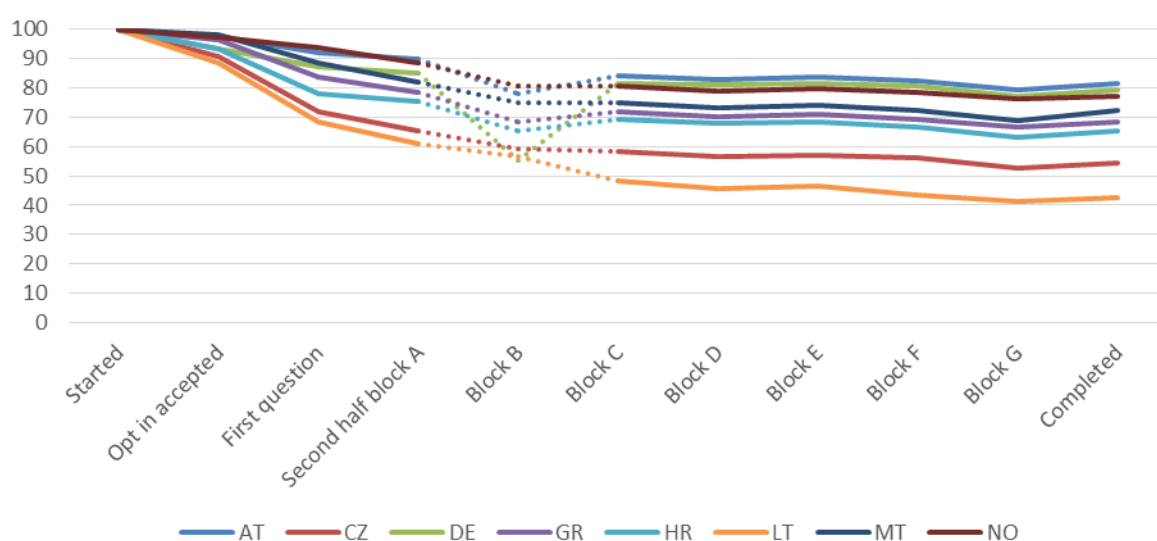
The question arises if the rather high median timespan to fill in the questionnaire yielded an increased dropout rate. Figure 2.5 presents the share of respondents per country that reached a certain pre-determined block of question in the survey:

- Started: The respondent logged in.
- Opt-in accepted: The respondent accepted the privacy statement
- First question: the respondent answered the first question: Study graduated from
- Second half block A: Respondent answered at least 1 question in second half of Block A (educational history)
- Block B: Respondent answered at least 1 question in Block B (Labour market)
- Block C: Respondent answered at least 1 question in Block C (Competencies and job aspects)
- Block D: Respondent answered at least 1 question in Block D (Place of resident).
- Block E: Respondent answered at least 1 question in Block E (Personal and social background).
- Block F: Respondent answered at least 1 question in Block F (Social outcomes).
- Block G: Respondent answered at least 1 question in Block G (Willingness to participate in future research).
- Completed: Respondent correctly closed the questionnaire after final question.

The picture presented by Figure 2.5 is rather straightforward and holds for all countries. The share of dropouts starts to increase from the beginning on and, in particular, in Lithuania and Czechia we find that close to 40% of the respondents are lost in the first part of the survey. In Croatia it is approximately 25% and in Greece around 17%, In the other countries just above or even below 10% of the starting respondents did not reach the second part of block A (Educational History). Given that Block A, and in particular the questions regarding the study programme one graduated from have been differently designed in the countries (e.g. open fields, interlinked long drop-down menus or not

asked as information was beforehand known), it is interesting to see if the design of the questions regarding the study programme graduated from has an influence. Both in Lithuania (large drop) and Germany (small drop) respondents were asked to answer the question in an open field. In Czechia (large drop) and Greece (relatively small drop) respondents were asked to answer the question following an interlinked dropdown menu and in Austria (small drop) an interlinked dropdown menu combined with an open question field was used. In this sense, no direct link between questionnaire design and dropout rate can be established. Continuing in Figure 2.1, the situation in Block B is marked with a dashed line. Reason is that Block B, covering questions on the labour market, is only asked to a selective group of respondents, those not continuing to study (2016/17 cohort) or those that have entered at least once in the last 5 years the labour market (2012/13 cohort). Therefore, Block B knows a drop-in share of respondents without directly indicating dropouts. This is visible as the share of respondents that entered Block C is strongly comparable to the share of respondents at the end of Block A. Interestingly, whereas we found in several countries a relative strong drop between 'Start' and 'Second half of Block A', the situation is different from Block C onwards. In Lithuania, we lose in the second part of the questionnaire around 6%-points. In all other countries, it is less than 4%-points. This seems to indicate that after respondents have passed a certain timespan filling in the questionnaire, they are most likely to continue until the end of the questionnaire.

Figure 2.5 Share of respondents per block in questionnaire (%)



Source : EUROGRADUATE pilot survey 2018.

For a final recommendation, we need to consider the following further considerations:

- A survey with median timespan to be filled in of (clearly) above 20 minutes must be considered as extensive in several countries. Moreover, a long questionnaire is not easily promoted in an invitation letter.
- The finding that a large portion of the respondents used a mobile device in combination with an extensive length of a questionnaire and the small screen of a mobile device makes respondents more likely to drop out. This is not a technical reason, but a fact found in different surveys.

2.3.3. Questionnaire - length: Recommendation

It is strongly recommended that the questionnaire to be used in future EUROGRADUATE waves to be shortened in comparison to the EUROGRADUATE pilot survey questionnaire.

In countries with a particularly high drop-out rate during future waves, accompanying (e.g. qualitative) research should be carried out to enrich the information gathered.

2.3.4. Questionnaire - Topics: Lessons learned and recommendations

Labour market relevance

No doubt, a core domain of higher education relevance is and has always been the successful transition to the labour market; i.e., adequate employment, career development and aspects such as job security. In this sense, a EUROGRADUATE survey needs to provide information on the European level which is relevant for policy makers and ensure comparability of definitions between countries. This holds in particular true with respect to standards and classifications on aspects such as occupation and economic sector. At the same time, the survey needs to be able to track differences in the labour market outcomes of higher education graduates between different countries and to reflect these differences against the background of varying national conditions. Therefore, the labour market topic of the EUROGRADUATE pilot survey covered both objective and subjective indicators to provide information on the *labour market entrance, career trajectories, and sectoral mobility*.

General recommendation: The section on *labour market relevance* of the questionnaire should stay in the future at the core of the questionnaire in each wave. However, as discussed below, some improvements might be considered necessary and some questions might not be needed to be asked in each wave.

Next, we provide some more detailed lessons learned and recommendations for a selective set of key labour market indicators.

Labour force status at time of survey

Approach used in EUROGRADUATE pilot survey: To measure the *labour force status*, the questionnaire took the formal definition of the International Labour Organization (ILO) into account. A disadvantage of this definition is that it requires a large set of questions, which is tedious for respondents and eats into precious questionnaire space. Therefore, it was agreed upon taking a shortened definition, which covers large shares of the ILO definition and covers whether respondents are currently in paid employment, and if not whether they are available for work, and are taking active steps to seek it. Based on the labour force status, two central groups can be distinguished: *Employed Labour Force* and *Unemployed Labour Force*.

Required improvement: In general, the taken approach worked well and the unemployment rates measured by the EUROGRADUATE survey are strikingly comparable to EUROSTAT unemployment rates as far as a comparison is possible⁶. However, due to a routing mistake the unemployment rate was not measured precisely in accordance with the above definition for the small group of respondents that had never worked since graduation. For this group, unemployment was measured by a self-reporting question. For future waves, it is important that this mistake is fixed.

To capture the 'quality' of the job found, the questionnaire measured several indicators (both objective and subjective) in an identical manner for both the group of respondents surveyed one year after graduation and the group of respondents surveyed five years after graduation.

Occupation

Approach used in EUROGRADUATE pilot survey: As a main approach, the pilot questionnaire used a question with pre-coded occupations. Here, a so-called tree

⁶ See EUROGRADUATE comparative report (Meng et al., 2020) for further comparisons.

approach, going step-by-step into further detail, was followed. This allowed for detailed information on the occupation, which graduates hold. In this context, the consortium co-operated with the *WageIndicator Foundation* and their established occupation tree in all relevant languages allowing differentiating occupations up to the 4-digit level of ISCO. The occupation tree of WageIndicator was made directly accessible to the EUROGRADUATE respondents by use of WageIndicator's Application Programming Interface (API).

Required improvement: In general, the taken approach worked well and respondents were generally able to locate their occupation in the tree. Important was that respondents not able to locate their occupation were able to provide the information in an open field, allowing for manual coding of these open answers. With respect to the usage of a tree to locate occupations, we however would like to make two clear recommendations for a future survey:

- If the WageIndicator Foundation API is used in a further wave of EUROGRADUATE, the WageIndicator Foundation needs to improve the linguistic quality in their tree approach significantly in different countries. Even though the translations are according to the information provided checked by experts, the linguistic use is in some languages not fully acceptable.
- In case a future survey will use a tree approach, time should be reserved to provide the respondents with a search tool for the tree approach allowing him or her to find the occupation without being required to go through three separate – yet linked to each other – questions with drop down menus.

Earnings

Approach used in EUROGRADUATE pilot survey: The questionnaire queried the *gross salary* for the pre-specified time of one month. In line with the information on the number of hours, respondents were asked to indicate the contractual salary excluding any salary based on bonuses or overtime in order to make the measure comparable. For graduates working self-employed or as freelancer, questions are adapted to consider their specific situation.

Recommendation: Although it is well known that in some countries graduates might be more aware of their net salary, given that taxes are taken away monthly and transferred from the employer to the government, it is recommendable to continue asking for gross salary. Reasons are that a) gross salaries represent in economic terms more precisely the labour productivity and b) asking for net salaries will create, in countries where labour income taxes are paid at the end of the year by the individual, the complex situation that respondents would have to calculate their net income on basis of the tax invoice.

Match between study and work

Approach used in EUROGRADUATE pilot survey: To capture detailed insights, the questionnaire applied subjective measures on both vertical as well as horizontal match between education and work. The *vertical match* was measured by asking the respondent to compare the level of education required by the employer according to their knowledge for their job⁷. In doing so, the indicator allows to measure if graduates are *over-educated*, *well matched*, or *under-educated*. The *horizontal match* was measured by asking the respondent to compare the field of study that best prepares for their current job and the field of study from which they graduated. In doing so, the indicator allows to measure if graduates are currently working within their own educational domain or not.

⁷ In case of self-employment or freelancing, the question was adjusted to take the requirements of their main contracting parties into consideration.

Recommendation: Based on the analyses in the comparative report, the manner the match between education and work was operationalized measures what it intended to measure. The match shows a strong relation to other labour market outcomes such as salary, skills match or satisfaction with the current job. Thus it is strongly recommended to continue this approach.

Job satisfaction

Approach used in EUROGRADUATE pilot survey: Complementing the objective indicators, a set of more subjective measures was used to capture the satisfaction of the graduates with their job. In addition to a question on the general job satisfaction, the questionnaire contained a set of indicators measuring specific aspects of the job (e.g. *career perspectives, work autonomy, job security, balance between job and private life*). Given that different groups of graduates might value these specific aspects differently, the questionnaire not only asked about the satisfaction with these aspects in the current work but also about the importance graduates attribute to these aspects.

Recommendation: The set of job aspects measured in the questionnaire provides interesting insights into the question what aspect matter for the overall job satisfaction and what not. By that, the set of questions provides valuable information. However, given that – as previously stated – the length of the questionnaire yielded a high dropout rate, the value provided by the job aspect questions needs in the future to be balanced with the length of the questionnaire. Therefore the questions should be placed on a list of possible questions not to be asked in each wave or to be asked in wave 1 to graduates one year after graduation and in wave 2 to graduates five year after graduation to shorten the questionnaire.

Skills

According to the New Skills Agenda (European Commission, 2016: 2) of the EU, “skills are a pathway to employability and prosperity. With the right skills, people are equipped for good-quality jobs and can fulfil their potential as confident, active citizens. In a fast-changing global economy, skills will largely determine competitiveness and the capacity to drive innovation. They are a pull factor for investment and a catalyst in the virtuous circle of job creation and growth. They are key to social cohesion”. This is in line with the OECD Skills Outlook 2017 (OECD, 2017). However, they also indicate big differences in the extent to which countries, also inside the EU, are equipping their workers with the right skills to benefit from the globalization of production chains. At the same time, the EC recognizes that there is a mismatch between “the skills Europe needs and the skills it has: many parts of the EU are experiencing shortages in certain high-skill professions, both in terms of qualifications and the quality of the associated skills. At the same time, too many students graduate with poor basic skills (literacy, numeracy, digital) and without the range of transversal skills (problem-solving, communication, etc.) they need for resilience in a changing world” (European Commission, 2017: 3).

Approach used in EUROGRADUATE pilot survey: To capture the skills requirements on the labour market as well as to match these requirements to the skills acquisition by higher education graduates, the questionnaire asked for self-assessment of a set of skills containing discipline-specific skills, basic skills and transversal skills. Basic skill measures are derived from the CEDEFOP measures of skills. This approach allows to derive additionally the mismatch between the required level and the own level and hence, allows to get insight into skill shortages (both one year and five year after graduation).

Recommendation: On basis of the analysis carried out and presented in the comparative report, we recommend keeping this approach and the set of questions as core set for all types of graduates in all waves. Given that the length of the questionnaire is seen as problematic, we recommend strongly not increasing the number of skills items asked.

(Inter)national mobility

According to the conclusion on a benchmark for learning mobility of the Council of the European Union (Council of the European Union, 2011: 31), *“learning mobility is widely considered to contribute to enhancing the employability of young people through the acquisition of key skills and competences, including especially language competences and intercultural understanding, but also social and civic skills, entrepreneurship, problem-solving skills and creativity in general. In addition to providing valuable experience for the individuals concerned, learning mobility can help to improve the overall quality of education, especially through closer cooperation between educational institutions. Furthermore, it can help to reinforce a sense of European identity and citizenship.”* In this sense, the (inter-)national mobility behaviour of European graduates represents a key issue within the survey.

Approach used in EUROGRADUATE pilot survey: To capture (international) mobility, the questionnaire asked the place of residence at three (four in case of the t+5 survey) time points:

- At the age before entering higher education
- During the study programme
- One year after graduation (time of survey for t+1 and t+5)
- Five years after graduation (time of survey for t+5)

Recommendation: On the basis of the analyses carried out and presented in the comparative report, we recommend keeping these questions as core set for all types of graduates in all waves.

Social Outcomes

Social outcomes and democratic values represent a core topic within the study. In the current Bologna agenda, the *Yerevan Communiqué* of 2015 (Ministers of the EHEA, 2015) stipulates that HE should promote intercultural understanding, critical thinking, tolerance, gender equality, as well as democratic and civic values to strengthen European citizenship. Moreover, social outcomes such as health and happiness are known to be relevant for the overall individual situation and affect a successful working life. In order to learn more about health and happiness, social goals, and active citizenship of graduates, the pilot study covered specific questions on social outcomes, democratic values, and civic engagement. To facilitate comparability between higher education graduates and other (non-academic) citizens and in order to ensure a high quality and appropriateness of the questionnaire, the questions were developed in collaboration with experts from the *European Value Survey (EVS)* and the *European Social Survey (ESS)*.

Approach used in EUROGRADUATE pilot survey:

The questions concentrate on four key issues:

- **Personal Outcomes:** The focus here was on individuals' subjective estimation of their happiness, health, and the overall level of social trust. This is important as it represents crucial indicators of social life.
- **Democratic values:** This set of questions covered attitudes towards different key aspects of democratic political systems, the perception of their country with respect to these aspects, and attitudes towards nationalism.
- **Attitudes towards Europe:** The questions on Europe addressed graduates' attitude towards the European idea and their perception of advantages and disadvantages of the European Union.
- **Active Citizenship:** The questionnaire contained information on the perception and evaluation of civic engagement in general, as well as on the individual willingness to be

engaged, and on the extent to which graduates are actively carrying out voluntary work and other forms of civic engagement.

Recommendation: We recommend in general keeping these social outcome indicators in future waves of EUROGRADUATE. They do not only have an intrinsic value but they also allow for interesting analyses on the extent to which social outcomes are related to labour market outcomes. At the same time, the analyses show that social outcomes, as measured in the taken approach, differ within countries only marginally between graduates surveyed one year and graduates surveyed five years after graduation. Given that the length of the questionnaire has been established as problematic, we recommend including the social outcome questions only either in the survey one year after graduation or in the survey five years after graduation. Alternatively, the set of questions could be included as an alternate set of questions in the two surveys.

Educational experiences

In addition to the transition from higher education to the labour market, the transition from study to study is a core topic. This holds true in particular for graduates from BA-level studies continuing their higher education career in MA-level programmes.

Approach used in EUROGRADUATE pilot survey: To start with, the questionnaire covered a question on whether graduates continued with further studying after receiving a degree. Also, the hierarchical level of that study programme (e.g. MA-level, PhD), the field of the study programme, as well as the country and region of the study programme is captured⁸. In the t+1 survey, the situation at time of survey is assessed (e.g. still studying, received degree, dropped out of study). In the t+5 survey, respondents were asked to provide information with respect to all degrees received since graduation in addition to the situation at time of survey. The survey contained further a set of questions capturing graduates' satisfaction with the preparation for further study programmes as well as reasons for continuing study (e.g. lack of labour market opportunities with the degree achieved, scientific interest). In order to gain deeper insights on pathways towards university, which represent important indicators on education and employment success, the EUROGRADUATE pilot survey captured selective indicators on the educational career prior to university. For instance, information on previous secondary school career was asked but also if the respondents graduated from other HE studies prior to the HE programme. Moreover, information on internships, temporary studying at another institution, study-related working experience, and non-study-related working experience are covered. The content and organisation of the study programme graduated from was assessed by asking graduates the extent to which specific modes of teaching have been emphasised (e.g. lectures, group assignments, project-based/problem-based learning, and multiple-choice exams). Finally, the survey contained a set of questions asking about graduates' satisfaction with study programmes, both in general terms (e.g. if the graduate in retro perspective would choose again for the same study) and in terms of specific indicators (e.g. the base the study provided to start on the labour market).

Recommendation: On the basis of the analysis carried out and presented in the comparative report, it can be established that the set of questions in principle provides valid and interesting information. However, it is also visible that the set of information is too extensive and in case of the survey five years after graduation will provide information that likely does not reflect the current higher education system. In this sense, the following recommendations are given as start for a thorough revision of this part:

⁸ Capturing the country and region of the further study allows tracking again (inter-)national mobility.

- Information capturing previous higher education programmes should be restricted to capture the most important aspects (level of degree, field of degree, location of HE institution);
- Information capturing higher education programmes followed after graduation should be restricted to capture the most important aspects (level of degree, field of degree, location of HE institution);
- Information capturing pre-higher education schooling should be restricted to capture the most important aspects (type of highest secondary education degree);
- Information capturing experiences during the higher education study (internships, work-experience, foreign experience, voluntary experience) should be restricted to the survey one year after graduation. This will shorten the t+5 survey strongly without reducing the value of the t+5 data.
- Information capturing experiences during the higher education study (internships, work-experience, foreign experience, voluntary experience) should be restricted to the most important aspects (work experience/internship: yes/no, location of most important experience: home country/foreign country; foreign study experience: yes Erasmus programme/yes other type of programme/ no, location of foreign experience: EU country/outside EU; voluntary experience: yes/no).
- Information capturing teaching modes applied during the study programme should be restricted to the survey one year after graduation. This will shorten the t+5 survey strongly without reducing the value of the t+5 data.
- Information capturing the satisfaction of the respondents with respect to the basis the study programme provided for different aspects should be restricted to the survey one year after graduation. This will shorten the t+5 survey strongly without reducing the value of the t+5 data.

Explanatory Factors

To assess labour market placement and labour market success of higher education graduates, it is essential to collect information on personal characteristics.

Approach used in EUROGRADUATE pilot survey: The survey gathered information on the sex, age, migration background, partner of the respondent (e.g. educational level, work situation), children of the respondent, and the parents of the respondent (e.g. educational level, work situation). Labour market interruptions due to childbirth and detailed information on current living conditions and circumstances were also queried. In addition, the EUROGRADUATE pilot survey aimed at assessing the subjective relative social position of the respondents by asking how they evaluate their parents' relative financial situation.

Recommendation: In general, the information captured is crucial to analyse higher education outcomes. However, given the problematic length of the questionnaire it is recommended to limit the information captured in future waves to the most important information (e.g. children: yes/no, age of oldest child/age of youngest child). Next, the location of these questions needs to be looked at in future. Given that sex of the respondent is a crucial variable in the weighting procedure, the question should be positioned at the beginning of the questionnaire rather than towards the end to guarantee the information is available for all respondents.

Methodological Issue: Likert scales

Approach used in EUROGRADUATE pilot survey: To guarantee international comparability, except for questions directly derived from ESS and EVS, Likert scales were designed with an uneven scale ranging from 1 (most positive outcome / lowest outcome) to 5 (most negative outcome/ highest outcome). This setup of the Likert scales might be counterintuitive for respondents in countries where e.g. grading systems run from 1-6 or 1-10 with a higher grade indicating a better result. Moreover, the setup might be contradicting the setup in national surveys and, given that Likert scales answers might be biased towards left outcomes, this might create comparability problems between results of a EUROGRADUATE survey and alternating national surveys.

Recommendation: We strongly recommend allowing for time before the next wave to test the extent to which the designing of Likert scales in a EUROGRADUATE survey differently impacts the outcomes in different countries. The test should be directed towards analysing if different designs of Likert scales in different countries (in line with the generally used grading system in a country) can be implemented without losing international comparability.

3. Questionnaire: Translation, verification and online programming

3.1. Introduction

For implementing the (English) master questionnaire as an online survey that is accessed by graduates from different countries two major steps need to be taken:

- (1) The master questionnaire needs to be translated in the different official languages of the participating countries while ensuring that questions are understood in the same way in different cultural, educational, and professional contexts.
- (2) For the technical implementation, a computer-assisted interview framework (CAI) must be developed and the online questionnaires must be programmed.

This chapter describes how both of these tasks have been conducted for the EUROGRADUATE pilot survey and what the lessons learned are.

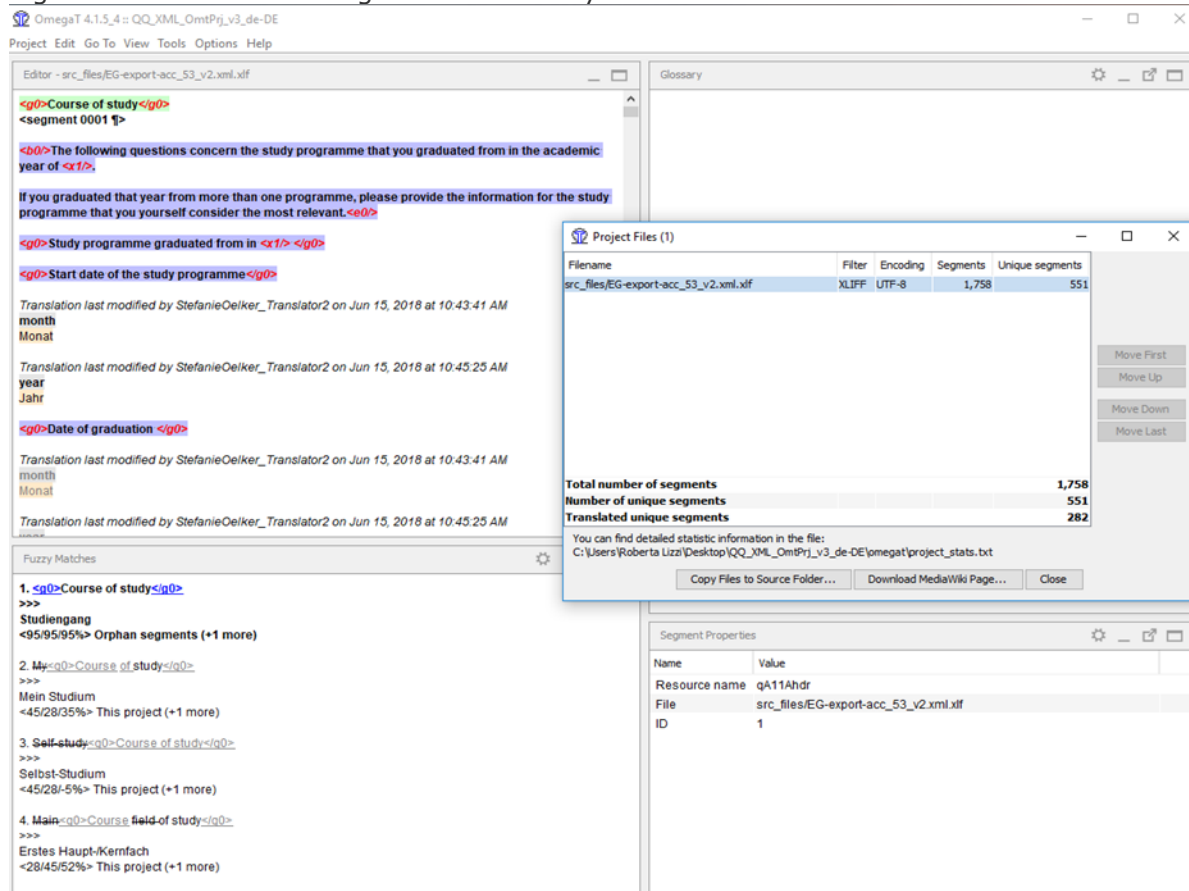
3.2. Translation and verification

The EUROGRADUATE pilot survey was administered in eight different national languages as well as in English. The translation process was followed by strict translation verification. The purpose of this verification is to ensure that the survey instruments are linguistically equivalent to the version in the master questionnaire where there are no adaptations, and to ensure that adaptations are correctly and consistently implemented. This approach maximizes comparability across different cultural, educational, and professional contexts.

To that end, capstan envisaged the translation process as a collaborative effort between national research partners and the consortium. The following steps were undertaken in the translation process:

- A translatability assessment was performed before the questionnaire was finalised. Linguists from different language groups identified and reported potential translation/adaptation issues. Possible solutions were discussed with the questionnaire authors. Question-by-question translation and adaptation notes were drafted.
- The national research partners in the participating countries appointed their own translation teams. Before the actual translation began, these country teams were asked to validate bilingual glossaries of key terms, prepared by cApStAn, to foster consensus at an early stage.
- National adaptations (e.g. in questions about levels of education and programmes available) were discussed as far as possible, given the restricted time schedule, and agreed before the translation process.
- The countries' translation teams were trained to use an open source computer-assisted translation tool (CAT tool) called OmegaT (see Figure 3.1). Additional support was provided in the form of a step-by-step user manual and interactive online training. The national translation teams received technical support throughout the translation process.
- The translated/adapted versions of the questionnaires were submitted to cApStAn for translation verification. The verification feedback was sent to national research teams for discussion. All decisions taken were documented in a centralised monitoring tool designed by cApStAn.

Figure 3.1 Extract of OmegaT file: Germany



3.2.1. Translatability Assessment

Before the master version was finalised, the source text was submitted to three linguists from different language groups (Hungarian⁹, Greek, and Croatian) for translatability assessment. The three languages for this assessment were selected by linguistic experts to guarantee a representative selection of the languages to be used in the EUROGRADUATE pilot survey. The purpose was to identify the challenges translators would face if they had to translate the questions in the proposed form. Their feedback was then collated by a senior linguist at cApStAn who focused on issues that can be generalised across several languages. As a result of this process, the senior linguist proposed (i) a translation/adaptation note to clarify a given term or expression, or to indicate the type of adaptation that may be necessary; and/or (ii) an alternative wording i.e. a new formulation that circumvented the problem without loss of meaning. The translatability report was sent to the international consortium, which had the opportunity to eliminate ambiguities, to address cultural issues or avoid unnecessary complexity.

3.2.2. Item-per-item translation and adaptation guidelines

One of the outcomes of the translatability assessment is that it produces a subset of translation and adaptation notes. These item-by-item notes were reviewed and validated by the international consortium and were entered by cApStAn in the centralised monitoring tool. The translation teams were encouraged to document how they addressed such guidelines. The verifiers systematically checked whether these guidelines have been addressed in a satisfactory fashion and reported possible deviations.

⁹ When the translatability assessment took place, Hungary was still participating in EUROGRADUATE.

3.2.3. Bilingual glossaries

Creating glossaries is considered best practice in the preparation of a multilingual survey. This builds consensus on the terminology to be used and ensures consistency in the translation. cApStAn selected key terms and recurring elements in the survey. Some of the terms relevant in the context of the EUROGRADUATE pilot survey had already been used in previously administered questionnaires. cApStAn asked linguists—native speakers of the target languages—to retrieve these existing translations. For new terms, the linguists were asked to propose a translation for consideration by the national teams. These terms and their definitions—provided by questionnaires authors—were made available to national teams in the form of notes in OmegaT.

3.2.4. Design of monitoring tool

cApStAn designed an Excel spreadsheet—called QTAV (Questionnaire Translation, Adaptation and Verification) follow-up form—for the documentation of the entire production of each target version. In QTAV, the translation, adaptation and verification history of each language version of each question is documented; and each decision or corrective action is noted. QTAV contains the source text, question by question guidelines and one column for each step performed in the workflow (from adaptation to sign-off) so that the person responsible for that step can add comments and remarks. This form was released to the national centres together with the files for translation and accompanying the files throughout the entire workflow.

Table 3.1 presents an extract for the QTAV file of Greece, showing the relevant information for three questions (B1.4b, F1.1 and A3.1c, see Annex for the full questionnaires).

Table 3.1 Extract of QTAV file Greece

		1	Item ID	B1.4b	F1.1	A3.1c
		3	International English Version	How many months did you search before you obtained this employment	Taking all things together, how happy would you say you are?	What was your highest secondary degree before you entered higher education for the first time?
		7	National Adaptation in Target Language			Ποιο ήταν το υψηλότερό σας δίπλωμα δευτεροβάθμιας εκπαίδευσης προτού μπειτε στην ανώτερη/ανώτατη εκπαίδευση για πρώτη φορά;
		8	English translation of the national version			What was your highest secondary degree before you entered higher education for the first time?
	International questionnaire team to complete	10	International questionnaire team Comments			Adaption accepted

Translation verification	Verifier	14	Intervention category	GRAMMAR / SYNTAX ISSUE	REGISTER / WORDING ISSUE	OK
		15	Verifier's comment	Literal translation: syntax corrected by ver. Inconsistent use of "employment" harmonised.	"Taking all things together" translated literally. Ver would suggest to change it to "generally". UNCHANGED.	
	Adjudicator (International questionnaire team) to complete	16b	Comment		Please check and if you agree with the verifier, please change.	
Post verify country review	NRC to complete	17	Follow-up on verification	OK	Changed to Σε γενικές γραμμές (Along general lines/In general terms)	
Final check	Verifier	18	Final check		OK	

3.2.5. Preparation of XLIFF files for translation and verification

In order for the contents to be imported in the survey platform, they had to be in a file format compliant with certain requirements. The file format is called XLIFF. XLIFF (XML Localization Interchange File Format) is an XML-based format created to standardize the way localizable data are passed between tools during a localization process and a standard for CAT tool exchange. Once the master source was finalised, DESAN exported the source contents in an XML file. cApStAn's translation technologists then prepared the XLIFF files. This implied source file optimization in the form of parsing, segmentation, and creation of project-specific rules (e.g. concerning tags, fills, routing, non-translatable content). Due to a few updates to the source content, this process had to be repeated.

3.2.6. Training of national teams

cApStAn provided a Web-based training to the national translation teams on how to use the translation tool OmegaT and QTAV follow-up form. The recording of the training was shared with the participants. Additional video tutorials and user guides were provided on cApStAn's knowledge base portal. cApStAn's translation technologists provided technical support to the national teams throughout the translation stage.

3.2.7. Verification

The verifiers' role was to make sure that the translation was linguistically equivalent to the source by comparing target versus source, segment by segment rather than word per word. In doing this, they had to keep the QTAV open at all times to refer to the question by question guidelines and react to any comments from the national teams. They implemented their edits directly in the XLIFF files and, in parallel, commented their intervention in the QTAV, selecting intervention categories from a drop-down menu and explaining the nature of the issue.

3.2.8. Translation and verification: lessons learned

For this project a face-to-face meeting was organised with cApStAn translation technologists and DESAN platform engineers. An agreement was reached on the way to prepare XLIFF files and manage local adaptations efficiently: the translation technologists agreed to take care of XLIFF file preparation and translation kit creation; the platform engineers produced XML exports with ITS data categories (that would allow to filter content and produce different target versions from one single master version that accommodates local adaptations that apply to one version but not to the others).

Suggestions from both sides were understood and accepted, decisions were made quickly from the start, and the chosen distribution of tasks was beneficial for the project and for all parties: platform engineers were happy to be discharged of the intricacies of fine-tuning XML file filters, and translators received optimal translation kits that they could handle as expected. Each player did what he knows how to do best, the project ran smoothly, and the final result was very satisfactory.

To ease the translator's work, a glossary containing key terms was provided to them. The key term translations were agreed by the national centres.

During the project, however, the master source file was updated with some country specific content and some questions had to be reworded. This meant that the translation kit the translators were given had to be updated to include the changes. While the conversion from the XML export to the XLIFF format used for translation went smoothly, it created some troubles in the translation kit: sentences that were translated earlier did not appear as translated anymore because of those wording changes. Some of the changes were minor and could be changed with minimal editing using the project translation memory, while for others the whole sentence had to be retranslated. This in turn caused issues in some of the Excel monitoring files, where the order in which sentences appeared did not follow the order in which they appeared in the translation software.

Some of those source updates were managed automatically, namely the country adaptations. The adapted source and the translation were provided in an Excel file which was converted to the TMX file format. This meant that the translation appeared at once in the translation software and no further human action was required.

Recommendation: For the future, it is strongly recommended that the master version should not be changed once the translation process is started to avoid further editing down the line which increases the number of manipulations and the risk of human errors. In survey questionnaires, the adaptation negotiation process should ideally take place before the translation starts. Time should be allowed for the national centres to go through the questionnaire and annotate the compulsory adaptations as well as any additional structural adaptations they would like to implement in their national version. The international questionnaire team would agree or negotiate those adaptations which the national team would then implement.

To accommodate the tight timeline, this process was performed after the translation. In cases where agreement was not reached or a different solution was adopted, the implementation had to be reverted or edited at later stages.

Recommendation: For the future, it is strongly recommended to agree on adaptations before the translation process begins. This is particularly important for adaptations that require structural changes in the survey.

3.3. Technical implementation of the online questionnaire: the CAI-framework

3.3.1. CAI-framework: Basic implementation features

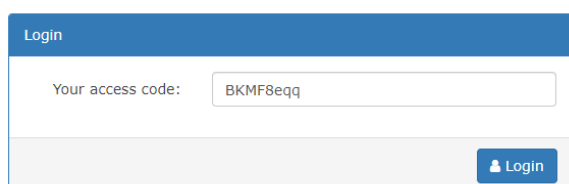
DESAN developed the CAI-framework for EUROGRADUATE using the latest standards:

- The computer-assisted interviewing (CAI) framework supports various survey modes (online, paper, telephone, face-to-face, etc.) guaranteeing that there are no discrepancies between the various modes in terms of questions, functionality (e.g. routing, etc.) and multiple language sets. The CAI-solution as it currently stands supports online, telephone, and face-to-face interviews using mobile solutions like tablets. In case of the EUROGRADUATE pilot survey, the questionnaires were implemented for various devices like desktop, laptop, tablet and mobile device and the completion of the questionnaire in stages with seamless transitions, i.e. one can start on one device and continue on a different one. The questionnaire fully functioned on all the mentioned platforms.
- The CAI-framework provided up-to-date functionalities like skips, routing, answer masking, rotation, cross checks and calculations. Moreover, the CAI-framework offers support for respondents in terms of FAQ-information (not implemented for EUROGRADUATE), a helpdesk button (implemented for EUROGRADUATE) and facilities like reading the questionnaire out loud for respondents with visual disabilities (implemented for EUROGRADUATE).
- The CAI-framework provides extensive logging of respondent behaviour and the automatic collection of metadata regarding e.g. date of completion, starting time, end time and devices used.
- The CAI-framework provided API solutions to include third party tools in the CAI-framework. An example is the *WageIndicator* API of the University of Amsterdam that has been used to create a tree structure in the online questionnaire for self-completion coding of occupations according to ISCO. For respondents the usage of external API solutions was not visible in the online questionnaire.

3.3.2. CAI-framework: Personalized login

The CAI-framework automatically generated unique access IDs for respondents. These unique access IDs for respondents were distributed through a secured channel to the individual country partners for distribution among respondents. The number of unique access IDs varied between countries (depending on the sample size). The number of IDs could be increased in case countries enlarged their sample to generate a larger response for reporting purposes. The maximum of unique access IDs in the case of the EUROGRADUATE pilot survey was 25.000 graduates for one single country.

Figure 3.2. Access code to login to questionnaire



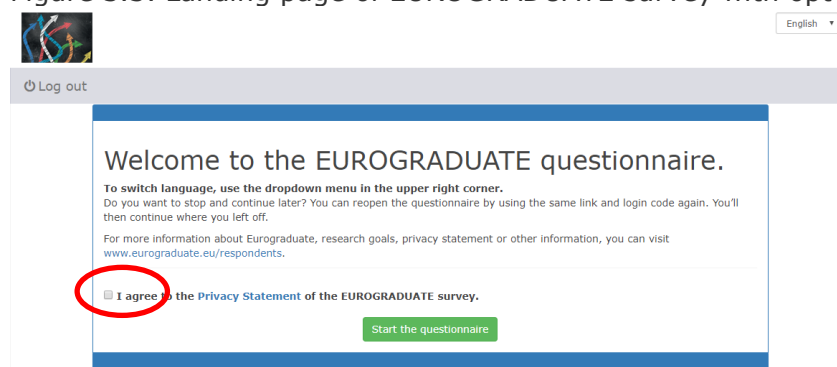
The distribution of unique access IDs to respondents took place in two different manners. For respondents invited by postal letter, the unique access ID was printed on the letter, requiring respondents to enter the ID once entering the online survey. Respondents invited by e-mail received a unique link including both the website and the unique access ID and transferring the respondent directly to the start of the survey (see opt-in).

3.3.3. CAI-framework: Opt-in and Opt-out

The EUROGRADUATE questionnaire, to be fully aligned with privacy regulations, required an active opt-in of respondents to enter the survey. At the start of the questionnaire, respondents were explicitly asked to agree with the privacy statement (see Annex 4). Unless agreed with the privacy statement, respondents were not able to enter the survey and no information on respondents was collected.

To guarantee that the survey took place fully aligned with national privacy regulations, countries were able to use also an opt-out option for respondents they invited. In countries where this was required, respondents were provided in the invitation to participate in the survey with a link to a separate secured website where respondents could log in with their personalised login codes to inform the EUROGRADUATE team that they explicitly opted-out and did not want to receive any further invitation for the survey.

Figure 3.3. Landing page of EUROGRADUATE survey with opt in option.



3.3.4. CAI-framework: Routing

Routing through the online questionnaire was implemented to guarantee that,

- respondents were directed to the correct questionnaire with respect to cohort (cohort 2016/17 and cohort 2012/13),
- respondents were directed to the correct questionnaire with respect to country of graduation (and relevant language) and,
- respondents were only asked questions relevant for their situation.

Routing: Cohort

Based on their unique access ID, respondents were directly at the start of the online questionnaire routed to the questionnaire either for the cohort 2012/13 or for the cohort 2016/17.

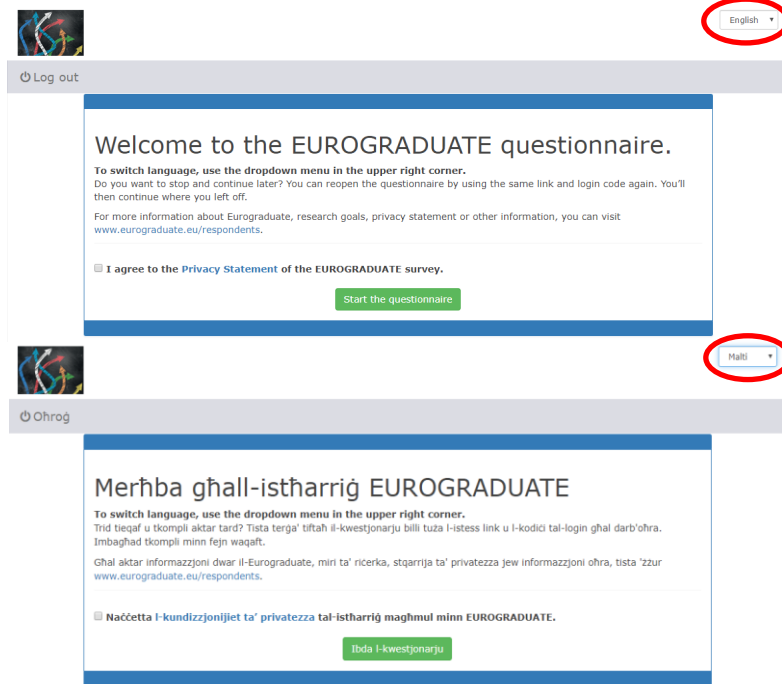
Routing: Country and language

Based on their unique access ID, respondents were directly at the start of the online questionnaire routed to the questionnaire of the country they graduated in. By that, respondents were provided with the online questionnaire including the country specific adaptations relevant for their situation. Given that the language choice of the respondent was not known in advance, the online questionnaire started in the home language of the country they graduated in, including in English information on how to change the language. Respondents were able to change at all times between the two languages (home-country language and English).

The CAI-framework allowed for exceptions including different designs for questions per country. For instance, the information on the study programme respondents graduated from was provided as an open field in Germany, a short standard dropdown menu in

Norway, and an interlinked tree dropdown menu in Czechia. In addition, the option for additional questions for specific countries (only Germany did opt for a set of country-specific additional questions added at the end of the online questionnaire) was available. The CAI-framework as developed would also allow for differentiation per country with respect to e.g. logos used, style or colour schemes. Due to the restricted time, these options were not implemented for the EUROGRADUATE pilot survey.

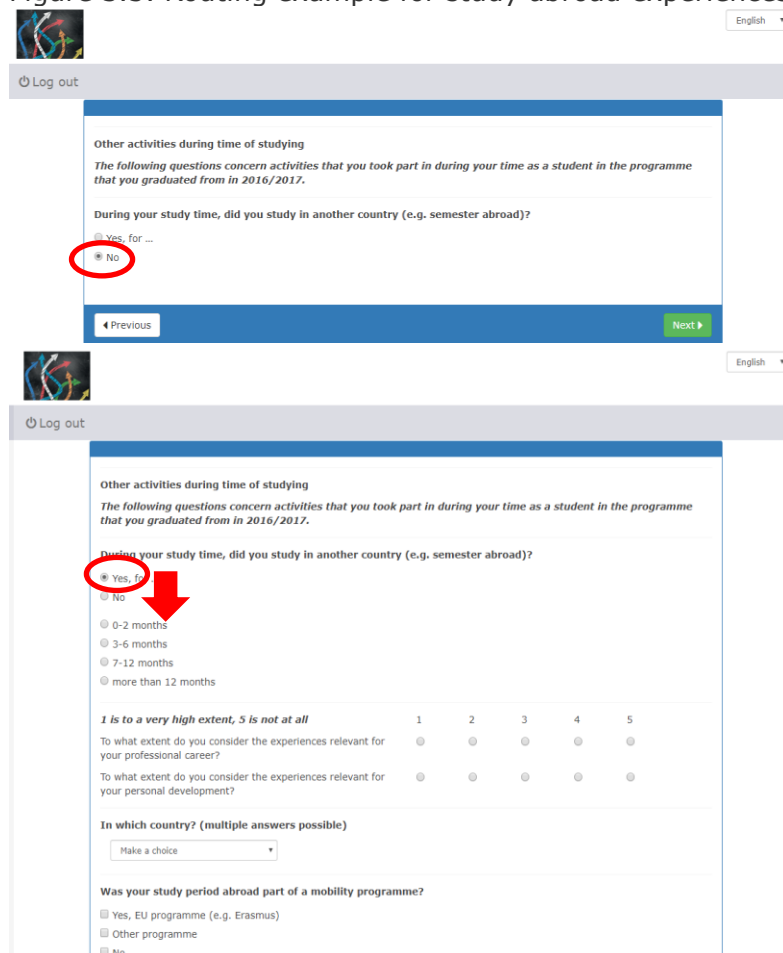
Figure 3.4. Landing page in English and Maltese



Routing: Throughout questionnaire

Throughout the questionnaire, respondents were automatically routed to the next question based on their answers. Questions that are not relevant for the respondent were not visible. In case respondents returned in the online questionnaire to previous questions changing their answer, the routing automatically adjusted.

Figure 3.5. Routing example for study abroad experiences



Log out

English

Other activities during time of studying

The following questions concern activities that you took part in during your time as a student in the programme that you graduated from in 2016/2017.

During your study time, did you study in another country (e.g. semester abroad)?

☐ Yes, for ...

☒ No

Previous Next

Log out

English

Other activities during time of studying

The following questions concern activities that you took part in during your time as a student in the programme that you graduated from in 2016/2017.

During your study time, did you study in another country (e.g. semester abroad)?

☒ Yes, for ...

☐ No

☐ 0-2 months

☐ 3-6 months

☐ 7-12 months

☐ more than 12 months

1 is to a very high extent, 5 is not at all

	1	2	3	4	5
To what extent do you consider the experiences relevant for your professional career?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you consider the experiences relevant for your personal development?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In which country? (multiple answers possible)

Make a choice

Was your study period abroad part of a mobility programme?

☐ Yes, EU programme (e.g. Erasmus)

☐ Other programme

☐ No

For an overview of routing within the questionnaires, please see the English master questionnaire included in Annex 2 and Annex 3 of this report.

3.3.5. CAI-framework: Response monitoring

The CAI-framework provided a fully functional management dashboard with online real time response information (24 hours a day throughout the whole fieldwork period). All country partners were provided with an online mean to follow the response for their respective county. The response system monitored information separately for both cohorts and within the cohorts for three groups of respondents:

- Number of respondents that started
- Number of respondents that passed a pre-determined cut-off question (Question E9, final question of block E)
- Number of respondents that fully completed the questionnaire

For each of these three groups, the response monitor system further provided information on:

- the type of study programme graduated from in 2012/13 or 2016/17,
- the institution graduated from,
- the sex of the respondents and,
- the year of birth.

Table 3.1 Extract from response monitoring system (Austria)

	Cohort 2012/13		
	Started	Cut-Off	Completed
Total	1327	1070	1097
Qualification			
Bachelorstudium	541	478	478
Diplomstudium	304	284	276
Lehramtstudium Bachelor	65	55	53
Lehramtstudium Diploma	28	26	25
Masterstudium	280	244	237
No response	109	1	1
Institution			
101	2	2	2
102	6	6	6
...			
119	278	258	264
...			
No response	109	1	1
Sex			
Female	646	644	629
Male	433	433	427
Other	3	3	2
No response	245	17	12
Year of birth			
...			
1988	121	120	119
1989	131	131	128
1990	85	85	85
...			
No response	258	30	24

3.3.6. CAI-framework: Hosting, security & privacy

Privacy of the respondents is of the utmost importance. The EUROGRADUATE pilot survey strived to be at the forefront regarding privacy and followed strictly EU-guideline 95/46/EG as a minimum. The project and all software solutions developed for the project took the rulings of the EU General Data Protection Regulation (GDPR; in effect since May 25th) into account. Hosting of the CAI-application and other tools took place in accordance to the requirements of ISO 27001. The CAI-framework guaranteed that sampling information (including contact details) were stored separate from actual data as delivered by the respondents.

For the participating countries, local hosting was not a requirement. Local implementation of the CAI-solution and accompanying tools has therefore not been tested. The consortium however is absolutely positive that this should not pose any problems if necessary in the future. The fact that this was not the case in the EUROGRADUATE pilot survey is a positive point. For methodological reasons, it is preferable not to include local hosting to avoid systematic errors in the data collection and therefore in the outcomes.

3.3.7. CAI-framework: Development & implementation strategies

The development of the CAI-framework was based on:

- Use of TFS (Team Foundation Server) as the project management tool.
- Use of open source like Aurelia (Angular like) for the front end and .net core for the backend.
- Work according to DTAP-principles (develop, test, accept, production).
- Agile approach taking into account new insights of the project partners and third parties during the development process.

- Extended test procedures using both end-to-end and unit testing

The above strategy worked well in the frame of the EUROGRADUATE pilot survey project. Internally the development was further supported using the project-management method SCRUM, daily stand-ups and bi-weekly sprint meetings.

3.3.8. CAI-framework: Lessons learned and recommendations

Although development time was short, the project delivered a fully functioning and tested data collection and handling system that is not only used for the purpose of the EUROGRADUATE pilot survey but is now part of the daily CAI-operations of DESAN and ready to be used in future waves. Amongst the surveys that are currently conducted with this CAI-solution are the 2019 Dutch and Norwegian graduate surveys. The CAI-framework proved itself responsive to the various devices used by the respondents (e.g.: phone, laptop, dashboard, etc.). The fact that a large portion of the respondents used a mobile device means that we lost some respondents in the completion phase of the survey. This was not due to technical reasons, but the length of the survey in combination with the small screen of a mobile device makes respondents drop out.

Recommendations: One of the main recommendations, already stated, for future EUROGRADUATE waves is to limit the number of questions where possible. This will have an overall positive effect on the response. This can be achieved by skipping questions that proved to be less informative, but also by looking at options to pre-fill information from other sources (administrative data, etc.). For the EUROGRADUATE pilot survey additional data from pilot countries were added after the fieldwork to enrich the dataset. For future EUROGRADUATE waves, additional data should preferably be included using an API-solution before the fieldwork. This would allow the data to be available during the completion stage of the survey and data could be used to partly prefill the questionnaire for the respondents, as far as this does not go against rules and regulations as laid out in the GDPR.

4. Data collection

This chapter describes the approach used in the EUROGRADUATE pilot survey with respect to the data collection in the eight pilot countries. The chapter starts with an overall description of the data collection step by step and addresses general complications encountered. Thereafter, detailed field reports for the eight pilot countries are presented. Finally, the chapter presents for the pilot country Croatia a more detailed response analysis.

4.1. Overview on the data collection and main challenges

The EUROGRADUATE Pilot Survey has generated 16,582 usable questionnaires in eight countries from two graduate cohorts (2012/13 and 2016/17) and from both Bachelor and Master graduates. The field phase took place between 8.10.2018 and 17.02.2019. For most groups, the desired target size of evaluable questionnaires could be realised or exceeded. However, the response rate is lower than expected in some groups. The reasons for this are described in more detail in the corresponding field reports.

Table 4.1 Sample sizes, response rates and usable number of questionnaires

	Austria	Czechia	Germany ¹⁾	Greece ²⁾	Croatia	Lithuania	Malta	Norway
Cohort 2012/13								
Sample size	7,104	5,914	500	n.a.	10,467	11,882	4,167	5,058
Opt-in accepted	1,302	1,286	195	616	1,483	878	635	1,322
Gross response rate	18.3%	21.7%	39.0%	n.a.	14.2%	7.4%	15.2%	26.1%
Usable questionnaires	1,054	745	174	446	919	640	457	1,124
Net response rate	14.8%	12.6%	34.8%	n.a.	8.8%	5.4%	11.0%	22.2%
Cohort 2016/17								
Sample size	6,667	6,350	5,474	n.a.	22,868	12,507	4,492	5,287
Opt-in accepted	1,313	1,547	1,083	1,204	5,676	1,542	705	1,538
Gross response rate	19.7%	24.4%	19.8%	n.a.	24.8%	12.3%	15.7%	29.1%
Usable questionnaires	1,120	1,015	914	866	4,278	1,164	506	1,160
Net response rate	16.8%	16.0%	16.7%	n.a.	18.7%	9.3%	11.3%	21.9%

1) In Germany the cohort of 2012/13 was already surveyed by the DZWH graduate panel survey 5 years after graduation. To avoid double-surveying, only a random sample of 500 respondents of this survey was invited to EUROGRADUATE.

2) n.a.: data for Greece can only be estimated. See Greek field report below for further information.

Source: EUROGRADUATE pilot study 2018.

To achieve this overall satisfactory pilot phase, almost 140,000 graduates were contacted, more than 22,000 (16.2% gross return) have begun the survey yielding in finally 16,582 usable questionnaires (12.0% net return measured by the invitees). Given that this is a pilot study that has been deliberately carried out in more difficult environments too, to face as many challenges as possible, the gross return is quite satisfactory. The lower net return is a sign that the questionnaire was very long and demanding. However, the proportion of abandoned surveys varies greatly from country to country (see Chapter 2.3.2 for a further analysis).

The starting conditions in the eight pilot countries were very different. This concerns in particular the availability of data of the total population, the availability of contact data (postal or e-mail addresses, in a central database or just the HEIs, or other registry databases), the willingness of universities to participate, the way invitations to participate were sent and how the responses could be monitored. The details are described below in the field reports of the pilot countries.

The data collected was centrally cleaned for all countries at the IHS in Vienna and prepared for the different analysis. Numerous plausibility checks were used. Variables with open text input were additionally processed by the research partners in the countries. In some countries it was also possible to add additional information from register data to the data set (for example, the exact programme completed). The phase of weighting the data (to ensure representativeness) was also very intensive, especially when there was insufficient population data available. Several different procedures were tested in each of the eight countries. Finally, a uniform procedure was used in all eight countries to ensure methodological comparability, even though a more elaborate procedure would have been possible in individual countries. The entire phase of data preparation took several months in which several people were involved. This effort should not be underestimated for a possible Europe-wide graduate survey.

All in all, the field phase of the EUROGRADUATE Pilot Survey was very successful, but difficulties have arisen in almost all countries and, in some cases, have meant that the original targets have not been fully achieved (in the case of Malta, this is indeed mainly due to the small size of the higher education system).

The following paragraphs describe the process of the data collection step by step and address some of the complications encountered:

Availability of population data:

For such an ambitious project as a national graduate survey, valid and detailed data on the overall population of graduates is indispensable. Unfortunately, these were not available in all countries in the optimal depth. In some cases, only aggregated indicators are reported by the universities to the statistical offices (or the responsible ministries). For example, it is known how many men and women graduated, how many bachelor or masters graduated, and how many students graduated in medicine or STEM. But this information can then no longer be combined, e.g. how many women have completed a Master in STEM. The more detailed and flexible the population data can be analysed, the more accurate the sampling can be planned.

Sampling:

Sampling started with the identification of the target group of the EUROGRADUATE Pilot Survey in the respective country. For example, discussions were held with the national research teams and mostly also with the ministries as to whether short courses exist in the higher education system (this was only the case in Malta), whether there are purely online studies and, if so, if these should be included in the pilot study, or whether there are programmes in which the students are already employed by the course-providing body during their studies (e.g. military colleges), which could lead to difficulties in the labour market part of the questionnaire. The next step was to decide whether to conduct a full survey (feasible for smaller higher education systems) or to draw a random sample. Attention was paid to the target minimum number of questionnaires for different subgroups. For precise sample planning, the population data were then analysed in detail in order to make optimum use of the limited resources, but also to ensure the representativeness of the survey. One topic, for example, was whether or not regional differences in higher education provision, the labour market and the cost of living should be considered in sample planning and, if so, how this is possible with the existing conditions (e.g. population data, maximum sample size). Thus, a national sampling plan was defined individually for each pilot country.

Contact details:

The central question for every graduate survey is which contact details of the graduates are available (post, online, telephone) and where they are available. Only in Norway and partly in Austria there was a central database available with the contact data of the HE

graduates (the database in Norway will probably no longer be accessible, however, due to new privacy rules). In the other pilot countries (and partly in Austria) only the HEIs themselves had the contact information of their graduates.

Linking of sampling and contact data:

Without a central database containing the contact data, it is a big challenge to link the sampling with the contact data available at the HEIs. Depending on what other information is contained in the population database (e.g. unique ID number of all students/graduates), the sample can be drawn centrally or must be drawn locally by the HEIs – on the basis of strict guidelines. In Norway (contact database available), in the countries carrying out a census (Lithuania, Malta), and in Germany (cluster sampling, see country chapter below) this complicated approach could be avoided. For the other pilot countries, a tool was developed for the EUROGRADUATE Pilot Survey, which made it much easier for the HEIs to carry out this complicated and sensitive process.

New rules for data protection, General Data Protection Regulation (GDPR):

It was very unfortunate that the field phase had to be prepared exactly at the time of the introduction of the GDPR. There was large uncertainty about the specific legal situation among all those involved (ministries, universities, intermediaries, researchers), which in case of doubt often led to a quick "no" that could not always be overcome. However, this situation should improve in the future due to gaining experience on data collection within the framework of the GDPR. An important question for data collection in line with GDPR is whether contact details of former students can be used for research purposes if the students (or the graduates) have not explicitly been asked for their consent on this. Not in all countries and not in all HEIs such consent has been obtained in the past, therefore, the uncertainty was great, whether the existing email addresses may be used. In some countries, this could be resolved through legal information from the relevant ministry, in others the time in the pilot study was too short and alternative ways of contacting the graduates had to be found. Nevertheless, in some countries, HEIs can use contact information for research purposes without an explicit consent, as research is in the general interest.

Outdated contact details:

After clarifying how the sample will be drawn and who should contact the graduates, the question arose as to whether the existing contact data is up-to-date or can be updated. However, an update is only relevant to the use of postal addresses. In Norway, a database with up-to-date addresses was available. In Austria, the addresses in the central database (only public universities) could be updated using the population register. However, this is only for those graduates who still live in Austria, which is a major shortcoming in a country with a high proportion of international students, many of whom are leaving Austria after graduation, then in countries with low outward mobility. Moreover, for updating of addresses additional costs may arise. Costs are also a major factor if only postal addresses are available and invitations must be sent via postal services. In addition, when invited to an online questionnaire with a letter, the respondents must make a media change, which usually leads to a lower return. A paper questionnaire, on the other hand, would make the whole project a lot more expensive (heavier letters, return of the letters, data collection). In Germany, HEIs reported that only smaller numbers of letters were undeliverable¹⁰. However, it is unclear to what extent letters were delivered to the addresses of parents and, if so, whether they have been passed on to graduates. In all other countries, graduates were invited to the survey

¹⁰ The availability of up-to-date contact information differs strongly between countries, and in some countries also between institutions. E.g. in Germany, many institutions were able to contact graduates by private e-mail addresses that are usually quite stable. HEIs are making efforts to keep their contact information up-to-date to run their own graduate surveys or because they are involved in regional or national surveys. Similarly, the research on the data collections in the Erasmus+ countries revealed major country differences in this regard

via E-Mail. In many of the pilot countries, however, only few HEIs record a current postal or E-Mail-address when students graduate. Mostly, students receive an e-mail account from their HEI when they enrol, and it is unclear whether these accounts are still active after graduation or are still being used by the graduates. As a result, there were hardly any private e-mail addresses available in which the likelihood that they would still be used would be higher than for university e-mail accounts. Private e-mail addresses were mainly available in Lithuania, where various administrative data (for example from tax or social security systems) could be used.

Cooperation with national surveys:

In Germany, Czechia and Norway, national graduate studies are regularly carried out. The “additional” EUROGRADUATE survey could be coordinated with the national surveys in different ways: In Norway, no national graduate survey was carried out in 2019, so EUROGRADUATE fitted perfectly between the national surveys. In Czechia, on the other hand, a full survey of all graduates was conducted in 2019. This (and because the EUROGRADUATE Pilot Survey was relatively small) made it possible for a randomly selected part of the respondents to be invited to answer the EUROGRADUATE questionnaire rather than the national one. In Germany, several major graduate studies took place in 2019. Due to the size of the higher education system, it would theoretically be possible for all studies to draw their samples together, so that no graduate is included in several samples. But all projects need the cooperation of the HEIs, which are mostly willing to only take part in one survey (usually the one from which they themselves have the greatest benefit). For future EUROGRADUATE surveys, a cooperation model must therefore be developed with other national studies, which above all requires a much longer preparation time. The target groups of the surveys (X years after completion) must then also be coordinated with each other.

Cooperation with HEIs:

In most countries it was somehow difficult to convince HEIs to participate in EUROGRADUATE – but cooperation with HEIs is essential to gain access to the contact details of graduates in most countries. There were different causes for this. In Germany for example, numerous (national, regional or institutional) graduate surveys took place at the same time, but many HEIs only wanted to take part in one survey. In many countries, HEIs did not participate because they were afraid of violating the GDPR (see above). But in most cases, the main reason for not participating was that the HEIs did not see benefit for themselves in the EUROGRADUATE survey, albeit they would have a lot of work to do with it (see sampling above). In addition, some feared that their graduates would be questioned too often so that they would no longer participate in their own institutional surveys.

The more HEIs in a country do not participate, the more difficult it becomes to draw a statistically clean sample, because the fields of study, type of university, labour market and living conditions in the region, as well as the willingness of the graduates to be mobile, differ greatly. The smaller the HE system, the more serious the impact of non-participating HEIs.

Data cleaning and preparation:

After the successful field phases, the data had to be cleaned and processed. The different national adaptations of the questionnaire (for example due to the different structure of the higher education system) had to be merged into a coherent data file. It also played a role in that (depending on the available population data in the countries), different questionnaire solutions had been developed for the identification of completed studies. These now had to be traced back to the internationally comparable ISCED standard. Similar work was done for the education of parents and the coding of the international classification of professions. In addition, open data were coded (with the help of the

language-competent national teams), missing values were defined for all variables (with special attention on filter questions for the following quality checks), dates (e.g. completion time) were converted into decimal numbers, which are easier to calculate, amounts of money have been converted into purchasing power parities (and per hour) and various variables have been regrouped and categorized. Conversely, some variables also had to be split into separate variables for each country, as the wording differed according to national circumstances (for example grade scales). Plausibility checks have been performed on many variables, e.g. whether previous or subsequent education courses took place in or outside the higher education system or whether the amounts given are realistic. Finally, the valid cases were identified that form the basis for the analysis. To be valid case, certain variables needed to be filled-in completely and plausibly – mainly those used for the weighting (see below).

Weighting:

Survey data is weighted to statistically align the distribution of social groups in the surveyed sample with the distribution in the target population if it is suspected that the sample is biased for whatever reason, or that certain groups are more likely to participate in the survey than others. This is a necessity with almost all surveys and a common quality standard. However, weighting is another reason why detailed data on the target population are so crucial for the quality of survey data. The EUROGRADUATE Pilot Study first developed an optimal weighting method for each country based on propensity scores. But it turned out that in at least one country, in this way, no satisfactory result could be achieved. After several variants and test runs, as well as after intensive discussions with GESIS, the Statistical Advisor of the EUROGRADUATE Pilot Study, it was decided to switch to the so-called “raking procedure” in all countries for reasons of comparability. Again, extensive checks of the results of various weighting procedures were carried out. The final solution now gives good results in all countries for the core analysis, but for very small groups larger deviations from the population are possible. If the samples in future surveys are larger than in this pilot study, most of these problems should no longer occur. Weighting was complicated by the fact that the availability and quality of population data was quite heterogeneous across countries. Generally, the raking focussed on variables for which all countries were able to provide the distribution in the population (i.e. the higher education graduates of the cohorts 2016/17 and 2012/13 respectively). With minor exceptions, the following variables have been considered for the statistical weights in each of the countries:

- Cohort
- Type of higher education institution (not in Lithuania for MA-level graduates)
- Kind of degree
- ISCED broad field (not in Malta and not for the non-university sector in Greece, Czechia, and Austria)
- Gender of graduate (not in Czechia for the cohort 2012/13 from the non-university sector)

In addition, specific variables have been used if they were available from the population data in the respective country:

- Austria: age groups
- Norway: age groups
- Germany: region
- Croatia: public or private institutions, region
- Czechia: age groups, full or part-time programme in non-university sector
- Lithuania: age groups
- Malta: age groups (not for graduates of the cohort 2016/17 in non-university sector)

Resulting weights have not been trimmed. Therefore, data users are advised to check if very large weights or very small weights strongly impact on their results.

In the following the data collection process is described in more detail for each of the eight pilot countries.

4.2. Field reports

4.2.1. Report on data collection Austria

National research team:

Higher Education Research Group at the Institute of Advanced Studies

Time of field phase:

17th of October 2018 until 6th of January 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	50,641	50,268
Sample size	7,104	6,667
Opt-in accepted	1,302	1,313
Gross response rate	18.3 %	19.7 %
Usable questionnaires	1,054	1,120
Net response rate	14.8 %	16.8 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

A central register, which also contains contact information, was available for sampling for graduates of public universities and teacher's colleges. The samples for all public universities and teacher's colleges were drawn centrally. For the universities of applied sciences, a central register was available to determine the number of graduates to be sampled per participating HEI and study field, but without a possibility to link the selected graduates with the contact details stored locally at the HEIs. Therefore, the universities of applied sciences had to draw their samples themselves with a sampling tool developed by IHS.

Private universities were not included in the pilot study, in consultation with the Ministry of Science, because the sector is made up of many very small universities, which would have meant a great deal of extra work. In 2012/13 there were also only 1.236 graduates from private universities (about 2% of all graduates).

The sample was drawn from different sub-groups (strata). These subgroups were type of HEI and type of study program. In order to guarantee that the sample matched the distribution of study fields in the population, the sampling frame was also sorted for study fields for all graduates in order to draw a systematic random sample. As only a part of the universities of applied sciences agreed to participate in the survey, the sample size per HEI was adapted to the overall distribution of study fields.

Contact details and invitation mode:

For universities and teacher's colleges it was possible to update postal addresses from the central register with data from the residents register – at least for graduates who still live in Austria. Invitations and reminders for this part of the sample were sent by postal letter. At the universities of applied sciences and four small universities invitations and

two reminders were sent by the HEIs themselves via e-mail – here the contact details could not be updated.

Challenges and learnings:

As graduates leaving the country are not obliged to report their new address abroad, the survey might misrepresent the share of graduates that have moved to another country. This is especially problematic as Austrian HEIs have a large number of international students and about 14% of the graduate cohort of 2010/11 from public universities left the country within three years (Radinger et al., 2016; this share is now expected to be higher).

The response rates were twice as high for those graduates that were invited via postal letter. One reason for this may be that postal addresses were up to date while e-mail addresses stored by the HEIs are of varying age and quality. Another reason might be that the letter, sent by the Federal Data Centre, looked formal and reputable and was taken very serious by the respondents.

Thankfully, it has been the Ministry of Science to take over to convince the HEIs to participate in the EUROGRADUATE Pilot Survey. This was very difficult and time-consuming for two reasons: 1. the universities saw no benefit for themselves and partly feared negative effects on the return rate of their own studies and 2. it was difficult to convince universities to give their permission for the usage of the register data that belongs to them, even if it is stored centrally, because of concerns about the new GDPR. As the universities of applied sciences could not be covered in the plan of central sampling and central sending of invitations, their active cooperation was needed. Recruiting these HEIs to participate in the EUROGRADUATE pilot survey proved difficult and not all agreed to participate. A second challenge was to not only convince the executives of the HEIs to participate, but also achieve that their technical staff cooperated and sent out invitations and reminders within the planned time frame.

4.2.2. Report on data collection Czechia

National research team:

Center for Higher Education Studies

Time of field phase:

8th of October 2018 until 6th of January 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	90,082	69,947
Sample size	5,914	6,350
Opt-in accepted	1,286	1,547
Gross response rate	21.7 %	24.4 %
Usable questionnaires	745	1,015
Net response rate	12.6 %	16.0 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

Both the sampling frames and the contact details were only available locally at the HEIs. Not all HEIs participated, and only addressable graduates were included in the sampling frames. Non-coverage with e-mail addresses was at 28 % for the t+5 and 19 % for the t+1 cohort, calculated from the participating HEIs.

The sample was drawn by the HEIs themselves, using the sampling tool developed by IHS. The sample was stratified by ISCED level and enrolment status. In order to guarantee that the sample matched the distribution of study fields in the population, the sampling frame was also sorted for study fields. The research team adapted the sample (where possible) to the target population, correcting for missing HEIs due to refused participation and missing contact details.

Contact details and invitation mode:

Invitations and reminders were sent by e-mail for all graduates by the HEIs. Quality and actuality of e-mail addresses depended on the practices of the individual HEIs.

Challenges and learnings:

One issue to tackle were high scepticism by the leaders of the HEIs due to new GDPR laws. Some HEIs did not participate in the EUROGRADUATE survey because of these concerns. In addition, a national survey on graduates was conducted, restricting the possibility to further increase the sample size. The Czech survey had the second highest drop-out rate of all. In the Czechia furthermore, no linkage between register data and survey outcomes was possible.

4.2.3. Report on data collection Germany

National research team:

German Centre for Higher Education Research and Science Studies (DZHW)

Time of field phase:

8th of October 2018 until 6th of January 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	332,093	417,312
Sample size	500	5,474
Opt-in accepted	195	1,083
Gross response rate	39.0 %	19.8 %
Usable questionnaires	174	914
Net response rate	34.8 %	16.7 %

1) In Germany the cohort of 2012/13 was already surveyed by the DZHW graduate panel survey 5 years after graduation. To avoid double-surveying, only a random sample of 500 respondents of this survey was invited to EUROGRADUATE. Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

Unlike the other pilot countries, Germany already regularly conducts graduates for the last 30 years. The target cohorts of the EUROGRADUATE pilot survey, the graduates of the academic years 2016/17 and 2012/13, are at the same time target cohorts of the regular German graduate panel conducted by the German Centre for Higher Education Research and Science Studies (DZHW). Surveys of both cohorts started in Autumn/Winter 2018. For the cohort 2012/13 this was the second panel wave.

For the 2016/17 cohort, it was possible to draw an additional sample in Germany within the framework of EUROGRADUATE. For the 2012/13 cohort for several reasons this was not possible. As a consequence, Germany did only carry out a full-fledged EUROGRADUATE pilot survey for the cohort of 2016/17. For the 2012/13 cohort, results reported in the EUROGRADUATE Comparative Report (Meng et al., 2020) and the EUROGRADUATE Country Report on Germany (Mühleck et al., forthcoming) this report

will rely on the DZHW Graduate panel data. Where the comparability between the DZHW Graduate panel and the EUROGRADUATE survey could not fully been established, no results of the German cohort 2012/13 will be presented.

It is important to note that the final results on the German cohort 2012/13 will be published by the DZHW. For calculating the final results it is envisaged to additionally use data of the KOAB study, the second large German graduate survey. The KOAB data was not yet available when this report was layed down. Thus the final results on the German cohort 2012/13 published by the DZHW might diverge from the results published in the EUROGRADUATE reports.

For the $t+1$ cohort a cluster sample was drawn from a database using data from the German statistical office on all HEIs in the country. Clusters were defined as graduates of a specific study field and a specific degree (Bachelors, Masters, or state examination) at one HEI of the respective cohort. After the sample was drawn, the respective HEIs were contacted and asked to participate in the EUROGRADUATE survey. In case the HEI agreed to participate, all graduates of the respective cluster were contacted. To avoid overlap with the "German Tracer Studies Co-Operation Project" (KOAB), which would have caused double surveying, clusters that were situated at HEIs participating in KOAB were replaced by another cluster with similar characteristics (for details see below). As a consequence, no HEI from North-Rhine-Westphalia, the regional focus of the KOAB project, is part of the sample. Trying to compensate this lack, neighbouring regions have been targeted for replacement clusters.

In replacing clusters, the type of institution and the type of degree have always been kept identical. Moreover, the field of subject has been kept identical as far as possible. The following rules have been applied in replacing clusters: (1) Pick the next cluster in the strata of the random sample with the same field of subject within the same German Land (state). 14 clusters have been replaced this way. (2) If no cluster is available within the same German Land, pick the next cluster in the strata of the random sample with the same field of subject within the same region (with regions being defined as direct neighbouring Länder plus Länder in the respective region North, West, South, and East Germany). For the regions North, West and South, no clusters from eastern region are to be picked as the latter differs considerably from the other regions with regard to the economic structure, labour market situation, and demographic characteristics. In analogy, for the eastern region no clusters from the regions North, West and South are to be picked. For Berlin (geographically situated in the eastern region) pick a replacement cluster from one of the other German city states, Hamburg and Bremen. 25 clusters have been replaced this way. (3) If no cluster is available within the same region, pick the next cluster in the strata of the random sample, within the same German Land within the same broad field of subject. 4 clusters have been replaced this way. To sum up, 43 clusters of a total of 102 clusters are replaced clusters.

All in all, the German sample for the cohort 2016/17 is somewhat skewed as compared to the distribution in higher education statistics, specifically regarding the representation of fields of study (e.g. the STEM fields are overrepresented). Weighting has been used to account for these differences.

For the $t+5$ cohort no full EUROGRADUATE pilot survey has been conducted in Germany because the cohort of 2013 is already covered by the 2nd wave of the DZHW graduate panel survey. The indicators on Germany presented in the EUROGRADUATE comparative report (Meng et al., 2020) and the EUROGRADUATE country report (Mühleck et al., forthcoming) will be based on data of the graduate panel survey to the extent they can be seen as comparable. As one means for assessing comparability, a random sample of 500 graduates was drawn from contacts of the DZHW graduate panel survey and invited

to participate in the EUROGRADUATE survey. This data is not part of the official EUROGRADUATE pilot survey data. It will not be used for providing statistics but for methodological purposes only.

Contact details and invitation mode:

For the t+1 cohort, the research team had to rely on the contact details stored by the HEIs. The HEIs differ considerably in kind and quality of contact information available. Depending on which contact details were at hand, DZHW provided letters and/or e-mail templates to the HEIs. Invitations were mostly sent in a letter informing about the survey and e-mails that contained the personalized links to access the EUROGRADUATE survey. In some cases, the graduates could only be reached via letters and HEIs printed the letters with login information to the survey themselves. After the first postal letter, at least three e-mail reminders were sent. Moreover, to increase the response rate, a lottery was used as an incentive. Graduates were informed that they could win prizes (travel vouchers, smartphones, tablets if they participated).

For the t+5 cohort postal and private e-mail addresses were available that had also been updated in parts some months before the survey.

Data preparation:

It was possible to provide data from the database on HEIs for a part of the respondents in order to be linked with the survey data, allowing for improvement of the data quality. This was an option for HEIs that had to contact only one cluster or could clearly tell which invitations were sent out to which cluster. The variables that could be linked were:

- name of HEI
- type of HEI
- type of qualification
- field of study

Challenges and learnings:

A key challenge was to acquire HEIs for participating in the EUROGRADUATE Pilot Survey as two surveys targeting the same target cohorts took place in approximately the same period: the KOAB survey and the DZHW graduate panel survey. The main purpose of the KOAB survey is to provide HEIs with data for quality assurance purposes and it targets all graduates of a participating institution. Thus, to avoid double surveying, all HEIs participating in KOAB needed to be excluded from the EUROGRADUATE sample. As a consequence, no institution from North-Rhine-Westphalia, the largest of the 16 German Länder and the focus of KOAB, was covered by the EUROGRADUATE Pilot Survey. Also, the graduate panel survey of the DZHW took place in this period. The graduate panel survey uses a cluster sampling and thus HEIs participating in this survey could additionally participate in the EUROGRADUATE Pilot Survey with a cluster of graduates not yet covered. The sampling of clusters for both surveys was coordinated at DZHW to preclude double surveying. In fact, a considerable number of HEIs was ready to participate in both surveys. However, a considerable number of contacted HEIs refused to participate in the EUROGRADUATE Pilot Survey, e.g. for capacity reasons or because they saw not much use for the institute or because other regional or institutional graduate surveys were running in parallel.

Future rounds of a European graduate survey would need to be integrated with the DZHW graduate panel survey and possibly with the KOAB survey as well to avoid doubling burdens for HEIs. Furthermore, it is crucial to get in touch with HEIs at an early stage to ensure widespread participation. For this end it will be important that institutions see participation as useful also from their point of view. Institutional level data for their own use is likely to be seen as an asset by HEIs.

4.2.4. Report on data collection Greece

National research team:

Department of Social Policy, Panteion University of Social and Political Sciences

Time of field phase:

30th of October 2018 until 17th of February 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	122,353	61,096
Sample size	Estimation: 28,907 *)	
Opt-in accepted	616	1,204
Gross response rate	6.3 %	
Usable questionnaires	446	866
Net response rate	4.5 %	

* Only estimations can be given for the numbers of sent out invitations and response rates.

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

A full survey, including all HEIs that agreed to participate was conducted, no sample was drawn. A large number of HEIs refused participation, partly because they did not have contact details of their graduates, but primarily because HEIs were not willing to share the graduates' email addresses due to the new GDPR regulations. Most HEIs were willing to contact their graduates themselves, however HEIs could not send personalised emails, thus their graduates could not receive a personalised survey URL. Moreover, some HEIs did not list their graduates per graduation year.

Contact details and invitation mode:

Invitations and reminders were sent by e-mail only. As contact details were stored locally at the HEIs, different strategies were applied:

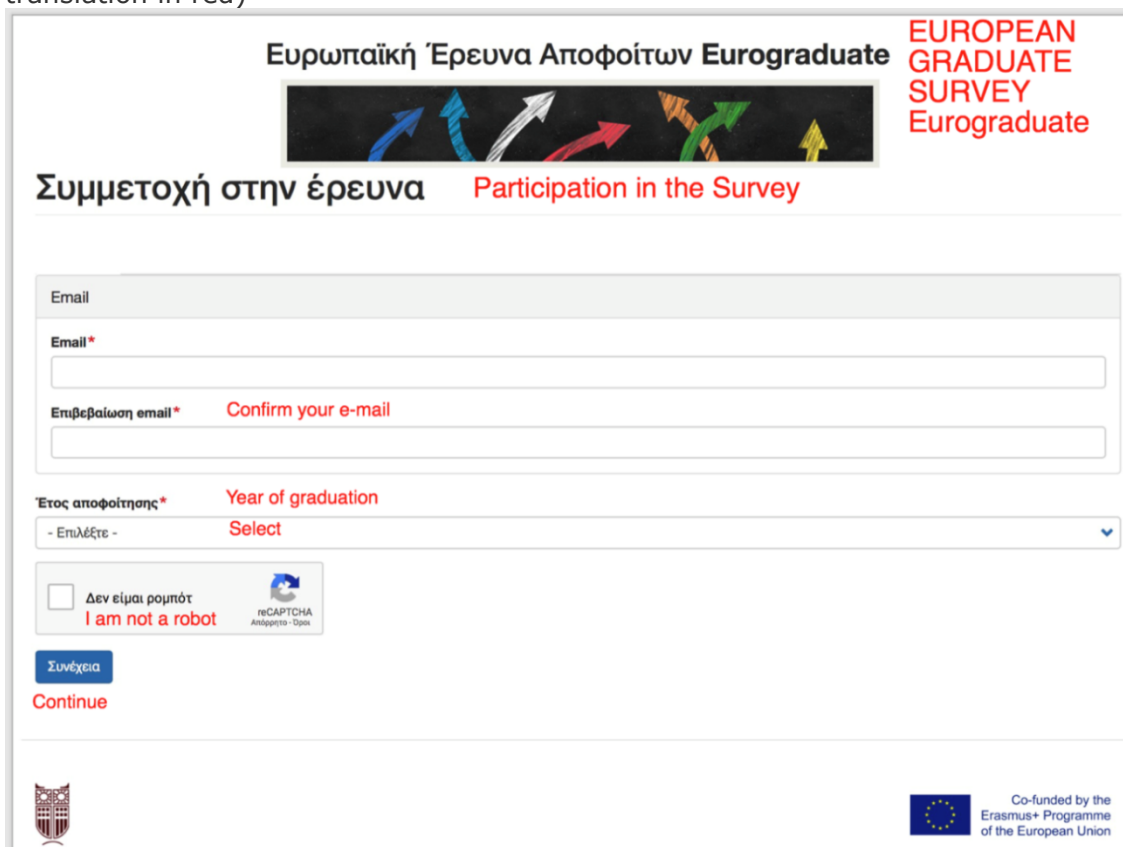
- Participating HEIs (6 out of 36) provided the e-mail addresses to the national research team that sent invitations and reminders centrally with an individualised link for the EUROGRADUATE survey.
- HEIs invited their graduates to participate in the survey by asking them to contact the National Research Team and provide their email address if they were interested (that had a very low response rate).
- HEIs that did not want to provide the National Research Team with the contact details nor had the possibility to send individualised e-mails to graduates sent a general invitation to the EUROGRADUATE pilot survey to their graduates containing a link that led to a platform operated by the National Research Team. Through this platform, individualised links for answering the EUROGRADUATE survey were distributed to the graduates who agreed to participate in the survey. For these graduates, reminders were also sent by the National Research Team, after they had entered their e-mail address on the platform.

Description of the platform

To overcome the aforementioned limitations a web platform was developed based on the open-source Drupal 8. All 20.000 available survey access codes were imported into the platform. Codes that were already assigned to graduates' email addresses were marked as "Used". The rest were marked as "Available". With this the National Research Team was able to:

- Develop a universal link through which each graduate would be able to access the survey, regardless of their graduation year;
- Find a way for graduates to automatically get a survey access code based on their graduation year;
- Find a way to track the graduates' progress of completing the questionnaire;
- Develop a tool to update the mailing software lists that were used based on the questionnaire completion status per survey access code. Three separate lists were maintained in the software:
 - Graduates who had not started the survey;
 - Graduates who had started the survey but had not yet completed it;
 - Graduates who had completed the survey;
- Find a way for the graduates to continue the completion of the questionnaire, without having to remember their personal access code.
- Increase response rate as graduates were more willing to participate in the survey if the invitation was sent from their HEI. This is verified by our records since before the development of the web platform the invitations that were sent directly from the National Research Team were: Total number of invited graduates: 9,300; Number of successful deliveries: 7,986; Number of e-mails that bounced: 1,314 which resulted in 305 completed questionnaires only.

Figure 4.1: EUROGRADUATE survey's web platform landing page (Greece; English translation in red)



Ευρωπαϊκή Έρευνα Αποφοίτων Eurograduate **EUROPEAN GRADUATE SURVEY Eurograduate**

Συμμετοχή στην έρευνα **Participation in the Survey**

Email

Email *



Επιβεβαίωση email * **Confirm your e-mail**

Έτος αποφοίτησης * **Year of graduation**

- Επιλέξτε - **Select**

☐ Δεν είμαι ρομπότ **I am not a robot** reCAPTCHA Αποθήκευση - Όροι

Συνέχεια **Continue**

  Co-funded by the Erasmus+ Programme of the European Union

More specifically, an online form was created using the Drupal 8 Webform module. In that form, graduates could enter their email address and graduation year. If a "Used" code matching the provided graduation year was assigned to the provided email address,

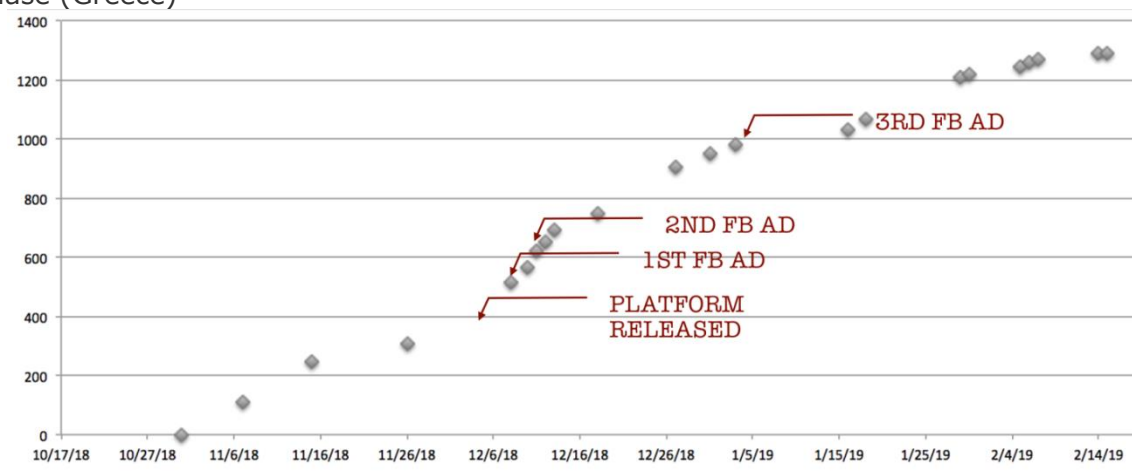
the graduate was automatically redirected to the survey without having to enter that access code. If there was no access code matching the combination of the email address and the graduation year, then a new "Available" access code was matched to that email address before redirecting the graduate to the questionnaire. If a graduate entered a graduation year other than 2012-2013 or 2016-2017, they were presented with a kind message declaring that they were out of the survey's scope. If the year was for example 2014-2015 the graduate was informed that unfortunately this graduation year is not part of the survey at the moment and thanking them for their time. The web platform's landing page is shown in Figure 4.1.

A CSV import mechanism was created using the Drupal 8 Feeds module, so that the platform could stay up-to-date with the questionnaire completion status of each code. Codes were categorised as "Not Started", "Started" and "Completed". A CSV (Comma Separated Values) export mechanism was created using the Drupal 8 Views and REST modules so that the codes' status could be imported into the mailing software that the National Research Team used (i.e. Mailchimp).

Facebook ads and contact through HEIs alumni associations were also used to increase the response rate. An advertisement was created on Facebook targeting people who speak Greek and have obtained a degree during the years 2012-2013 and 2016-2017. When somebody clicked on that ad, they were led to the platform's online form asking their email and graduation year. About 300 questionnaires were completed thanks to that campaign.

Putting our records of the number of completed questionnaires on a graph we easily see the impact of the web platform development (Figure 4.2).

Figure 4.2: The evolution of the number of completed questionnaires through fieldwork phase (Greece)



The fieldwork was extended to 17/2/2019 due to the construction of the platform, delays regarding the communications with the HEIs and low response rate. Up to 17/2/2019, 2,677 graduates have visited the platform (1,751 started the questionnaire and had the correct year of graduation).

Challenges and learnings:

Initially, there were two plans on how to sample and contact the graduates. The first plan was to use a central register operated by a government agency, the Greek Research and Technology Network (GRNET) that includes data on all students and their contact details from the time of enrolment. GRNET that operates under the auspices of the Ministry of Education and Religious Affairs would provide the contact details of the graduates.

GRNET is responsible for issuing the academic ID card for all students. HEI's would provide the GRNET with the list of the cancelled ID cards (which points to graduation) and GRNET could match it with its list, so that a central sampling frame could be constructed. Sampling and contacting the graduates would have taken place centrally. The plan was abandoned due to the GDPR regulations. The contact details of the students were provided to GRNET merely for issuing the ID card and GRNET was sceptical to provide the contact details to a third party or to use them for a reason other than the one that they were asked for.

A second plan was for the HEIs not only to provide IDs but also contact details of the respective graduates, while sampling and contacting the graduates would have taken place centrally. Both plans would have required the support of the Hellenic Ministry for Education and Religious Affairs. At a late stage of the planning phase, a new data protection officer of the Ministry declared that the initial plans were not feasible due to GDPR limitations.

Even though the Greek research team came up with the innovative solution to distribute personalised links on the platform, the number of participating HEIs¹¹ and the response rates remained low.

As a conclusion, there is a strong need for the development of a central sampling frame of graduates in Greece that could be established if graduates were obliged to register for graduation, as they are for their enrolment.

4.2.5. Report on data collection Croatia

National research team:

Faculty of Law, University of Zagreb/Agency for science and higher education AZVO

Time of field phase:

10th of October 2018 until 6th of January 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	35,018	33,004
Sample size	10,467	22,868
Opt-in accepted	1,483	5,676
Gross response rate	14.2 %	24.8 %
Usable questionnaires	919	4,278
Net response rate	8.8 %	18.7 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

For the t+5 cohort, first stage of sampling was allocation of sample sizes to study programs by cumulative size method, using aggregate data provided by the Croatian statistical office¹². After this first stage of sampling, higher education institutions were asked to provide lists of the graduates in their study programs, which 68 out of 119 eligible institutions did (excluded were study institutions with study programs not oriented on labour market e.g. police, military, and institutions that did not exist during

¹¹ Out of the 36 HEIs in Greece, 30 sent out invitations or provided the Greek research team with the contact details of the graduates. From the remaining 6 HEIs, one added an advertisement to their alumni association website with a link to the platform. On basis of the final data, EUROGRADUATE knows respondents from 35 out of the 36 HEIs indicating that some graduates found the survey through Facebook advertisement.

¹² First stage provides sample sizes for separate study programs and enables separate random sampling on partial lists of graduates as they arrive from higher education institutions.

the time of graduation of the cohort 2012/13). Simple random sample was drawn separately from available graduate lists using allocated sample sizes from stage one. All graduates with available contact information were invited to participate in the survey with clear distinction of probabilistic sample and optional boost consisted of all other available graduates. After checking for response bias, both parts of the sample were used in data analysis.

For the $t+1$ cohort, dual sampling frame was used. For the first stage same procedure was applied in allocation of sample sizes for study programs. All higher education institutions were asked to provide lists of the graduates in their study programs, which 74 out of 124 eligible institutions did. Additionally, another source for contact details than the HEIs was available, as one of the research partners, AZVO, operates a database containing contact details and written consents from graduates – that source added data from 24 institutions. In total both sources cover 98 out of 124 higher education institutions. Simple random sample was drawn separately from the available graduate lists using allocated sample sizes from stage one. All graduates with available contact information were invited to participate in the survey with clear distinction of probabilistic sample and optional boost consisted of all other available graduates. After checking for response bias, both parts of sample were used in data analysis.

Contact details and invitation mode:

Contact details stored at the HEIs were provided to the national research team to generate a central database. Graduates were contacted via phone and/or e-mail, depending on the availability of contact details by the national research team.

Data preparation:

It was possible to provide register data in order to be linked to the survey data, allowing for improvement of the data quality the respondents entered in the survey. The variables that could be matched were:

- Name of HEI and department
- type of HEI
- ISCED level
- ISCED fields
- region
- type of study program
- gender
- study program
- organizational form of the HEI (public or private)

Challenges and learnings:

Because the population data on graduates per academic year were not available in a central register, workarounds were found. The data used reflects all graduates from 2012 and 2013 for $t + 5$ and all graduates from 2016 and 2017 for $t + 1$. During the data collection, the research team was also provided with contact data from graduates, who were invited to participate in the survey.

4.2.6. Report on data collection Lithuania

National research team:

The Government Strategic Analysis Center (STRATA)

Time of field phase:

10th of October 2018 until 4th of February 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	38,074	26,821
Sample size	11,882	12,507
Opt-in accepted	878	1,542
Gross response rate	7.4 %	12.3 %
Usable questionnaires	640	1,164
Net response rate	5.4 %	9.3 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

Two central registers were available that contained contact information of graduates. The students' register was merged with another government register containing information about taxpayers. The survey was conducted with all available contact data and hence no further sampling took place.

Contact details and invitation mode:

The availability of contact details depended on the HEIs and on whether they provided e-mail addresses to the students' register, and what type they provided (personal e-mail addresses or e-mail addresses were provided by the HEI that would not be usable for the graduates after leaving the HEI). In addition, e-mail addresses in the students' register could stem from the time of enrolment and be outdated. The second register contained up-to-date e-mail addresses, but only for a small part of the population. Invitations and reminders were sent centrally by STRATA for most HEIs. Kaunas University of Technology (second biggest HEI in Lithuania) sent invitations themselves for 2012/13 cohort graduates.

Data preparation:

It was possible to provide register data in order to be linked with the survey data, allowing for improvement of the data quality the respondents entered in the survey. The variables that could be matched were:

- name of HEI
- type of HEI
- gender
- ISCED level
- ISCED fields
- enrolment status

Challenges and learnings:

Even though two registers could be merged, the coverage with e-mail addresses was lower than expected. As in previous online surveys in Lithuania in HE context (e.g. EUROSTUDENT) response rates were low. Thus, it was decided to do a full survey to reach the highest possible outcome.

It is known that many graduates leave Lithuania for jobs in other countries, especially the UK. As they are probably not covered in the social fund registry, these graduates might be underrepresented.

4.2.7. Report on data collection Malta

National research team:

National Commission for Further and Higher Education (NCFHE)

Time of field phase:

24th of October 2018 until 4th of February 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	4,167	4,492
Sample size	4,167	4,492
Opt-in accepted	635	705
Gross response rate	15.2 %	15.7 %
Usable questionnaires	457	506
Net response rate	11.0 %	11.3 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

In Malta a full survey at the two main HEIs (University of Malta and MCAST¹³) was conducted, no sampling was needed. Other institutions were not included as they only make up for a very small part of the population.

Contact details and invitation mode:

Contact details were stored at the HEIs and could not be provided to the national research teams. Invitations were sent by the HEIs themselves. Graduates of the University of Malta received invitations and reminders by letter, graduates of MCAST received invitations and reminders by letter and e-mail.

Data preparation:

It was possible to provide register data that was linked to the survey data, allowing for improvement of the data quality the respondents entered in the survey. The variables that could be linked were:

- ISCED level
- ISCED fields

Challenges and learnings:

The national research team had far less time to prepare since Malta entered the EUROGRADUATE pilot survey as eighth country as a replacement for a country, which dropped out.

¹³ The Malta College of Arts, Science & Technology.

4.2.8. Report on data collection Norway

National research team:

Nordic Institute for Studies in Innovation, Research and Education (NIFU)

Time of field phase:

17th of October 2018 until 6th of January 2019

	2012/13 (t+5)	2016/17 (t+1)
Population size	40,984	48,427
Sample size	5,058	5,287
Opt-in accepted	1,322	1,538
Gross response rate	26.1 %	29.1 %
Usable questionnaires	1,124	1,160
Net response rate	22.2 %	21.9 %

Note: Numbers include both Master and Bachelor graduates.

Source: EUROGRADUATE pilot study 2018.

Sampling and stratification:

A central register was available for sampling. The sample was drawn from different subgroups (strata). These subgroups were type of HEI, educational level and sex. In order to guarantee that the sample matched the distribution of study fields in the population, the sampling frame was also sorted for study fields for all graduates in order to draw a systematic random sample. Only a small share of the universities of applied sciences agreed to participate in the survey, the sample size per HEI was adapted to the overall distribution of study fields.

Contact details and invitation mode:

Contact details were available centrally. Invitations and reminders were sent by letters and e-mail.). For the 2016 / 2017 cohort e-mail addresses were provided by the Norwegian Centre for research data (NSD). This cohort received the invitation and two of the reminders by e-mail, and one reminder by post. E-mail addresses were not registered for the 2012/2013 cohort and so the invitation and reminders were sent by post.

Data preparation:

It was possible to provide register data in order to be linked with the survey data, allowing for improvement of the data quality the respondents entered in the survey. The variables that could be matched were:

- name of HEI
- type of HEI
- ISCED level
- ISCED fields
- Sex
- Age at graduation

Challenges and learnings:

Due to new GDPR rules, the Norwegian centre for research data, that provided NIFU with the e-mail addresses, is not anymore allowed to do so since June 2018.

4.3. Response rate – The case of Croatia

The response rate describes the number of individuals that answered the survey divided by the number of individuals that were selected for the sample. The higher the response rate, the larger the sample obtained, and the more detailed analysis are possible. That contributes to a higher quality of the analysis and conclusions.¹⁴ The figures above indicate that the response rates in the EUROGRADUATE pilot varied considerable across countries.

Generally, there is a large set of factors known to influence the response rate; such as the quality of the contact information, – if respondents cannot be reached or are reached too late, they are of course not able to participate – the length of the questionnaire, the way in which respondents are approached (e.g. mail, e-mail, on the street), the incentives that were offered to participate, the number of reminders, the topics of the questionnaire but also personal characteristics (e.g. age, gender, educational level) play a role. Concerning the potential for a full rollout of the EUROGRADUATE survey, it is important to know more about these factors.

For Croatia – the country with the largest number of participants in the EUROGRADUATE pilot survey – it was possible to carry out a more in-depth analysis on factors driving the response rate. Due to large number of individuals contacted, it was possible to differentiate:

- between modes of invitation and the mode of reminders (phone versus e-mail),
- between types of consent that was given by the respondents (Higher education institutions sent out contact details without prior consent versus consent was given by the time of graduation),
- between fields of study,
- between males and females and,
- between ISCED levels.

Results on differences in response rate according to these factors are presented in the following.

Modes of invitation

In Croatia, potential respondents were contacted either by E-mail (majority) or by phone (minority). In the subsequent table, differences in the response behaviour according to the two modes of invitation are shown. The table indicates that the expected benefit of a direct contact via phone compared to e-mail contacting is not clear. In the personal telephone contact, non-participation is detected immediately, however in e-mail invitations this refusal is counted as non-response. The total completion rate is even higher in the group that has been contacted via E-mail only.

Table 4.2. Response rate and mode of invitation (row percentages)

	Not invited	No response	Opted out	Completed	Total
Phone invitation	72%	13%	2%	13%	100%, n=1,825
E-mail invitation	3%	74%	4%	19%	100%, n=21,043
Total	1,894	15,830	903	4,241	22,868

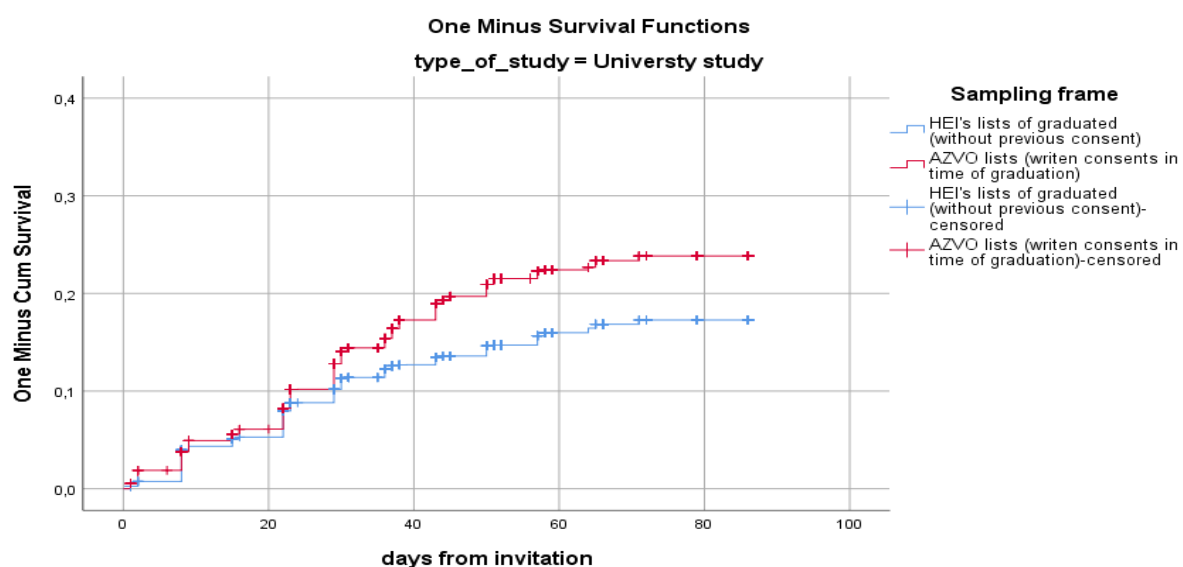
Source: EUROGRADUATE pilot survey 2018

¹⁴ However, a high response rate does not per se mean higher data quality – although this is often assumed. It is not the response rate that is decisive for the quality of the data, but the most accurate representation of the target population in the sample. This is achieved, inter alia, by weighting methods.

Type of consent

Generally, the decisions on whether or not to give consent within a survey can be understood as being similar to the decision to complete the survey. Thus, prior consent should influence the likelihood to give a response and to complete the EUROGRADUATE questionnaire. In Figure 4.3 an inverse survival function is depicted, showing the time until respondents answered the questionnaire. The higher the line on the graph, the higher the response rate. The blue line represents respondents, whose addresses were provided by higher education institution without prior consent, whereas the red line represents the answering behaviour of the respondents that agreed on being contacted by the time they graduated from university. Although, it is likely to assume that respondents – especially five years after graduation – might not remember to have agreed on being contacted, the figure indicates a higher participation rate for those that gave consent earlier. This finding might be due to the consent as such, but it could also be driven by the selection of individuals that gave consent, which are generally more inclined to participate in a survey.

Figure 4.3 Response rate by types of consent



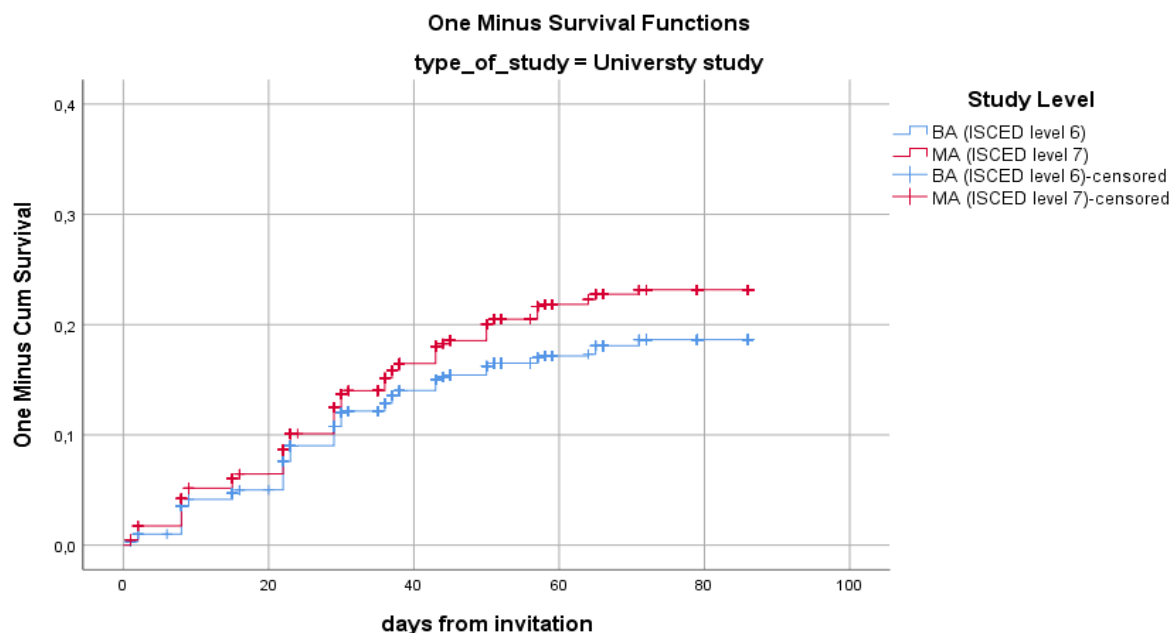
Source: EUROGRADUATE pilot survey 2018, only graduates at research universities in Croatia.

ISCED level

The overall assumption following findings from previous research is that higher educated individuals are more likely to participate in surveys. This also holds true for the EUROGRADUATE pilot survey, where it can be observed that the time of response and the share of individuals responding is earlier/higher for MA-level graduates in Croatia compared to BA-level graduates. This finding confirms prior research on response behaviour in relation to the educational degree.

In the subsequent figure, differences between BA-level and MA-level graduates are displayed.

Figure 4.4 Response rate by ISCED level

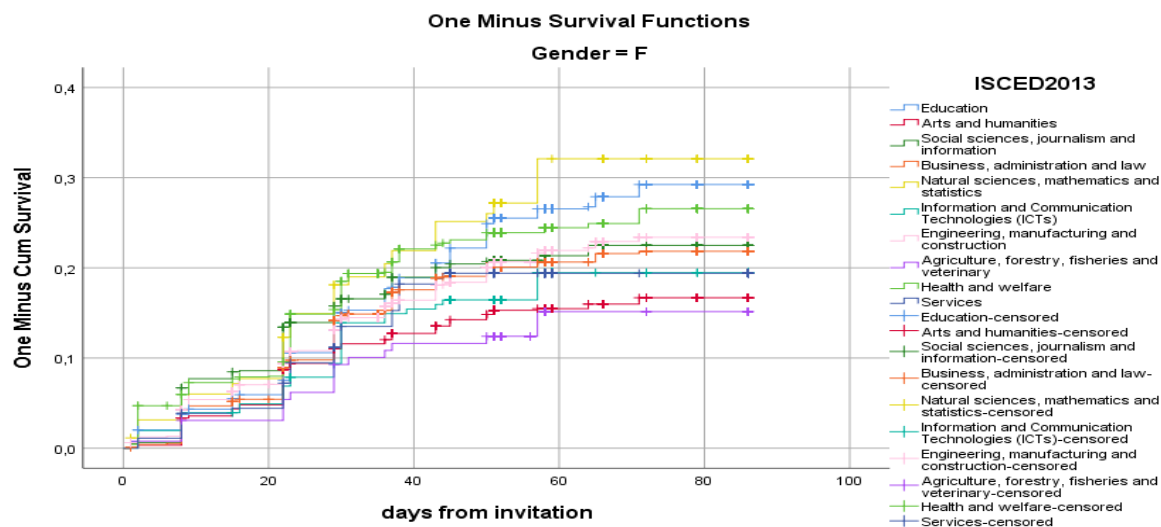


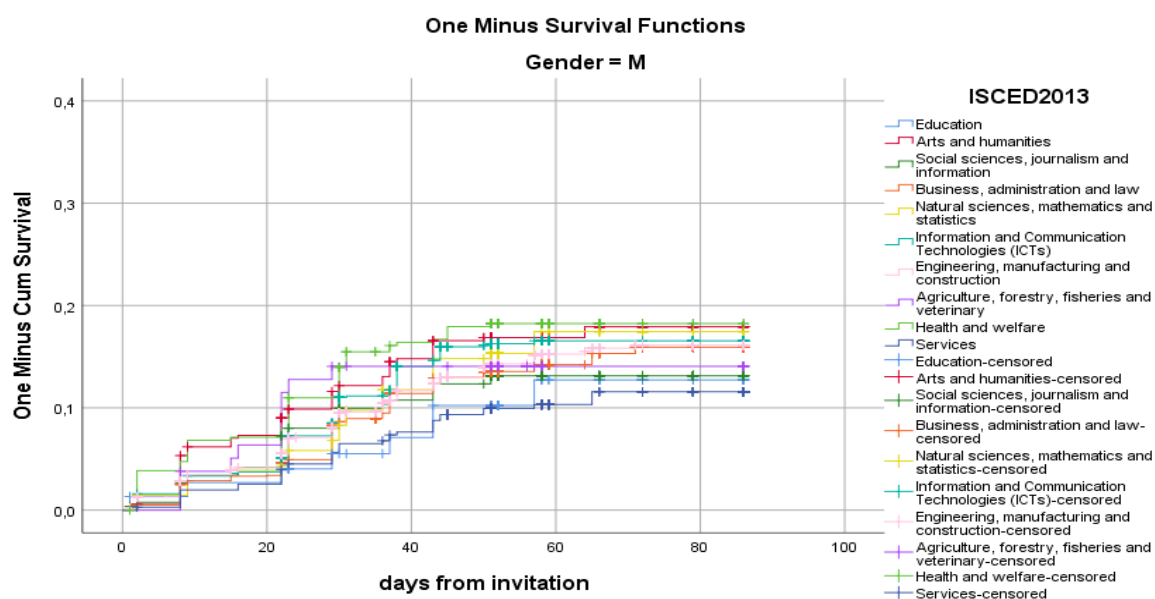
Source: EUROGRADUATE pilot survey 2018, only graduates at research universities in Croatia.

Gender and fields of study

The following figures display an inverse survivor function on the answering time by fields of study and gender. The two figures indicate clear differences between men and women. Comparing the two graphs, it can be observed that women are overall more likely to answer. Thus, the overall female response rate is considerably higher than the one for males. This is again, very much in line with prior studies that confirmed an overall higher participation rate in surveys for women compared to men.

Figure 4.5 Response rate by field of study and gender (upper panel=female, lower panel=male)





Source: EUROGRADUATE pilot survey 2018, only graduates at research universities in Croatia.

The combination of fields of study and gender shows that the men that are most likely to answer come partly from different study fields than women. While women, are most likely to answer when they study Natural Sciences, Education or Health and least likely to answer when studying Agriculture or Arts and Humanities, men are most likely to answer when studying Arts and Humanities or Health. Men studying Service, Education or Social Sciences are least likely to answer. The study differences between men and women in response behaviour indicate that personal interests and talent – expressed in study fields – influence the likelihood to participate in a questionnaire. Nevertheless, when comparing women in Agriculture (lowest likelihood to participate) with men in Health (highest likelihood to participate), we find women's response rate to be only slightly below the men with the highest response rate. Thus, a crucial indicator in explaining differences in response rate is – as often shown in empirical research – gender.

Overall, this more in-depth focus on the factors influencing the response rate for the case of Croatia showed that the typical drivers are quite similar to what has already been found in previous research on response rates. Thus, in order to increase the response rates a consent should be given, BA-level graduates and students from low-responding fields of studies could be given particular emphasise such as additional incentives or additional reminders in order to increase their response behaviour.

5. Data collection conditions for a full rollout in the Erasmus+ countries

5.1. Introduction

In order to investigate the prospects of a possible full rollout of a European graduate survey, the EUROGRADUATE pilot survey assessed the data collection conditions in the Erasmus+ countries. The objective was a compilation of detailed knowledge on the access to the field in the different countries, i.e. availability and quality of contact information and possibilities for drawing samples.

In a first step, a brief standardized questionnaire was designed to measure the availability of population data and central registers with or without contact information, the potential coordination with existing graduate surveys and the interest in participating in a full European graduate survey. The enquiry was directed towards graduate tracking experts in ministries, national agencies, and other organisations in the 34 Erasmus+ higher education systems.¹⁵ The questionnaire was sent to the national representatives in December 2018. Thanks to the helpful support of the country experts, we were able to learn more about the survey conditions in 32 Erasmus+ systems.

Secondly, the country representatives were contacted with an invitation to an expert interview. The goals of these interviews were to clarify uncertainties from the enquiry, and to find ways of solving problems, e.g. strategies for coordinating with existing surveys or sampling solutions. Interview guidelines were developed and conveyed to the interviewees beforehand. The conversations were organized as online meetings (phone calls alternatively) and took place between February and August 2019. Usually, the interviews lasted about one hour. Protocols of the interviews were sent to the interviewees for feedback and approval.

Based on the approved protocols, one-page country sheets were prepared as an easy-to-read documentation of the potential interest in a full rollout and the data collection conditions in the respective country. These country sheets, which are available in chapter 5.3, were checked, corrected and finally approved by the country experts. They provide a feasibility assessment per country, looking at four criteria: (1) interest in participating in European graduate survey, (2) feasibility of identifying and sampling graduates of the target cohort, (3) contacting graduates of the target cohort, and (4) potential conflict with existing surveys and ways to coordinate with a European graduate survey. For a reader-friendly feasibility assessment, a colour code has been used (green, yellow, and red). The legend in Annex 1 shows how the colour code has been defined for the four criteria and the overall assessment. The evaluations of the four criteria lead to an overall assessment. Note that as all four criteria need to be fulfilled for a graduate survey to be feasible, the overall assessment corresponds to the least favourable assessment among the four criteria.¹⁶

All in all, expert interviews were conducted for 29 Erasmus+ higher education systems. For five countries no representative was available for an expert interview.

The results presented in Chapter 5.2 below are based on both, the experts' survey and the country sheets. For transparency, the source used is specified below each figure. For

¹⁵ There are 33 Erasmus+ countries but the higher education systems of the French-speaking community of Belgium and of the Dutch-speaking community of Belgium are treated separately due to being managed independently by the administrations of the two communities.

¹⁶ Example: If all criteria are "green" (i.e. "feasible") but contacting graduates would only be possible with major changes to the system (i.e. "yellow") the overall assessment is "yellow" as well, because a major change is necessary for participation in a full rollout being feasible

some figures, information from the experts' survey has been updated by information from the country sheets, which were conducted at a later point in time.

For a full understanding, a number of limitations of our assessment should be kept in mind. The results shown in the following sub-chapters and in the country sheets are descriptions of the current situation and may be subject to changes. The results are based on the views of specific nominated representatives of the higher education system, which may be subjective to some extent. We have tried to ensure that the country sheets give valid picture of representatives' views in the country sheets but being concise they remain to some extent superficial and may miss important details and differentiations. The statements on the countries' interest are by no means to be understood as decisions to participate in a future full rollout of a European graduate survey.

The assessment covers 32 countries in the brief enquiry and 29 Erasmus+ countries in the expert interviews. We are indebted to the country experts for their support and to the European Commission in helping us to contact country representatives.

5.2. Interest in participation in future full rollout and data collection conditions in the Erasmus+ countries

This chapter gives a cross-country overview on the data collection conditions in the Erasmus+ higher education systems. Chapter 5.2.1 starts with the interest in participating in a potential full rollout of a European graduate survey. Interest in a relevant number of countries is obviously a precondition for a European graduate survey to be a meaningful undertaking.

As a next step, Chapter 5.2.2 looks at the technical side of conducting a European graduate survey. Firstly, it will be checked to what extent countries run central databases on the graduates of their higher education systems. Such central registers can be used for identifying and sampling, as well as, if contact information is contained or can be supplemented, for contacting of graduates. Thus, it will also be checked whether central registers hold contact information.

Another way of identifying, and contacting higher education graduates is to ask the higher education institutions to do this. In fact, for most graduate surveys in the Erasmus+ countries graduates are contacted by the HEIs. Often, but not always, only the HEIs have contact information of the graduates at their disposal or the contact information stored at institutions if more up-to-date or allows for various modes of contacting graduates (e.g. by postal mail, electronic mail, or phone). Therefore, the kind and availability of contact information at HEIs will be dealt with.

If HEIs are involved in conducting the graduate surveys this means extra-work for institutions' administrations. Moreover, supporting external graduate surveys may not always have a tangible benefit for the individual institution. This raises another question that will be dealt with: to what extent are HEIs expected to support a European graduate survey and what could help in gaining their support?

The technical aspects are summarised in the feasibility assessments for identifying, sampling, and contacting graduates in the Erasmus+ higher education systems.

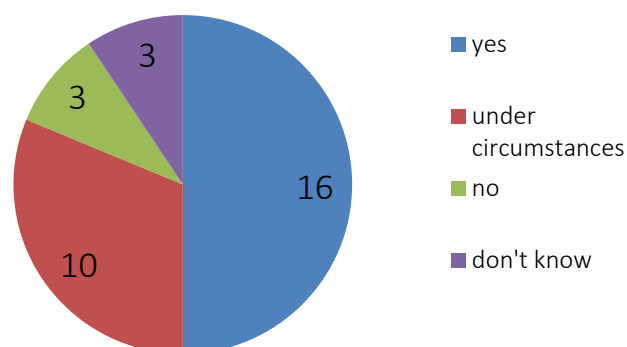
Another important issue for the data collection conditions of a European graduate survey is whether graduate surveys exist already in the country and, if so, how surveys could be coordinated to avoid double-surveying or inefficient use of resources. This question is tackled in Chapter 5.2.3.

Finally, Chapter 5.2.4 provides the overall feasibility assessment for the Erasmus+ countries as derived from the country sheets.

5.2.1. Interest in participating in a full rollout

Country representatives have been asked to express whether they see an interest in participation in a full rollout of a European graduate survey in their country. About half of the 32 experts agreed to that (Figure 5.1). Another third considered participation as possible, if certain circumstances were given. These crucial preconditions included benefits for the HEIs (e.g. institutional level data), the opportunity to add country-specific questions, the possibility to combine survey and register data, a secured comparability of data, i.e. data of the same quality as produced in the national survey, as well as the prevention of any harmful effects on existing surveys. Also wishes for a short(er) questionnaire, enough time to prepare the survey, financial support (for the HEIs) and for support in conducting the survey in the country or at HEIs were expressed.

Figure 5.1 Interest in participation in full rollout



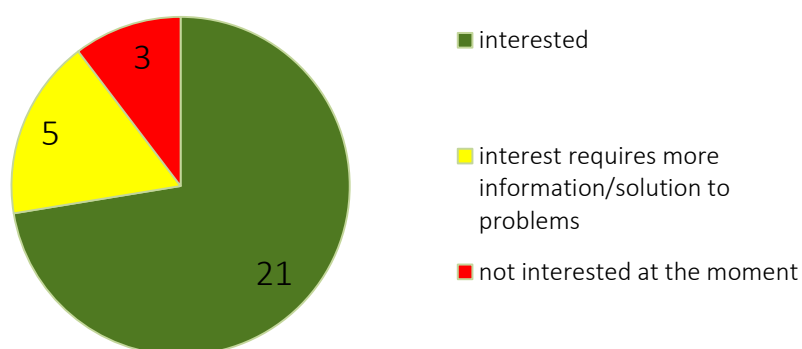
Source: EUROGRADUATE country experts' survey

Important aspects for being interested were, for instance, the thematic focus on comparisons on labour market topics and international mobility, the enhancement of graduate tracking at HEIs and the promotion of its added value.

All in all, experts from more than three quarters of the Erasmus+ HE systems (with available data) stated that their countries would be interested (under circumstances). Only representatives from 3 systems said, that they would not see an interest and for a further three systems, experts did not know or deemed it as too early to say.

In the experts' interviews, the question of the interest in participating in a full rollout was taken up again. The results confirm that there is strong and widespread interest in participating in a full rollout of European graduate survey in the Erasmus+ countries (Figure 5.2). 21 countries, i.e. close to three quarters, of those 29 higher education systems with a country sheet stated that they would be interested. Five countries would be interested if certain important obstacles would be overcome. Mostly this relates to coordinating existing surveys in the country with a European graduate survey. At the same time, three countries have stated that they are not interested at the moment.

Figure 5.2 Interest in participation in full rollout



Source: EUROGRADUATE experts' interviews

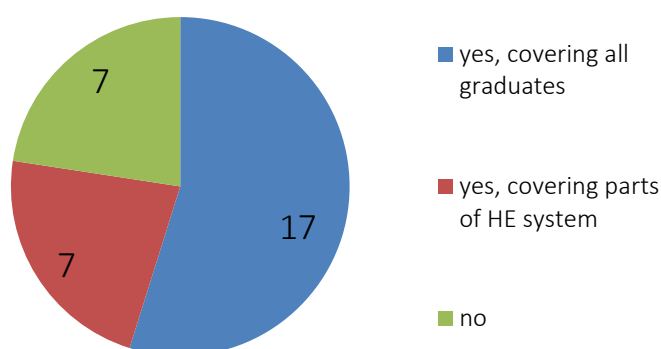
The country sheets (chapter 5.3) give more details on the specific motivations of countries for being (or not being) interested as well as on preconditions for interest.

5.2.2. Data collection conditions: technical aspects

Availability and quality of central registers

According to the Erasmus+ country experts, 78% of the higher education systems have a central database holding information on the graduates. There was one missing answer and in seven countries there is no register available at the moment. For seven out of the 24 higher education systems with a register, only parts of the higher education system are covered. In some countries, this means that major parts of the HE system are not covered. In other countries this means that minor proportions of 5-10% of the graduates are not covered by the central register. Thus, for identifying graduates' central databases could be good point to start with in several countries.

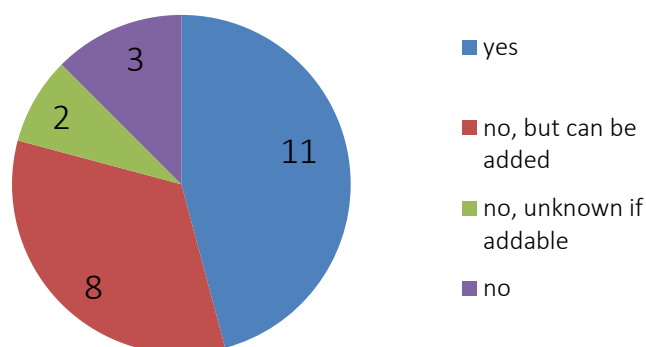
Figure 5.3 Availability of central register of graduates



Source: EUROGRADUATE country experts' survey

Another question is whether central registers could be used for contacting graduates. Therefore, country representatives have been asked what kind of contact information is stored in the register, if any. Nearly half of the 24 systems with a register answered that contact details are saved in there. In further eight systems contact information could be supplemented to the register from other databases. In three systems no contact information was contained and it could also not be added to the register, excluding the option of contacting graduates via the register.

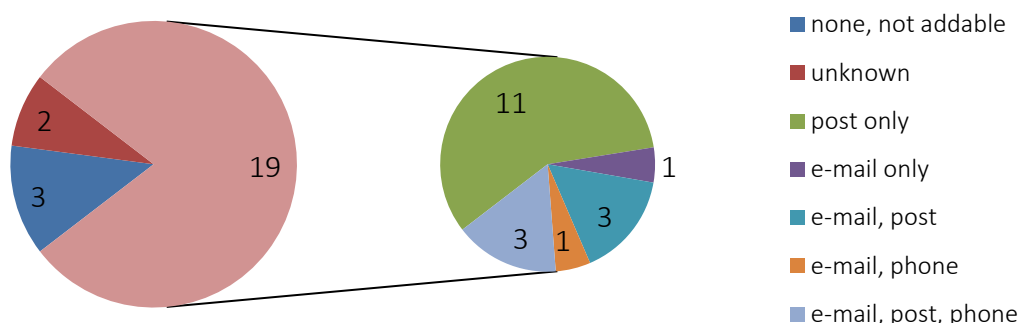
Figure 5.4 Contact information in central register



Source: EUROGRADUATE country experts' survey

All in all, this seems to suggest that the contacting of graduates could be done centrally in quite a number of countries but of course this also depends on the kind and quality of contact information. Often, country representatives see contacting of graduates by the HEIs as preferable due to better contact information.

Figure 5.5 Kind of contact information in central register



Source: EUROGRADUATE country experts' survey

Figure 5.5 shows the kind of contact information that is available in the central register or that could be added to the central register. For the majority of central registers, postal addresses are either readily available or could be added. For eight registers, e-mail addresses or combinations of e-mail addresses with other kinds of contact data are available or could be added.

Generally, it is preferable if several kinds of contact data are available. Using different ways to approach graduates usually increases response rates. Often a combination of postal contacts and e-mail contacts is seen as favourable. Invitations by postal mail underline the seriousness and importance of the survey. E-mail contacts are advantageous as respondents can access the online survey without changing the

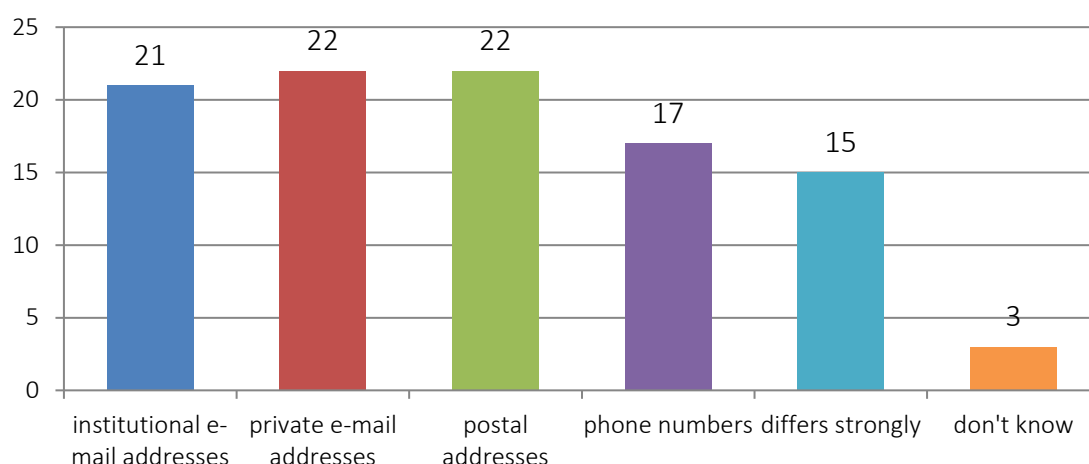
medium. The fact that most registers are restricted to postal addresses already indicates that for most countries other ways of contacting graduates might be better suited. Another problem is that many central databases do not update the contact information once stored. Note, however, that this varies strongly across countries and registers. The question for the best way of contacting graduates can only be answered within the context of a specific country (see country sheets for more information on this point).

5.2.3. Identifying and contacting graduates via the Higher Education Institutions

HEIs will necessarily need to be involved in identifying graduates where no central register of graduates is available or where registers miss a substantial part of the graduates. HEIs usually keep lists of their graduates and are in some countries obliged to keep such lists. Thus, identifying the graduates of the target cohort has not been seen as a major problem in any of the countries, be it with or without a central register.

The prevalent way of contacting graduates for surveys is with the help of the HEIs. Therefore, it is important to know what kind of contact information of graduates HEIs typically store in the Erasmus+ countries. Sometimes, country representatives were not entirely sure about the kind of contact information at HEIs and, as a matter of fact, in several countries practices differ strongly across HEIs as was stated by experts from 15 systems (Figure 5.6).

Figure 5.6 Kind of contact information available at HEIs (% of HE systems)



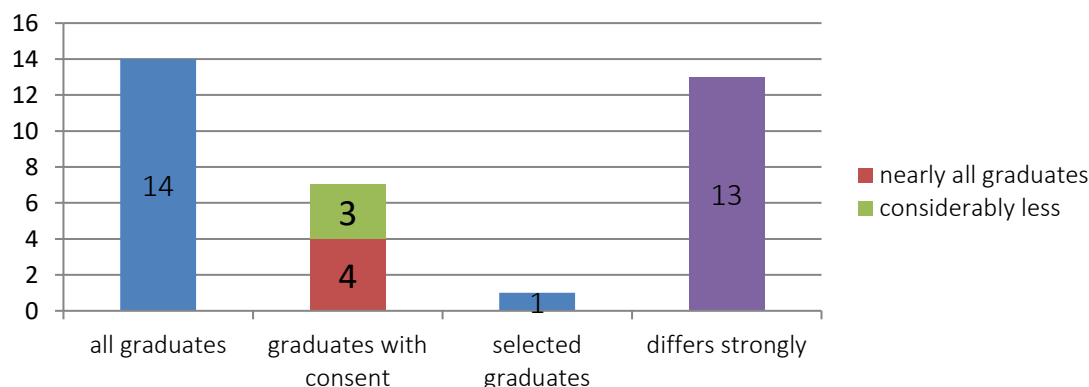
Source: EUROGRADUATE country experts' survey

Mostly e-mail and postal addresses are available. Institutional e-mail addresses are widespread, however typically they are not valid anymore after graduation or not used anymore (in some systems they are kept for a while). Private e-mail addresses and postal addresses are similarly widespread. Private e-mail addresses are usually quite stable. Postal addresses can be more volatile. In some countries, postal addresses stored at HEIs are typically those of the parents of the graduates. Especially in smaller countries, experts expected that invitations would reach graduates nevertheless as they are passed on by the parents. It is not always known by country representatives if contact information is updated and, again this is expected to vary across institutions.

Also, the share of graduates covered by contact data differs across countries and for at least 13 countries also across institutions. Experts from 14 systems stated that all graduates are covered. In further seven systems contact data is available only for

graduates that have consented to storage. In four of these countries this encompasses nearly all graduates, but in three countries it is considerably less.

Figure 5.7 Coverage of contact data at HEIs (% of HE systems)



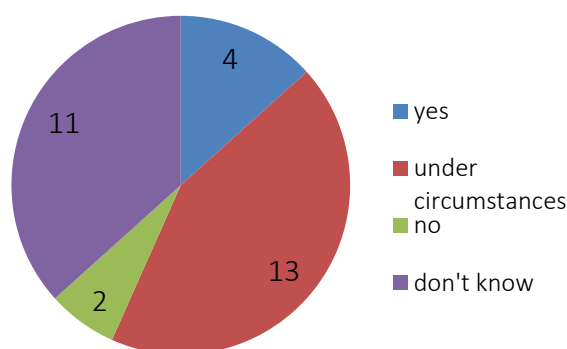
Source: EUROGRADUATE country experts' survey

Taken together, the results indicate that in many countries there is leeway for improving the availability, quality, and homogeneity of contact information in institutions. The feasibility assessments (see below) indicate that the availability of contact information in most systems is good enough to conduct graduate surveys reasonably well. But at the same time, representatives from many countries confirmed that especially the availability of up-to-date contact information could be improved.

Readiness of institutions to support contacting & sampling

Experts were asked whether they think that higher education institutions would be willing to support a European graduate survey by sending out invitations to graduates.

Figure 5.8 HEIs' willingness to contact graduates



Source: EUROGRADUATE country experts' survey

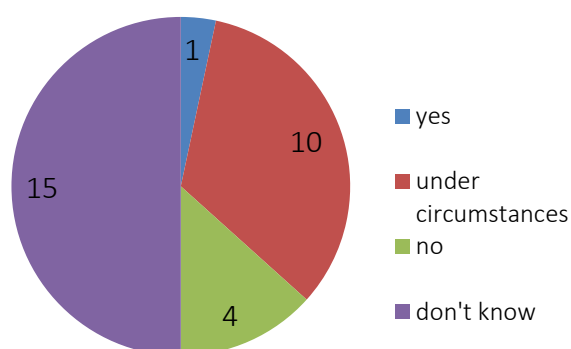
The answers show on the one hand a certain degree of uncertainty. This is not very surprising as the country representatives mostly were ministry staff rather than representatives of HEIs. There are two missing answers and eleven respondents answered, "don't know". A positive assessment of the HEIs' willingness to support in contacting was given four times, while a clear "no" was given twice. For a majority of 13 systems, experts felt that HEIs' support would depend on certain circumstances, e.g. a

clear added value of the survey for the HEIs, compliance with the GDPR, a good organisation avoiding conflict with existing surveys, and financial support. Some representatives also highlighted that the willingness of HEIs to support a potential European survey in contacting graduates might well vary across institutions.

A similar picture was given by the country experts when asked whether they thought that HEIs in their country would be able and willing to draw random samples of graduates from their registers. Here the share of “don’t know”-answers was 50%. Only in one system a clear willingness and ability of the HEIs to do the sampling was presumed. Representatives of ten systems assumed that sampling by HEIs would be possible under circumstances, e.g. if the legal basis is specified, if no conflicts with existing surveys are to be faced, if financial support is provided, and if a clear methodology and technical support are provided.

In the EUROGRADUATE Pilot Survey sampling was done by HEIs in two countries: Austria and Czechia. In both countries the EUROGRADUATE team provided HEIs with a tool facilitating sampling which, to the best of our knowledge, worked well for institutions’ administrations.

Figure 5.9 HEIs’ willingness to sample graduates



Source: EUROGRADUATE country experts’ survey

In the expert interviews, representatives were asked again about the support of HEIs, in order to supplement information and to learn more about what could motivate HEIs. It was highlighted that one would need to seek for the support of HEIs at an early stage of the project. Moreover, while HEIs often are motivated to support surveys for the public benefit, it was felt by representatives that they would need to see their own benefit as well. A strong incentive could be, if a European graduate survey would provide HEIs with institutional level data for their own (non-public) use. Generally, in many countries, gaining the support of the HEIs is seen as of crucial importance and an important precondition for participation.

Feasibility assessments of identifying, sampling, and contacting graduates

The feasibility of identifying, sampling, and contacting graduates was assessed by using the information given by experts in the survey and follow-up interviews. Assessments are depicted in a colour code of three categories with the following definitions (cf. annex 1).

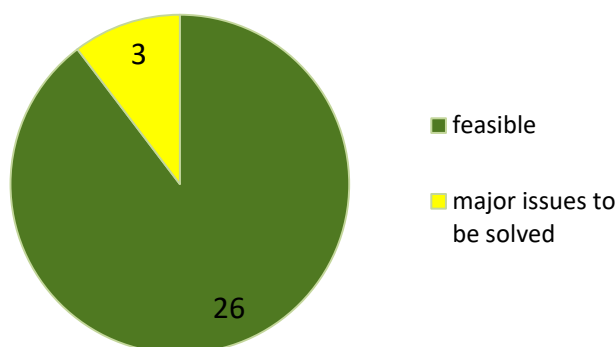
1. *Green*: Identifying and sampling (or contacting respectively) of the target cohort is feasible without major changes (not precluding the possibility of improvements).
2. *Yellow*: Identifying & sampling (or contacting respectively) of target cohort requires major changes; realistic solution(s) can be specified.

3. *Red*: Identifying & sampling (or contacting respectively) of target cohort is currently not possible and a realistic solution cannot be specified.

Note that, according to the definition “green” does not mean “perfect”. It means that data collection conditions are (at least) reasonably well for conducting a graduate survey, including the possibility of improving conditions as well as having to handle manageable problems, as they are usually encountered by graduate survey projects. If conditions for conducting the task are not reasonably well, categories yellow (realistic solutions can be specified) or red (realistic solutions cannot be specified) apply.

Regarding identifying and sampling of graduates, all 29 Erasmus+ higher education systems with a feasibility assessment have been categorized green. For all these countries, identifying graduates is, to the best of our knowledge, possible, either by a central database, by the HEIs, or by both. Sampling of graduates is a more demanding task but was also not seen as a major problem by any of the representatives or would anyway not be conducted in the respective system due its small size. Sampling could either be facilitated by using a central database or by the HEIs. As shown above, it cannot be taken for granted that HEIs are willing and able to sample graduates and this clearly is a task adding to the burdens for institutions’ administrations in supporting a graduate survey. However, gaining the support of the HEIs is in most countries a precondition for the data collection for a European graduate survey. Thus, the support of institutions is more of a general question rather than for sampling alone, and as many representatives have highlighted, should be ensured by early communication and a clear added value for institutions. To support HEIs in sampling graduates technically, the EUROGRADUATE Consortium provided methodological expertise and a sampling tool to HEIs. With this tool, positive experience was gained in the pilot survey; it was applied in Austria and Czechia.

Figure 5.10 Contacting graduates feasible



Source: EUROGRADUATE experts’ interviews

Regarding the feasibility of contacting graduates, the overall picture is quite positive as well (Figure 5.10). For almost 90% of the systems assessed we came to conclude that contacting graduates is feasible. However, conducting the EUROGRADUATE pilot surveys showed that often ‘the devil is in the detail’. The country sheets sketch for 26 countries how graduates could be contacted but this does not preclude that unforeseen problems come up in conducting surveys. Moreover, it is worth highlighting that the conditions for contacting graduates among those systems categorized as “feasible” can differ strongly. Some countries have excellent, up-to-date contact information of different kinds allowing for using several channels to contact graduates. Other countries need to rely on postal addresses only. Many countries need to rely on the contact information collected by HEIs

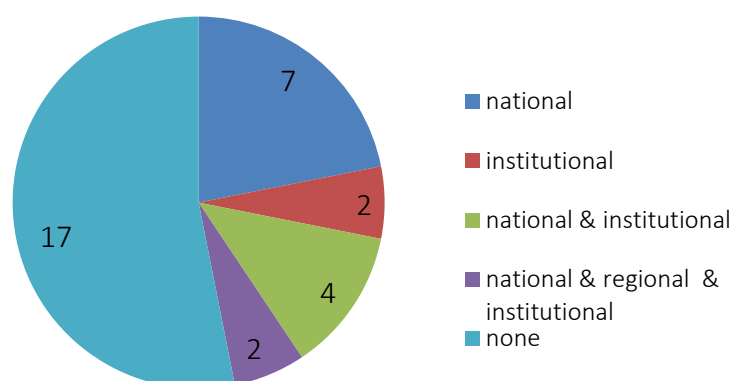
and the kind and quality of this information may well be heterogeneous. While the available contact information is, to the best of our knowledge, sufficient for conducting graduate surveys, there is leeway for improvement in most countries. Representatives from many countries confirmed that especially the availability of up-to-date contact information could be improved. Moreover, graduates living abroad are relatively hard to reach with the contact information available in most countries. Specifically, data sources providing postal addresses are often restricted to domestic addresses.

Therefore, in preparing for a full rollout of a European graduate survey, it is strongly recommended to, firstly, check the quality and availability of contact information in the data sources envisaged at an early stage and, secondly, to take actions for improving contact information of graduates duly before the full rollout.

Conflict with existing surveys

The data collection for a European graduate survey could conflict with existing surveys. Information on this issue was collected in the EUROGRADUATE experts' survey as well as discussed with representatives in the expert interviews. For detecting possible conflicts with other existing surveys, it was asked: "For a potential European graduate survey, it is suggested to do a repetition every four years (e.g. 2020, 2024) and survey graduates about 1 year and 5 years after graduation. Do you see a conflict with existing graduate surveys at national, regional, or institutional level?"

Figure 5.10 Potential conflicts with existing surveys

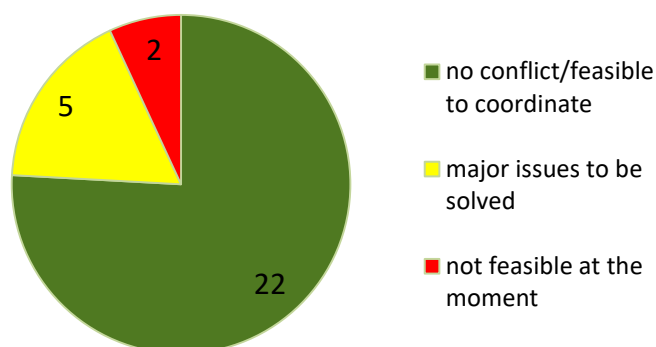


Source: EUROGRADUATE country experts' survey

Representatives from 17 out of 32 systems did not see a conflict, usually because there is no regular graduate survey at national level and because institutional surveys are not very widespread. But there could be conflicts in about half of the systems covered, mostly with national level surveys. In smaller numbers of countries, conflicts with studies at regional and institutional level were possible as well.

Moreover, the reasons of potential conflicts were asked for in the enquiry. Competition for respondents was mentioned quite often, resulting in survey fatigue among graduates and the risk of decreasing response rates. Countries with a long tradition of surveys at the national or institutional level or yearly surveys expressed concerns about harming their well-established survey system. There were also critical remarks on a potential doubling of information because the European survey topics are in parts already covered by the existing surveys. Another reason for potential conflicts was the competition for funding.

Figure 5.11 Feasibility assessment of conflict with existing surveys



Source: EUROGRADUATE experts' interviews

In the expert interviews, the question of possible conflict with existing surveys was taken up again. In talking to country representatives we were also seeking for ways of coordinating existing surveys with a potential European survey (the country sheets describe possible solutions for the respective higher education system). For three quarters of the systems with available information no such conflict is at stake or it was seen as feasible to solve this conflict (Figure 5.11). Comparing this result with the numbers of the EUROGRADUATE survey (Figure 5.10), shows that for several countries the view on the potential conflict has changed or that in the wake of the interviews feasible solutions for coordinating existing surveys with a potential European graduate were identified.

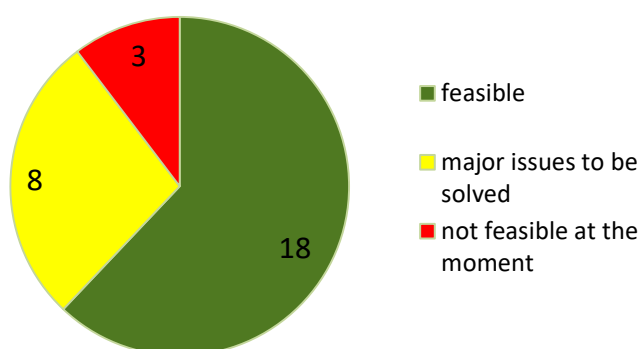
At the same time, it needs to be acknowledged that for seven systems this problem is not (yet) solved. For two systems, to date no realistic solution could be specified. For five systems it is possible to describe ways of coordinating existing surveys with conducting the data collection for a European graduate survey. At the moment it cannot yet be assessed whether these solutions are feasible, but they are seen as realistic options by country representatives. In preparing for a potential full rollout of a European graduate survey, these options would need to be further explored if countries want to participate.

5.2.4. Overall feasibility assessment & capacity building

Figure 5.12 depicts the overall feasibility assessment for the Erasmus+ countries. For 18 higher education systems, i.e. about 60% of the 29 Erasmus+ systems with available information, participating in a European graduate survey is assessed as feasible. For 8 systems, major obstacles would need to be overcome to facilitate participation. While realistic solutions for these obstacles were identified, it is not yet possible to say whether these solutions would work out. Only for three countries the feasibility of participation is assessed negatively without being able to identify promising solutions.

Which factors lead to negative assessments? For all three systems with the colour code "red" (Flanders, the Netherlands, and the UK) a certain lack of interest is to be asserted. These countries do not see much added value in participating in European graduate survey as compared to the tracking system in place (the Netherlands), or the expected cost-benefit-ratio is not very good (Flanders). Moreover, in two of the three countries (the Netherlands, and the UK) there are strong concerns that a European graduate survey could harm existing national level graduate surveys. For both countries, no realistic solution for coordinating with a European graduate survey could be identified (the UK) or possible solutions are seen with scepticism (the Netherlands).

Figure 5.12 Overall feasibility of participating in European graduate survey



Source: EUROGRADUATE experts' interviews

Eight countries have the colour code "yellow". Which obstacles are to be overcome, which issues would need to be solved? For five countries, coordinating existing graduate tracking systems with a potential European survey is the problem: Germany, Denmark, Finland, France, and Ireland. All these countries are generally interested in participating in European graduate survey and all of them meet the technical conditions for running a graduate survey. Moreover, for all countries possible solutions for coordinating with existing tracking systems were identified. However, to date it is not fully sure whether these solutions would work out and further steps would need to be taken to facilitate the participation of these countries in full rollout of a European graduate survey. For three countries, contacting of graduates is not assessed as feasible: Lithuania, Luxemburg, and Slovenia. Lithuania was one of the EUROGRADUATE pilot countries and for this end identified and contacted graduates via a variety of ways. This has proven challenging and it is unclear whether these options jointly cover the graduates sufficiently well for a full rollout. In Luxemburg, private e-mail addresses and phone numbers would be available for contacting graduates but these could only be used if graduates were informed about this beforehand. Moreover, most higher education students from Luxemburg graduate in another country. It is unclear, if a European graduate survey could provide information on this group and thus, the interest of Luxemburg is also limited. In Slovenia, the quality of contact information at HEIs is unclear and graduates often do not consent to being contacted again for surveys. Thus using a central is seen as a more promising option but for this an amendment of the HE act would be needed.

Experts have been asked how data collection conditions for participating in a European graduate survey could be improved. Improving the availability of up-to-date contact has been mentioned most often by experts. This measure of 'capacity building' has been referred to by representatives from 18 systems. Ensuring or gaining the support of HEIs is seen as big issue as well for many systems and was voiced by 14 experts. Finding ways to coordinate existing surveys with a potential European one is seen as an important way to improve data collection conditions in 11 systems. Seven systems each have referred to clarifying data protection questions often related to the GDPR and to resources for running the data collection in the country (e.g. early financial planning, providing resources to HEIs, improving level of expertise of staff at HEIs). Another issue mentioned by several experts is using administrative data to supplement the survey data of a potential European graduate survey.

All in all, it can be concluded that a full rollout of a European graduate survey would be feasible in 18 countries and thus in the clear majority of the Erasmus+ systems with

available information. Further countries could join this group if known problems are overcome for which we were able to specify realistic solutions.

5.3. Data collection conditions in the Erasmus+ countries and feasibility assessment by country

In the following the data collection conditions for a full rollout of a European graduate survey are described country by country for the Erasmus+ higher education systems. The country sheets are primarily based on information kindly provided to us by representatives of the Erasmus+ countries within a standardised questionnaire and a guided qualitative follow-up interview. These expert interviews were conducted online or by phone between February and August 2019. Interview guidelines were conveyed to the interviewees beforehand. Interviewees were representatives of ministries of education, national higher education agencies, national statistics agencies, or other graduate tracking experts in the Erasmus+ countries. Usually the interviewees were at the same time the members of the European Commission's graduate tracking expert group that have been nominated by their respective country.

After the interview, interviewees have been provided with interview protocols for check and approval. Based on these protocols, one-page country sheets have been prepared and again sent to country representatives for check and approval. All in all, we were able to conduct interviews for 29 Erasmus+ countries. For five countries unfortunately no representative was available for an interview.


Each system with available information is covered by a concise one-page country sheet. We have made all efforts to give a valid description of the situation in each respective country. Despite all efforts, descriptions necessarily remain superficial to some extent within a one-page setup and important details may have been missed.


Each country sheet offers some background information on data collection conditions and an evaluation of the data collection conditions regarding four criteria:



- 4. interest in participating in European graduate survey,*
- 5. feasibility of identifying and sampling graduates of the target cohort,*
- 6. contacting graduates of the target cohort, and*
- 7. potential conflict with existing surveys and ways to coordinate with a European graduate survey.*



For these four criteria a feasibility assessment is provided using a three categories colour coding scheme. Green is understood as feasible, not precluding the existence of minor problems or leeway for improvement. Yellow indicates that major issues need to be solved before a participation in European graduate survey is possible. The problems and issues can be identified, and realistic solutions can be named. It is, however, currently not possible to assess whether these solutions really would work out. Red, finally, means that participation is currently not feasible because of major obstacles (including lack of interest) for which to date no solution can be specified (for a definition of the colour code scheme see Annex 6.1)


The country sheet is concluded by a summary and an overall assessment based on the above four criteria. A section on "capacity building" describes how data collection conditions could be improved in the respective higher education system.

<div>Austria</div>	Background information on data collection conditions	
	Size of graduate cohort (2016/17): Bachelors & equivalent: 36,753; Masters & equivalent: 15,676	
	Current graduate tracking surveys: Austria has no regular national level graduate survey. An increasing number of HEIs conducts surveys. Single HEIs conduct graduate surveys annually but typically the pace is lower. Some institutional surveys have a long tradition.	
	Central register of graduates: There is a central register covering the public universities as well as the university colleges of teacher education. Universities of applied sciences & private institutions are not covered. The register has no contact information but postal addresses can be supplemented from the central registration register.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey for allowing international comparisons. International mobility of graduates would be a specifically interesting topic. It would be seen as advantageous if a European graduate survey would lead to streamlining institutional level surveys. HEIs are perceived as somewhat less interested & gaining their support may well be laborious. For the support of HEIs, access to their own data at institutional level is seen as important.		
Identifying & sampling of target cohort		
Identifying & sampling graduates is possible via the central register for public universities as well as university colleges of teacher education. For universities of applied sciences & private universities graduates could be identified & sampled by the HEIs. This has been practiced for the EUROGRADUATE pilot survey as well.		
Contacting of target cohort		
Contacting graduates by letters is possible via the central register for public universities as well as university colleges of teacher education if contact information is supplemented from the central registration register. While contact information is of good quality, postal invitations enforce a media change for participating in an online survey. For universities of applied sciences & private universities, graduates can be invited by the HEIs. This has been practiced for the EUROGRADUATE pilot survey as well. Generally, electronic contacting to date is only possible for some HEIs. The quality of contact information at HEIs is heterogeneous. It is assumed that most HEIs do not have private e-mail addresses of their graduates.		
Conflict & coordination with existing graduate surveys		
A European graduate survey could conflict with institutional surveys with long-traditions, but generally the coordination with existing surveys is not expected to cause major problems.		
Summary, key challenges, & possible solutions		
The participation of Austria in a European graduate survey seems feasible. There is an interest in participation as well as tested ways to identify, sample, and contact the target cohort. The availability of up-to-date contact information, specifically e-mail addresses, is a challenge, however. Furthermore, it is a challenge to convince the HEIs of the benefit of a European graduate survey.		
Capacity building	<ul style="list-style-type: none">• Improve on availability of up-to-date contact information across all HEIs• Ensure support of HEIs at an early stage	

<div>Belgium, Flanders</div> <div><div></div><div></div><div></div></div>	Background information on data collection conditions	
	Size of graduate cohort (2017/18): Bachelors & equivalent: 39,048; Masters & equivalent: 20,045	
	Current graduate tracking surveys: Flanders has no current higher education graduate survey at regional level. The tracking system rather builds on administrative data. Institutional level surveys are widespread. It is assumed that institutions typically conduct surveys every 2-3 years, with variation across institutions.	
	Central register of graduates: The ministry of education of Flanders has a central register covering about 95% of all graduates. Graduates from private HEIs are partially but not fully covered. The register contains postal addresses from the time of enrolment.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
Without precluding a definite decision, Flanders is currently not interested in participating in a European graduate survey. Flanders seeks to use existing data sources as far as possible and is not convinced that the expected costs of a European graduate survey are outweighed by its benefits. Moreover, there are concerns about low response rates and, as a consequence, a non-satisfactory quality of the data. Nevertheless, the added value of comparative information is seen.		
Identifying & sampling of target cohort		
The register of the ministry of education of Flanders would allow identifying and sampling graduates of a given cohort. The register covers about 95% of all graduates with private HEIs only partially being covered.		
Contacting of target cohort		
The central register has postal addresses of graduates but only from the time of enrolment. It contains a unique identifier, allowing supplementing up-to-date postal addresses stored in the national register (rijksregister) governed by the Ministry of Internal Affairs of Belgium. Jointly, these registers could be used for sampling graduates and contacting graduates with letters, if compliance with the GDPR is secured. It is yet unclear, if graduates could be invited electronically as well. It is assumed that HEIs mostly collect institutional e-mail addresses only and do not update e-mail addresses. Generally, availability and quality of contact information varies across institutions. While it is technically feasible to combine contact information of HEIs with the central register, it is unclear if this would be in line with the GDPR and if institutions would agree to this.		
Conflict & coordination with existing graduate surveys		
A European graduate survey is not expected to conflict with institutional graduate surveys.		
Summary, key challenges, & possible solutions		
Identifying, sampling, and contacting graduates by postal mail seems feasible for Flanders. For preparing for a full rollout, the legal and technical preconditions for e-mail invitations should be explored and up-to-date e-mail addresses ensured. No conflict is expected with existing surveys. Currently, Flanders is not interested in participating in a European graduate survey. For changing this view, the added value would need to be clearly visible and the costs would need to be clear and manageable.		
Capacity building	<ul style="list-style-type: none">• Further explore the options of contacting graduates by letters, by e-mail, & coordinating both modes.• Improve on availability & homogeneous quality of up-to-date contact information across all HEIs• Ensure that contacting of graduates by HEIs is in line with data protection legislation	


<div>Belgium, Wallonia</div> <div></div>	Background information on data collection conditions	
	Size of graduate cohort (2017/18): Short-cycle: 14,599; Bachelors & equivalent: 24,372; Masters & equivalent: 17,114	
	Current graduate tracking surveys: The French-speaking community of Belgium does not run regular regional graduate surveys. There is wide use of an administrative database.	
	Central register of graduates: To date, there is no central database covering all types of HEIs. The SATURN database covers information on all non-university institutions (universities of applied sciences, art schools etc.). A database covering graduates from all types of HEIs is currently being built. It is expected to be available from on 2021 latest but it has not yet been tested. The cohort 2018/19 will be the first to be covered by this database. Moreover, Wallonia has central database on HE students which could provide data on graduates as well, starting from the cohort 2020/21. Both databases will cover an ID, kind of diploma, degrees of ISCED and credits, but no contact details.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. Generally, the federation of higher education institutions of Wallonia ARES (Académie de recherche et d'enseignement supérieur) sees graduate tracking as a relevant mission. The HEIs, as members of ARES, would need to see a European graduate survey as beneficial as well. The possibility to exploit national or regional data would presumably be seen as an important benefit by institutions. For a decision, the costs and resources would need to be known.		
Identifying & sampling of target cohort		
A central database on graduates is currently being built and it is assumed that graduates could be identified and sampled by either the database on graduates or the database on students from on the year 2021. As long as these databases are not yet available, graduates could be identified by the HEIs.		
Contacting of target cohort		
The HEIs are in charge of the graduates' contact details and cannot transfer the contact details for legal reasons. The kind and quality of contact information at HEIs is not fully clear. Assumingly HEIs collect private e-mail addresses, postal addresses and telephone numbers, but the availability of contact information is heterogeneous across institutes. Art schools could be less motivated to participate or have contact information of lower quality. While the quality of contact information at the HEIs can be improved and is unclear to some extent, it is expected that it is sufficient to facilitate contacting of graduates reasonably well.		
Conflict & coordination with existing graduate surveys		
There is no conflict with existing surveys in Wallonia.		
Summary, key challenges, & possible solutions		
The participation of the French-speaking community of Belgium in a European graduate survey seems feasible. Generally, there is an interest for participation. The support of the HEIs is indispensable for conducting the survey and they would need to see it as beneficial as well. The graduates could either be identified by the HEIs or, in the future, by central databases. Graduates need to be contacted by the HEIs. The quality of contact information is unclear to some extent but expected to be sufficient.		
Capacity building	<ul style="list-style-type: none">• Check on the quality of contact information at HEIs and improve the availability of up-to-date contact information as necessary.• Investigate the option of administrative data feeding into the European graduate survey (and vice versa)• Ensure support of HEIs at an early stage and develop specific benefits for them such as the exploitation of national or regional data	


<div>Bulgaria</div> 	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: 29,272; Masters & equivalent: 22,351	
	Current graduate tracking surveys: There is no national level graduate survey in Bulgaria. Some HEIs conduct graduate surveys but this is not very widespread.	
	Central register of graduates: There is a central register of graduates covering all HEIs. However, figures provided by HEIs do not always match the field of study coding scheme of the register & sometimes HEIs cannot provide the exact numbers of graduates. The central register has no contact information. It is unclear if contact information could be supplemented.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. Graduate tracking is becoming more important in Bulgaria in general. There is a perceived lack of reliable data on graduates which a European graduate survey could help to fill. Mismatch of higher education & employment is one of the topics seen as specifically relevant for Bulgaria. Further stakeholders interested are: the national social security institute, researchers, & the HEIs. For HEIs to see the project as valuable, data at the institutional level would be helpful.		
Identifying & sampling of target cohort		
Graduates could be identified & sampled with the central register. As figures seem not always to be fully accurate &/or match with the field of study coding schemes used at HEIs, identifying & sampling graduates at HEIs might be a good alternative. A European graduate survey would need to provide expertise & tools enabling HEIs to sample graduates.		
Contacting of target cohort		
50 of 51 universities run career development centres with good alumni networks. These networks cover all graduates. The career development centres have e-mail databases, usually covering the private mail addresses. These addresses are updated during studies. Universities of Arts and Colleges of Arts are not always equipped with career centres. They have small numbers of graduates and it is assumed that they could reach them easily.		
Conflict & coordination with existing graduate surveys		
It is not expected that there is a conflict with existing graduate surveys.		
Summary, key challenges, & possible solutions		
The participation of Bulgaria in a European graduate survey seems feasible. There is an interest in participation. It is expected that HEIs would be very engaged in supporting a European survey, if they see a value in the project. Identifying, sampling, & contacting graduates could be done via the HEIs if they are supported by a central coordination of a European graduate survey.		
Capacity building	<ul style="list-style-type: none">• Ensure that field of study coding schemes used by the central register & HEIs can be matched with international coding schemes (ISCED-F).• Improving level of expertise of staff at HEIs	

<div>Croatia</div> <div></div>	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: 18,409; Masters & equivalent: 14,795	
	Current graduate tracking surveys: There is no national level graduate survey and only few surveys at institutional level. Moreover, the Agency for Science and Higher Education (AZVO) runs a graduate survey with a larger number of HEIs. Currently AZVO is adapting the design of the survey to the EUROGRADUATE Pilot Survey to improve compatibility and ease participation in a possible full rollout.	
	Central register of graduates: There is no central register of graduates. The Information System of Higher Education Institutions (ISVU) encompasses a considerable proportion of Croatian HEIs, however, and could be used to identify graduates in these HEIs. The ministry strives for improving the situation by drafting a bylaw to build a data base including the exact date of graduation.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is strongly interested in participating in a European graduate survey. The HEIs are interested as well but would need to see the added value of European graduate tracking. E.g. insights on the quality of teaching and learning would be appreciated presupposing the availability of information at institutional level. Smaller HEIs and universities of applied sciences might be more ready to participate whereas the bigger non-integrated universities often work very autonomously with a separate financing.		
Identifying & sampling of target cohort		
The target cohort could be identified by HEIs which are obliged to keep lists of graduates. For Croatia's large non-integrated universities such lists may only be available at faculty level. For the EUROGRADUATE Pilot Survey, graduates have been identified and contacted centrally for those HEIs participating in the graduate survey of AZVO. A key advantage of this approach is that AZVO collects contact data from about the time of graduation. HEIs not participating in AZVO's programme have been asked for lists of graduates with contact information. If legal questions are clarified, the ISVU could be used for identifying graduates as well. For a European graduate survey, the ministry would want to contact all graduates rather than a sample to allow for institutional level analyses.		
Contacting of target cohort		
While HEIs collect contact information at enrolment or during studies this information may be outdated. Many HEIs collect contact information for the purpose of inviting graduates to the graduation ceremony which is a source of relatively up-to-date information. Generally, the quality and availability of contact information differs strongly across institutions. Besides the information stored at individual HEIs, the database of AZVO has been used for the EUROGRADUATE pilot survey. AZVO prepares lists of graduates including contact details for a number of HEIs but not for the full HE system. While contacting of graduates seemed to have worked reasonably well for the EUROGRADUATE pilot survey, the ministry sees leeway for improvement. Thus, it is drafting a bylaw that will define the ownership of contact information of HEIs.		
Conflict & coordination with existing graduate surveys		
There are no conflicts with the existing graduate surveys expected.		
Summary, key challenges, & possible solutions		
The participation of Croatia in a European graduate survey seems feasible. There is a strong interest for participation, but a definite decision requires the results from the pilot survey. Identifying and contacting graduates worked out for the EUROGRADUATE pilot survey but was challenging and costly. The ministry prepares a bylaw to improve the situation.		
Capacity building	<ul style="list-style-type: none">• Peer learning: Further exchange of experiences from the pilot survey and how obstacles were overcome• Clarify the data protection regulations• Improve on identifying the target cohort and the availability of up-to-date contact information• Raise awareness for the importance of graduate tracking among HEIs	



<div>Cyprus</div> <div></div>	Background information on data collection conditions	
	Size of graduate cohort: Bachelors & equivalent: 3,648; Masters & equivalent: 4,683 (2016/17)	
	Current graduate tracking surveys: There are plans to start a national graduate survey with a questionnaire geared to the questionnaire of the EUROGRADUATE pilot survey. This survey would first address the public universities who are potentially more ready to participate and test the feasibility. Moreover institutional level surveys already investigate the number of graduates and deliver this information to the statistical offices (no information on the entry to the labour market).	
	Central register of graduates: There is no central register of graduates.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
<p>The ministry is strongly interested in participating in a European graduate survey and so are Cyprus' public HEIs. Topics of interest are e.g. employability, skills acquirement, interest in further studies, and mobility. It is expected that private HEIs are somewhat less interested as they conduct their own surveys. Generally, for convincing HEIs to participate, benefits would need to be highlighted and accordance with the GDPR ensured. Another precondition is the availability of adequate staff and a research centre to conduct the survey within Cyprus, and the University of Cyprus might be an option for that.</p>		
Identifying & sampling of target cohort		
<p>All Universities have career centres called «liaison offices». These offices have lists of graduates which could be used for identifying the target cohort.</p>		
Contacting of target cohort		
<p>The Universities collect contact details of all students in the registration office and of their graduates at the liaison offices. Private and institutional e-mail addresses as well as postal addresses are collected. It is unknown to what extent these addresses are updated but institutional e-mail addresses are typically valid and used by graduates for certain period of time after graduation.</p>		
Conflict & coordination with existing graduate surveys		
<p>Most likely there will not be any conflicts with existing graduate surveys. For those HEIs carrying out institutional level graduate surveys more persuasive efforts might be required, however. Cooperation with the HEIs and the liaison offices is suggested where the University of Cyprus could act as coordinating institution. Cyprus currently prepares a graduate survey. The fieldwork is expected to be done before the data collection of a European graduate survey would take place. This experience could help preparing for participating in a full rollout of a European graduate survey.</p>		
Summary, key challenges, & possible solutions		
<p>The participation of Cyprus in a European graduate survey seems feasible. There is a strong interest for participation. Graduates of the target cohort could be identified and contacted with the support of the liaison offices at the Universities and possible similar offices at the other HEIs. Institutional e-mail addresses seem to be a good way to contact recent cohorts of graduates. This option and the availability of up-to-date contact information in general should be further explored. The readiness of private HEIs to participate should be checked. No conflict is expected with existing and planned surveys.</p>		
Capacity building	<ul style="list-style-type: none">• Provide financial support for HEIs to maintain contact data platforms & staff• Check and ensure availability of up-to-date contact information• Develop strategies to persuade private HEIs to participate• Identify research centre for conducting the survey & provide expertise to staff• Experts and financial support from the European Commission to fulfil the aforementioned targets would be more than welcomed.	



<div>Czechia</div> 	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: ~ 35,000; Masters & equivalent: ~ 30,000	
	Current graduate tracking surveys: A national graduate survey is carried out at intervals of 3-4 years. The questionnaire and survey design are based on REFLEX. It is envisaged to run the survey every 4 years and harmonize the timing with institutional surveys. Most institutions conduct graduate surveys as well. Some institutions have long tradition in that.	
	Central register of graduates: The Ministry of Education, Youth, and Sports manages a central register covering all higher education graduates. To date, it contains no contact information, but e-mail addresses will be included from 2020 on.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is a strongly interested in participating in a European graduate survey. Financial support by the EU and the option of adding country-specific questions to the survey are seen as preconditions for participation, however. There is a sense that HEIs are interested as well, though less than the ministry. It is assumed that HEIs would be interested in access to institutional level data and the possibility of non-public comparisons against national, international or institutional benchmarks.		
Identifying & sampling of target cohort		
The graduates of the target cohort can be identified by use of the central register.		
Contacting of target cohort		
To date, the central register contains no contact information, but a change of the law makes it possible to collect e-mail addresses in the student register from 2020 on. Graduates could then be contacted independently of the HEIs. HEIs typically use and collect private e-mail addresses. Some HEIs also use institutional e-mail addresses. The kind and quality of contact information varies across institutions to some extent but in the aftermath of the GDPR graduates were contacted for the consent to use their e-mail address and thus contact details were updated. Contacting graduates via the HEIs is possible. The level of expertise and experience of staff at HEIs is heterogeneous and the communication and coordination of the HEIs has proven to be very laborious in the EUROGRADUATE pilot survey.		
Conflict & coordination with existing graduate surveys		
For coordinating the national survey and a European survey the preferred option is to combine both surveys into one. While this is regarded as feasible, it is recommended to take enough time (about 2 years), to coordinate and align the surveys. The option of adding country-specific questions to the survey is seen as a way to ease combining both surveys. It is expected that HEIs could reserve a year for a European graduate survey without major problems, if this is known early enough.		
Summary, key challenges, & possible solutions		
The participation of the Czech Republic in a European graduate survey seems feasible. There is an interest in participation. Identifying and sampling of the graduates of the target cohort could be done with the central register. A new law enables the supplement of contact information to the register which allows contacting graduates independently of the HEIs.		
Capacity building	<ul style="list-style-type: none">Improving level of expertise of staff at HEIsImprove on availability & homogeneous quality of up-to-date contact information across all HEIs	



<div>Denmark</div> 	Background information on data collection conditions	
	Size of graduate cohort (2018): short-cycle degrees: 9,197; Bachelors & equivalent: 40,289; Masters & equivalent: 23,387	
	Current graduate tracking surveys: A graduate survey is conducted every second year targeting graduates 1 and 2 years after graduation, i.e. every second year all graduates of two subsequent cohorts are surveyed. A primary goal is to give guidance to potential student on their educational choice. The survey data is integrated with Statistics Denmark's register data covering all educational steps from pre-school education to adult education. It is possible to link this data to further administrative data sources via Statistic Denmark using the Central Personal Registration (CPR number) as a unique identification key. Monitoring of graduates is mandatory for HEIs and institutional level surveys are done every 1, 2 or 3 years.	
	Central register of graduates: There is no central register of HE graduates.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
Generally, the ministry is interested in participating in a European graduate survey and comparative data. However, more information would be needed on the design, organization, and costs for clearly voicing interest. It is decisive that the indicators for international comparisons are well chosen and thus an added value is achieved.		
Identifying & sampling of target cohort		
HEIs can provide information on which graduates are part of the target cohort. This is also the procedure used for the national level survey. Based on this information the ministry could draw a random sample of the target cohort.		
Contacting of target cohort		
The HEIs collect contact information; however, using e-Box is seen as recommendable way to contact graduates electronically and safely. e-Box is the official channel through which the public administration sends important information. Thus, invitations via the e-Box are very likely to be read. Graduates identities and e-Box addresses can be linked by the CPR.		
Conflict & coordination with existing graduate surveys		
The question of how to coordinate a European graduate survey with existing data collections remains open to some extent. The national level graduate survey of Denmark contacts all graduates of two subsequent cohorts. An adaptation of Danish survey is not possible because of its specific purposes. A possible solution for cooperation is to draw a random sample of the target cohort which would be invited to the European graduate survey. However, much of this data is already available from administrative sources and would be collected again which is seen as a downturn. To date, it is unclear whether the Danish ministry would approve of this option. Providing register data or integrated survey and register data at micro level to a European consortium is not possible. Alternatively, Denmark could provide aggregate level indicators only, if comparability with the European survey data is ensured.		
Summary, key challenges, & possible solutions		
There is an interest in participation, but the benefits need to be clarified against potential costs. Identifying and sampling of the graduates of the target cohort as well as contacting them would be feasible. The question of how to coordinate with existing data collections is not fully solved yet. A possible solution could be the participation of a random sample of the target cohort, but it is not yet clear, whether the ministry would approve of this option.		
Capacity building	<ul style="list-style-type: none">• Clarify acceptance of options to participate in a European graduate survey• Clarify added value for international comparison on data already available in Denmark	



Estonia	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: 5,502; Masters & equivalent: 3,327	
	Current graduate tracking surveys: A national level graduate survey is done every 3 years. The current survey covers three cohorts: 2016, 2017 and 2018. Former surveys covered one cohort only with an additional qualitative survey of three cohorts of foreign students. Additionally, there are institutional level surveys, which are coordinated by an agency.	
	Central register of graduates: In a central register (EHIS) everybody who registers for HE is listed with information on the studies. The information is provided by the HEIs, however it is not compulsory to give or update private e-mail addresses. Postal addresses are available in the register.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. Topics of interest are labour market transition, (mis)match, mobility and the effects of mobility experiences, "social guarantees" to students, the comparison of Estonian- and Russian-speaking graduates, and the comparison with countries in a similar economic situation in general. The willingness of HEIs might depend on their resources so that smaller universities might be less willing to participate. Besides it is decisive that there is an option to add a country-specific module to the questionnaire.		
Identifying & sampling of target cohort		
For the national survey convenience sampling is applied. HEIs can identify the target cohort and it is assumed that they would be ready to identify and contact the graduates of the target cohort. It is not yet clear whether data protection laws in Estonia would allow HEIs to provide information for the purpose of centrally identifying or sampling the target cohort. Due to the small size of a graduate cohort in Estonia, all graduates should be contacted rather than a sample.		
Contacting of target cohort		
Only the HEIs have correct contact details of their students. Usually, the institutional and private e-mail addresses are available, and the quality and coverage is very similar across institutions. Telephone and postal address could be available as well. Students have to revise their contact information annually. It is not yet clear whether data protection laws would allow for HEIs to share contact information for central contacting. However, graduates could be contacted by the HEIs for the purpose of a European graduate survey and it is assumed that they would be ready to do so. This is also the way the national level survey is conducted.		
Conflict & coordination with existing graduate surveys		
Conducting a European graduate survey besides to the national survey evokes a risk of over-surveying the graduate population. Thus, both surveys need to be coordinated. It is judged as an option to conduct the European graduate survey every 4 years and the national survey every 3 years. In case, the same graduate cohort would be targeted by both surveys, it is seen as an option that the national level survey disposes of this cohort, if country-specific modules can be added to the European survey.		
Summary, key challenges, & possible solutions		
The participation of Estonia in a European graduate survey seems feasible. The Estonian ministry is interest in participation and sees a need for comparative information. A definite decision requires the results from the pilot survey and discussions with relevant stakeholders (HEIs, student organizations etc.). Identifying and contacting of the graduates of the target cohort could be done with the support of the HEIs. For the coordination of the national and the European survey it is seen as an option that the national level survey disposes of a graduate cohort in case of conflict.		
Capacity building	<ul style="list-style-type: none">• Settle uncertainties in the field of data protection• Develop a concept of a European questionnaire that can also cover country specific topics	



<div>Finland</div> 	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: 24,504; Masters & equivalent: 15,162	
	Current graduate tracking surveys: Finland has a long tradition in graduate tracking especially in universities. The national surveys are coordinated by the Aarresaari network of Academic Career Services. There is a yearly survey 5 years after graduation mainly focusing on Masters (it is uncommon to finish studies with a Bachelor). The Kandipalaute survey covers Bachelors in the year of graduation. Several HEIs do their own surveys one year after graduation. The labor unions are active in surveying graduates as well. The Graduate tracking survey for Universities of applied sciences will have been implemented twice by the end of 2019.	
	Central register of graduates: There is a central register with information on graduates administered by Statistics Finland. Moreover, the higher education achievement register VIRTa contains data on study rights, degrees, study attainments and their assessment, term-specific enrolments and international mobility periods in Finnish higher education institutions.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry might be interested in participating in a European graduate survey. Any decision has not been yet made. There are concerns about survey fatigue and the risk of decreasing response rates if Finland joins a European survey. For an assessment, the results of the EUROGRADUATE pilot survey and the European Commission's graduate tracking experts group are seen as crucial before any decisions are made. To convince HEIs to participate, information at institutional level for non-public use could be an asset for HEIs. In addition, HEI's want more information about the use and ownership of the data gathered in a European survey.		
Identifying & sampling of target cohort		
The register of Statistics Finland could be used for sampling, but going via HEIs is assumed to be more practical. The VIRTa database (see "central register") contains has a copy of HEI's study register's contents. Extraction of data requires consent of HEIs.		
Contacting of target cohort		
The Finnish Universities get contact details of graduates from the population register and their student and alumni registers and do the contacting for the national graduate survey centrally. There has been capacity building in Finland and an improvement of the alumni data collection so that today private e-mail addresses and telephone numbers (for text messages) are available and updated for many, but not all. Universities of applied sciences are in charge of providing contact information of their graduates. They use their own student registers as well as their alumni registers for contact details. All in all, the availability and quality of contact information is very good.		
Conflict & coordination with existing graduate surveys		
A European graduate survey would conflict with the existing national graduate survey if it contacts graduates 5 years after graduation as well (which was the approach of the EUROGRADUATE pilot survey). To avoid double-surveying, the European survey would either need to dispense of a survey 5 years after graduation or the national and the European questionnaires would need to be aligned or done in cooperation. The feasibility and acceptance of this approach cannot yet be assessed.		
Summary, key challenges, & possible solutions		
Technically, the participation of Finland in a European graduate survey would be feasible. Identifying and sampling of the graduates of the target cohort as well as contacting them could be done with the support of the HEIs. There is initial interest for participation, but more information is needed before making a decision. The results of the pilot survey and the tracking experts group would need to be available. Participation would require the acceptance of the HEIs and the Aarresaari network. The feasibility of options to coordinate a European survey with existing surveys would need to be ensured.		
Capacity building	<ul style="list-style-type: none">• Early preparation of a participation in a European graduate survey• Starting discussions with Aarresaari & HEIs about potential participation• Developing a "roadmap" on how to deal with existing surveys• Aligning the questionnaires of the Finish & the European graduate survey	



<div>France</div> 	Background information on data collection conditions	
	Size of graduate cohort (2018): Bachelors & equivalent: ~49,000; Masters & equivalent: ~108,000	
	Current graduate tracking surveys: The French Ministry of Higher Education, Research, and Innovation annually conducts a full-population graduate survey. Graduates are surveyed ~30 months after graduation. Expectedly this survey will be done biannually in future. Moreover, Céreq surveys a sample of graduates of all educational sectors of France every 3 years (every 4 years soon). Céreq contacts graduates 3 years after graduation. Further graduate surveys exist at regional & institutional level.	
	Central register of graduates: There is a central register covering graduates from universities, business schools, schools of engineering, and private institutions. Very small private schools such as schools for art or dance are not covered by the register. All in all, more than 90% of the graduate population is covered. The register has no contact information; whether contact information could be added is unclear.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is strongly interested in participating in a European graduate survey for means of international comparison, especially with countries of similar size. However, for participation, a European graduate survey would need to be coordinated with other graduate surveys, primarily the survey of the ministry. It is expected, that the vast majority of HEIs would be interested as well for international & institutional level comparisons. The added value would need to be conveyed to the HEIs to convince them to participate. In order to prepare such a survey in France, its start would need to be known 1-2 years before.		
Identifying & sampling of target cohort		
Graduates could be identified & sampled with the central register. For the survey of the ministry, lists of graduates to be contacted are selected from the central register & provided to HEIs for contacting graduates.		
Contacting of target cohort		
Graduates should be contacted by HEIs for motivating them to participate & achieve good response rates. The HEIs usually collect institutional as well as private e-mail addresses & postal addresses. As the HEIs know they have to keep in touch with their graduates, contact information is regularly updates, typically by alumni associations. Thus, contact information is expected to be of good quality. However, the kind of contact information differs across HEIs to some extent & the ministry's graduate survey therefore is a multi-mode survey. For a European graduate survey, it would need to be checked if the contact information available allows for a one-mode online-survey.		
Conflict & coordination with existing graduate surveys		
A European graduate survey would need to be coordinated with existing graduate surveys, primarily the ministry's survey. Presumably, the rhythm of the survey will change to every 2 years. Two ways of coordinating a European survey with the ministry's survey are seen as realistic options: 1) Every second national survey could be done within the frame of a European graduate survey. 2) A European graduate survey could be done in years where no national graduate survey is done. Another possibility is drawing a random subsample, but this is seen as less appealing.		
Summary, key challenges, & possible solutions		
Generally, the participation of France in a European graduate survey seems feasible, however to date it is not fully clear, whether the options to coordinate it with the ministry's survey would work out. Thus, the support of the ministry & the HEIs to support any of these solutions would need to be checked beforehand.		
Capacity building	<ul style="list-style-type: none">• Ensure the availability of contact information allowing to invite to an online survey• Start early with gaining the support of HEIs for a European graduate survey• Clarify how a European graduate survey could be coordinated with the ministry's survey & ensure support for this solution	


 Germany	Background information on data collection conditions	
	Size of graduate cohort (2016): Bachelors: 239,649; Masters: 124,278; State examination: 53,305	
	Current graduate tracking surveys: In Germany there is a long-standing tradition of graduate surveys at national, regional, and institutional level. Besides, there are steps being undertaken to establish tracking for the entire student lifecycle from the end of upper secondary education to employment.	
	Central register of graduates: There is no central register of graduates. The (legal) possibilities of a central educational register (including graduates) are currently investigated.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The Federal Ministry of Education and Research is interested in participating in a European graduate survey as long as existing surveys and the collection of data for national monitoring are not compromised. Therefore, fundamental questions on the final methodology of a European graduate survey need to be clarified first, the coordination/integration with existing surveys has to be secured and relevant stakeholders have to be included in the decision-making process (e.g. rectors' conferences and education ministries of the Länder). At the same time, the HEIs need to be convinced to participate. Providing HEIs with institutional level data for their own use (i.e. non-public) would presumably be seen as an asset by HEIs.		
Identifying & sampling of target cohort		
As there is no central register, to date graduates of a certain cohort would need to be identified via the HEIs. For the current national graduate surveys, HEIs are typically not drawing samples and it is unclear whether they would be ready to do so. For the EUROGRADUATE pilot survey cluster sampling has been used to provide for a random sample.		
Contacting of target cohort		
Due to data protection regulations, contacting of graduates would need to be done via the HEIs. Typically, HEIs collect contact information of their students (postal addresses, private and institutional e-mail addresses). However, the kind and quality of contact information differs across institutions. For the EUROGRADUATE pilot survey, most HEIs contacted graduates via e-mail and postal letters, which worked reasonably well.		
Conflict & coordination with existing graduate surveys		
For participating in a European graduate survey, the coordination with existing graduate surveys is a key issue in Germany. National graduate surveys work jointly since recent years. A European graduate survey would need to be integrated with national surveys to avoid double-surveying. A modular approach could be an option. For this, compatibility of established survey instruments with a European instrument would need to be tested and ensured. Where compatibility cannot be achieved the German questionnaires could be supplemented by modules of a European questionnaire. However, the feasibility of this option cannot yet be assessed.		
Summary, key challenges, & possible solutions		
The participation of Germany in a European graduate survey requires strategies for integrating it with existing graduate surveys at national and probably also at regional level. There is an interest in participation, but the method and design have to be clear first. Identifying, sampling, and contacting of the graduates of the target cohort can only be done with the support of the HEIs. Generally, HEIs might be interested in a European graduate survey, but gaining their support is another key challenge. Institutional level data could be seen as an asset by HEIs.		
Capacity building	<ul style="list-style-type: none">• Developing and testing a way to integrate a European graduate survey with existing surveys• Getting in touch with HEIs and ensure the participation of an adequate number of HEIs	



Hungary	Background information on data collection conditions	
	Size of graduate cohort (2017): Bachelors & equivalent: 29,346; Masters & equivalent: 18,600	
	Current graduate tracking surveys: In Hungary there is a comprehensive graduate tracking system since 2010 which is being redesigned in 2019 to improve the response rates. The annual survey will have a shorter modular structure with mandatory core topics and rotating focus topics. Graduates 1 and 5 years after graduation are covered, but not in a panel design. The survey data is collected centrally within the Eversis system. HEI clean the data and send it to the educational authority which builds the national dataset.	
	Central register of graduates: There is a central register of students in Hungary which contains the postal addresses and mostly private e-mail addresses. After graduation an update of the contact details is legally no longer possible. HEIs are not obliged to provide their contact information to the register.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. A precondition for participation is an overlap of topics of the European survey with the Hungarian national survey but that is largely given. The data collection would need to be coordinated with the national survey. It is seen as important to aim at shortening the questionnaire. There is specific interest in graduates working abroad.		
Identifying & sampling of target cohort		
Graduates of the target population could either be identified by the register or by the HEIs. For the Hungarian survey all graduates are invited. Drawing samples should be possible as well.		
Contacting of target cohort		
The central register contains postal addresses and mostly private e-mail addresses. The contact information at HEIs is of better quality as mailing lists are maintained through alumni networks, job portals and cooperation connections with the labour market. Therefore HEIs contact graduates for the national survey.		
Conflict & coordination with existing graduate surveys		
A European graduate survey would need to be coordinated with national graduate survey. A way of cooperation could be to run a European survey as one of the modular parts of the national survey and thus replace the national survey every 4 years. Adapting the national questionnaire to the European questionnaire is seen as an option. A precondition would be that questionnaire topics relevant for Hungary are covered. The panel design envisaged for a European graduate survey could be a challenge as the Hungarian system cannot do the identification needed for a repeated surveying so far.		
Summary, key challenges, & possible solutions		
The participation of Hungary in a European graduate survey seems feasible. There is an interest for participation. As for the national survey, it is recommended to identify and contact graduates by the HEIs. A European survey would need to be coordinated with the national survey. Running the European survey every 4 years instead of the national survey is seen as a realistic option if survey topics of interest are covered.		
Capacity building	<ul style="list-style-type: none">• Systematically update or supplement contact information• Ensure coordination of a European survey with the national survey and align questionnaires	






<div>Iceland</div> 	Background information on data collection conditions	
	Size of graduate cohort (2016/17): Bachelors & equivalent: 2,792; Masters & equivalent: 1,793	
	Current graduate tracking surveys: Iceland has no regular national level graduate survey yet. Some institutional level surveys exist.	
	Central register of graduates: There is no central register of graduates in Iceland. The citizen register could be useful for contacting, but due to data protection legislation this might be difficult.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is strongly interested in participating in a European graduate survey for allowing international comparisons. A system of graduate tracking is seen as highly important and relevant for policy making. It is assumed that besides the Ministry of Education, Science and Culture also the Ministry of Employment of Iceland and the HEIs would be interested and happy to collaborate.		
Identifying & sampling of target cohort		
Identifying the target cohort could be either done by HEIs or the Icelandic Statistics Agency. It is advised to cover all graduates of all 7 HEIs instead of taking a sample of graduates.		
Contacting of target cohort		
The HEIs collect institutional e-mail addresses, mobile phone numbers, and private e-mail addresses of their graduates. Mobile phone numbers and private e-mail addresses are expected to be quite stable. Generally, the quality of the contact data is heterogeneous and should be checked and improved in preparing for a potential European graduate survey. However the University of Iceland, which accounts for about 80% of Iceland’s graduates, collects private e-mail addresses. An option would be to gather the contact information from the HEIs, save it centrally and then also contact graduates centrally. Alternatively contacting could be done decentral by the HEIS. The best approach needs to be decided upon jointly with the HEIs.		
Conflict & coordination with existing graduate surveys		
There is no conflict expected with existing institutional surveys in Iceland. It is advised, however, to coordinate the data collection with EUROSTUDENT to avoid stressing staff capacities at HEIs at the same time.		
Summary, key challenges, & possible solutions		
The participation of Iceland in a European graduate survey seems feasible. There is a strong interest for participation and a full census of graduates would be planned. The HEIs have a central role in identifying and contacting graduates. However these processes need to be organized first and the availability of up-to-date contact information, specifically e-mail addresses, is a challenge.		
Capacity building	<ul style="list-style-type: none">• Develop suitable organizational setup for data collection jointly with HEIs and ensure availability of adequate staff resources• Improve on availability of up-to-date contact information across all HEIs• Ensure support of HEIs at an early stage	



<div>Ireland</div> <div></div>	Background information on data collection conditions	
	Size of graduate cohort (2017): Bachelors & equivalent: 30,324; Masters & equivalent: 11,646	
	Current graduate tracking surveys: The Higher Education Authority (HEA) annually conducts the nation-wide Graduate Outcomes Survey (GOS). The data collection is done by the HEIs. The GOS contacts all graduates of all publicly funded HEIs at about 9 months after graduation. It provides institutional level as well as national level data.	
	Central register of graduates: HEA manages a central register (Student Records System). It covers all publicly funded HEIs (the vast majority of institutions and graduates). For recent student and graduate cohorts, the student's/graduate's full permanent home address prior to entry to the programme of study is covered. This full permanent home address prior to entry (held by the HEA) is never updated and does not necessarily represent the student's/graduate's address for correspondence, nor does the HEA does not have a legal basis for contacting students or graduates.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
HEA and the HEIs are generally interested to participate in a European graduate survey. The practical nature of the survey is decisive for participation (e.g. division of work, resources needed, resources provided, or legal rights). Moreover, it is crucial that the data collection does not conflict with the GOS. It is assumed that HEIs would need to have access to their data at institutional level for their own accounts to be ready to participate.		
Identifying and sampling of target cohort feasible		
Generally, it would be possible to identify and sample graduates of the target cohort in the central register. However, identifying and sampling graduates by the HEIs is seen as best way because, in any case, HEIs would need to be involved in contacting graduates.		
Contacting of target cohort feasible		
For recent graduate cohorts, the postal address is covered in the central register. However, under the current data collection policies and regulations, only the HEIs have the right to contact the graduates (provided the graduate has given consent). To contact graduates for the purpose of a European graduate survey, either adjustments in the HEA data collection notice of GOS would be required or respondents of GOS could be asked at the end of the questionnaire, if they would be willing to be contacted again as part of a European graduate survey. Availability of contact information at institutional level varies. Most HEIs collect postal addresses, private and institutional e-mail addresses, as well as phone numbers. Up-to-date private e-mail addresses should be available for most graduates, as they are often collected at the graduation ceremony. Thus, generally, the quality of contact information is expected to be good. However, quality may vary across institutions, depending on the existence and activity of alumni offices. In many smaller HEIs, there are no alumni offices. For a European graduate survey, the quality and availability of contact information throughout all HEIs (including private institutions) should be checked.		
Conflict & coordination with existing graduate surveys		
Potentially, there is a conflict of a European graduate survey with the GOS. The GOS interviews graduates at about 9 months after graduation (6-11 months). Thus, a way to avoid conflict would be to survey graduates after the GOS, which would be in line with the envisaged design of a European graduate survey (survey at about 18 months after graduation). It would need to be checked whether the HEIs and other relevant organisations agree to this solution. The level of response rates to be expected in this design is unclear.		
Summary, key challenges, & possible solutions		
All in all, it seems feasible to conduct a European graduate survey in Ireland, however it cannot yet be said whether all preconditions will be met. The main challenges are to avoid conflict with the GOS and the agreement of the Irish HEIs to support a European graduate survey. Meeting both preconditions does not seem unrealistic but cannot be taken for granted yet.		
Capacity building	<ul style="list-style-type: none">• Coordinate activities with GOS and ensure participation and support of HEIs• Ensure consent of graduates to be contacted by HEIs for European graduate survey	

Latvia	Background information on data collection conditions	
	Size of graduate cohort: Short-Cycle: 3,354; Bachelors & equivalent: 7,529; Masters & equivalent: 3,598, (2018)	
	Current graduate tracking surveys: There is no national level graduate survey. HEIs carry out institutional level surveys for quality assurance. Administrative data will be available for the monitoring of HE quality at the end of 2019.	
	Central register of graduates: There is a student and graduate register which contains an ID, but no contact information.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey for quality assessment purposes and the potential usage of the obtained data to develop new instruments for higher education institutions performance funding. Other ministries, for instance, the Ministry of Welfare and the Ministry of Economics would also be interested in graduates` careers and employability for policy-making purposes. The HEIs are expected to be interested as well, but would need to see their benefits and the tasks and resources they would need to provide to the project. A European survey would need to enable institutional level comparisons for quality assurance. Questions of financial planning should be discussed early as Latvia has a 3-year budgetary process.		
Identifying & sampling of target cohort		
The target cohort could be identified by use of the central register. A European graduate survey could be carried out by the Central Statistical Bureau (CSB). This is also seen as preferred option by the ministry. The CSB has specific rights in the use of personal data (e.g. linking the graduate register with information from the population register). Sampling could be done by the CSB, too. In that case the ministry would provide information on the graduates` ID to CSB. Involving CSB would also be cost effective because all contact data are already available and the methodology is also approbated by CSB in other surveys, for instance PhD career assessment. If another research organization is to conduct the survey, questions of data protection would need to be solved.		
Contacting of target cohort		
Up-to-date contact information is available in the population register and could be accessed with the support of the CSB. The CSB uses different sources to get contact details and then uses updated postal addresses to send letters with invitations to participate in surveys. This way, for contacting graduates the HEIs would not need to be involved. Alternatively, if another organisation conducts the survey, contacting would need to be done with the support of the HEIs. The HEIs typically collect private e-mail addresses of their graduates.		
Conflict & coordination with existing graduate surveys		
There are no conflicts with the existing graduate surveys expected. However, data protection issues might arise, if the European graduate survey is conducted by a public or private research organization instead of the CSB. The CSB has unlimited access to register data including the population register with up-to-date contact information.		
Summary, key challenges, & possible solutions		
The participation of Latvia in a European graduate survey seems feasible. There is an interest in participation, but a definite decision requires further information on the organization and funding of the project. Identifying the graduates of the target cohort as well as contacting them could be done with the support of the CSB that can combine different register datasets.		
Capacity building	<ul style="list-style-type: none">• Early financial planning• Informing (the HEIs) about benefits of participating and the organization of the project• Solving questions of GDPR	

<div>Liechtenstein</div> <div></div>	Background information on data collection conditions	
	Size of graduate cohort (2017): Bachelors & equivalent: 61, Masters & equivalent: 81, (>90% of all students of Liechtensteinian nationality study abroad)	
	Current graduate tracking surveys: In Liechtenstein there is no regular graduate tracking survey, but anonymized data on Liechtensteinian students who study in Switzerland is received from a Swiss survey.	
	Central register of graduates: There is no central register of graduates.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The Office of Education expresses its interest in participating in a European graduate survey. Topics specifically interesting would be the career paths of graduates from Liechtenstein on the (inter-)national labour market or the careers of citizens of Liechtenstein that have graduated abroad. For a definite answer, more information on the design of a European survey, the resources needed, and the possibility of adding country specific questions is required. The ministry approves of a central organization of a European survey.		
Identifying & sampling of target cohort		
For a potential European graduate survey all graduates of the University of Liechtenstein would be contacted rather than a sample. This would also deliver directly institutional level data. The target cohort can be identified by the university.		
Contacting of target cohort		
The University of Liechtenstein has contact information of its graduates. It cannot transfer this contact information, i.e. graduates would need to be contacted by the institution. The actual quality of the contact data is unknown and should be checked in advance.		
Conflict & coordination with existing graduate surveys		
There are no conflicts with existing graduate surveys.		
Summary, key challenges, & possible solutions		
The participation of Liechtenstein in a European graduate survey seems feasible. There is an interest in participation, but a definite decision requires the results from the pilot survey and further information. Identifying the graduates of the target cohort as well as contacting them could be potentially done with the support of the University of Liechtenstein.		
Capacity building	<ul style="list-style-type: none">• Update the contact information of graduates and/or collect up-to-date information for the target cohort• Inform the target cohort about the survey beforehand to raise awareness	

Lithuania	Background information on data collection conditions	
	Size of graduate cohort (2016/17): Bachelors & equivalent: 19,508; Masters & equivalent: 7,191	
		Current graduate tracking surveys: In Lithuania there are no regular graduate surveys at the national or institutional level so far.
		Central register of graduates: There is a student register of all students in Lithuania. HEIs are obliged to provide data on their students; however the transfer of e-mail addresses is optional. E-mail addresses are available for about one third of current graduate cohorts.
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is strongly interested in participating in a European graduate survey. Graduate tracking is perceived as very important and a European approach would be preferred over starting a national survey. The HEIs might not initially see the added value. Therefore a dialogue with the rectors would need to be started. The ministry is planning to base funding on the results of graduate tracking. This fact and the provision of institutional data could help convincing the HEIs. Another important organization is Statistics Lithuania who is in charge of the methodology of Lithuania's annual statistics plan. Topics of interest are skill match as well as immigration. The ministry of economy is interested in research on transitions to the labour market.		
Identifying & sampling of target cohort		
Identifying and sampling of the target cohort could be done with the use of the national student register.		
Contacting of target cohort		
There is a variety of options to contact graduates that could be combined: The student register contains e-mail addresses but not for the entire graduate population as the transfer is optional. Personal e-mails are available for about one third of the graduates of current cohorts. Often these are institutional e-mail addresses that are closed after graduation. Private e-mail addresses are usually collected at admission and not further updated. The register includes the personal ID so that contact information from other sources (e.g. the social insurance funds) could be matched. The Qualification Management Information system (KVIS) has private e-mail addresses of graduates of those HEIs participating in the system. About 16% of the graduate population is covered in KVIS, however. Some HEIs have contact details but the quality and availability of contact information is very heterogeneous across HEIs. The National Union of Students collects contact details and has a high coverage but e-mail addresses may be outdated and it is unclear whether using this data would be in line with the GDPR and whether the union would agree to it. The National Citizens Register contains e-mail addresses and postal addresses. Getting access would require 2-3 years of preparation to deal with legal issues and it is unclear whether they could be resolved.		
Conflict & coordination with existing graduate surveys		
There are no conflicts to be expected with any existing surveys.		
Summary, key challenges, & possible solutions		
There is a strong interest for participating in European graduate survey in Lithuania and the country has gathered valuable experience in the EUROGRADUATE pilot survey. Identifying and sampling graduates of the target cohort could be organized with the national student register. The key challenge is the availability of up-to-date contact information which would need to be further improved. The strategy for contacting needs to be further clarified. It could be a combination of data from the student register, KVIS and individual HEIs.		
Capacity building	<ul style="list-style-type: none">• Improve the availability and quality of contact information or find strategies to combine different sources of contact data• Long-term forward planning for preparing the participation and financing	


<div>Luxembourg</div> 	Background information on data collection conditions	
	Size of graduate cohort (2017): Short-cycle programmes: 287, Bachelors & equivalent: 581, Masters & equivalent: 447	
	Current graduate tracking surveys: In Luxembourg there is no regular national graduate survey. Three years ago, a labour survey was carried out with bachelor and master graduates 6 months after graduation. The survey was inspired by the survey <i>Destination of Leavers of Higher Education</i> , carried out in the UK by HESA.	
	Central register of graduates: There is no comprehensive central graduates' register run by national organisations of Luxembourg. Each institution has the information on who is a student or graduate. There are some initiatives of institutions aiming to use administrative data from alumni databases.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
<p>The ministry is for the time being not considering the participation in a full rollout of the European graduate survey. However, there is a willingness to participate in European activities and high interest in international comparisons.</p> <p>It is worth noticing that some technical challenges are perceived as too prominent. A major problem is the size of the target population. As most of the tertiary degree seekers study outside of Luxembourg, the ministry holds an interest in mobile degree seeker students and institutional level data. For the time being, a unique direction at national level on how to track graduates has not yet been decided on.</p>		
Identifying & sampling of target cohort		
<p>Institutions could identify the target cohort. For the small population of graduates, it is not advised to draw a sample, but there are concerns related to the validity of results that can be biased by a non-sampling error and the relative small size of the target population.</p>		
Contacting of target cohort		
<p>Due to the small size of the target population, a mixed method approach may be the best option in order to avoid a number of non-responses that can bias the effort of the survey. In order to be GDPR compliant, contact information cannot be transferred and graduates would need to be informed of this particular use of their data beforehand. Private e-mail addresses and phone numbers are available. The data is only updated during the studies and the institutional e-mail addresses become inactive after graduation. It is assumed that there is a bias as people who stay in Luxembourg after their graduation can be reached more easily. For good response rates, it is recommended to supplement online surveys by telephone interviews.</p>		
Conflict & coordination with existing graduate surveys		
<p>There are no conflicts expected with existing graduate surveys. Nevertheless, a way of coordination needs to be developed because there are different approaches to the survey methods. Instead of a comprehensive questionnaire, a modular concept would be preferred in order to reduce questionnaire fatigue and single item non-response.</p>		
Summary, key challenges, & possible solutions		
<p>To date, Luxembourg is not considering the participation in a full rollout of the European graduate survey. There is interest in international comparison but at the same time, the data is seen as of limited use if citizens of Luxembourg who have graduated abroad are not covered by the survey results. If this was to change, participation could potentially be reconsidered. Methodological issues due to the different survey methods would need to be clarified as well. Identifying the graduates of the target cohort could be done by the institutions. Sampling is not necessary. Contact information of the graduates is administered by the institutions, which could do the contacting.</p>		
Capacity building	<ul style="list-style-type: none">• Clarify if and how resident students who graduated abroad could be reached• Check on suitability of a mixed-method survey approach	

Background information on data collection conditions	
Malta 	Size of graduate cohort (2017): Short-cycle: 720; Bachelors & equivalent: 2,506; Masters & equivalent: 1,300
	Current graduate tracking surveys: There is no national level graduate survey in Malta. The main vocationally orientated HE provider (MCAST) and the University of Malta currently do not undertake graduate surveys themselves.
	Central register of graduates: The National Statistics Office (NSO) and the National Commission for Further and Higher Education (NCFHE) conduct annual data collections on graduates. Only the register of the NSO captures ID-data and only the NSO is authorized to link the register with information from other central registers, containing postal addresses.
Evaluation of data collection conditions	
Interest in participation in European graduate survey	
<p>The ministry is interested in participating in a European graduate survey. Both MCAST and the University of Malta are interested as well and are assumed to participate if the ministry supports this. The NCFHE, which would be likely to conduct the survey in Malta, is restricted in terms of staff available so that a central organization of the survey is appreciated. Important conditions for Malta's participation are the early planning of the project (1-2 years ahead) and financial support by the EU. A wish for compensating the work of the HEIs and the interest in institutional level data were expressed.</p>	
Identifying & sampling of target cohort	
<p>In Malta all graduates of MCAST and the University of Malta (UoM) were covered in the EUROGRADUATE pilot survey because of the small cohort size. In general, there are more than a 100 further and higher education providers in Malta, but MCAST and UoM are the largest two (one VET and the other academic) and they have approximately 80% of the students following accredited study programmes between Malta Qualifications Framework level 5 and 7. This approach would also be chosen for a future European survey. The target cohort could be identified by the central registers of the NSO or the NCFHE or by the HEIs themselves.</p>	
Contacting of target cohort	
<p>For the EUROGRADUATE pilot survey, graduates have been contacted by the HEIs and this is also seen as best way for a full rollout. The HEIs collect contact information of their students upon enrolment and this information is updated during the studies. However, it is unclear whether contact information is updated after graduation as well. HEIs collect postal addresses and institutional e-mail addresses that are forwarded to private e-mail addresses. It is not known how long this works after graduation. Typically, postal addresses are those of the parents. Parents forward official letters to their children. In the pilot survey HEIs contacted graduates quite successfully, using postal addresses and (mostly institutional) e-mail addresses. Alternatively, graduates could be contacted by the NSO but this would need to be scheduled at least 1 year before. The NSO would have used phone calls for contacting which is efficient but much more costly. It might be an option to complement contacting by phone for sub-groups of graduates that are hard to reach.</p>	
Conflict & coordination with existing graduate surveys	
<p>There are no conflicts with the existing surveys expected.</p>	
Summary, key challenges, & possible solutions	
<p>The participation of Malta in a European graduate survey seems feasible. The ministry and relevant stakeholders are interested. Identifying and contacting the graduates of the target cohort via the HEIs is seen as best option. The availability of up-to-date contact information could be improved and the effectivity of contacting graduates via parents' postal addresses and institutional e-mail addresses should be checked.</p>	
Capacity building	<ul style="list-style-type: none"> • Improve on availability of up-to-date contact information • Check effectivity of contacting graduates via parents' postal addresses and institutional e-mail addresses 

Netherlands	Background information on data collection conditions	
	Size of graduate cohort (2017/18): Bachelors & equivalent (HBO): ~70,000; Masters & equivalent (WO): ~44,000	
	Current graduate tracking surveys: Every two years the National Alumni Enquête (NAE; former WO monitor) surveys the Master graduates of research universities. Annually, the HBO monitor surveys graduates of the universities of applied sciences (with different degrees, mostly Bachelors). Both surveys are run by the HEIs. They are used for quality assurance and are combined for national level information.	
	Central register of graduates: There is a central register of graduates. Postal addresses from the residents register could be supplemented, if it is allowed under privacy regulations and the GDPR.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is currently not interested in participating in a European graduate survey. In the view of the ministry, a good tracking system is already in place. Though the comparative perspective is of interest for the Netherlands, points of critique are the loss of autonomy in designing the questionnaire, possible 'trend breaks' in the longitudinal data and the length of the questionnaire which could harm the response rates. Moreover resistance of the HEIs is expected. If HEIs would support participation and if it ensured that the current tracking system is not harmed by a European survey, the ministry sees participation as an option.		
Identifying & sampling of target cohort		
Sampling and contacting of graduates could be done with the central register limited to postal addresses. For the current surveys, HEIs transfer data on the graduates, their study programs, and available contact information to a survey institute carrying out the surveys centrally. This practice could be applied for a European graduates survey as well, given the HEIs agree.		
Contacting of target cohort		
Up-to-date postal addresses would be available for graduates living in the Netherlands via the residents register. The preferred option is to use the contact information of the HEIs, if it is allowed under privacy regulations and the GDPR. They collect postal addresses, e-mail addresses (typically private e-mail addresses and sometimes phone numbers). For both graduates surveys, respondents are contacted by e-mail and letters. Phone numbers are used as an important measure to increase the response rates towards the end of the fieldwork.		
Conflict & coordination with existing graduate surveys		
There would be conflicts with the existing national graduate surveys. For the biannual NAE it could be an option to survey uncovered cohorts. Alternatively, a European graduate survey could replace certain repetitions of the NAE. For the annual HBO Monitor this would be the only option. The ministry does not know whether universities and universities of applied sciences want to support any of these options. They could be reluctant to support it. But it is assumed that a lot of overlap between questionnaires would ease acceptance by universities (of applied sciences). Researchers involved in the surveys see considerable overlap with the questionnaire of the EUROGRADUATE Pilot Survey and assume that most major indicators could be measured in comparable manner. The ministry sees it as an option to align the questionnaires of the European and the national surveys but it does not know whether universities and universities of applied sciences want to support changes to the questionnaire.		
Summary, key challenges, & possible solutions		
Currently, the Netherlands are unlikely to participate in a European graduate survey. There is no interest for participation in the ministry and HEIs might be reluctant to support participation as well. The preferred option for identifying, sampling, and contacting graduates would be to do that centrally by a survey institute with the support of the HEIs. A capacity building project of the European Commission could be helpful to convince HEIs as well as for possibly aligning national and European questionnaires. In case the European and the national questionnaire can be aligned, the HEIs would be willing to participate, and the current tracking system is not be harmed, the ministry sees participation as an option.		
Capacity building	<ul style="list-style-type: none">• Convincing HEIs to participate• Aligning the national and the future European questionnaires• Check on the use of administrative data	

Norway	Background information on data collection conditions	
	Size of graduate cohort: Bachelors & equivalent: ~34,500; Masters & equivalent: ~16,500	
	Current graduate tracking surveys: In Norway two national surveys are conducted biannually by NIFU. The regular graduate survey is at 6 months after graduation and the specific graduate survey, with a longer questionnaire on different topics, is one year after graduation. Thus, each year a survey takes place. Besides several HEIs do their own surveys at institutional level.	
	Central register of graduates: HEIs provide information on their graduates to the Common Student System (FS) run by the Norwegian Directorate for ICT and Joint Services in Higher Education and Research (UNIT). Contact information (incl. private e-mail addresses) is covered, but for research organizations to use the information the HEI's approval is required. Postal addresses from the population register could also be matched with this graduate register.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
Without foreclosing any official decision, the ministry is interested in participating in a European graduate survey. Also, HEIs, employer organizations and labour unions have shown an interest. However, a high quality of the survey, countries that are interesting for Norway to compare with, a concise questionnaire, and high response rates are preconditions for a potential participation of Norway.		
Identifying & sampling of target cohort		
The register of the FS could be used for identifying the target cohort and sampling. For this one would need to seek exemption from the duty of confidentiality in accordance with the public administration act. This could be granted by the ministry.		
Contacting of target cohort		
The central register covers usually quite stable private e-mail addresses. Using it requires the approval of the HEIs. With support by the Norwegian Centre for Research Data (NSD) up-to-date postal addresses could be added from the population register No data protection issues are expected but it is necessary to apply for an exemption from the duty of confidentiality at the ministry.		
Conflict & coordination with existing graduate surveys		
Without coordination, a European graduate survey would conflict with the existing national graduate surveys. Nevertheless, the Norwegian ministry considers a participation in a European graduate survey as feasible, provided such a survey would be of high quality and would take place every 4 years. Either a substitution or an adjustment of every 2 nd specific national graduate survey to a European graduate survey could be considered to avoid conflict between the European and the national survey.		
Summary, key challenges, & possible solutions		
The participation of Norway in a European graduate survey seems feasible. There is an interest in participation under the condition of high-quality standards. Identifying and sampling the graduates of the target cohort as well as the contacting of graduates could be done with the use of the graduate register. Provided that the European graduate survey would be conducted every 4 years, every 2 nd specific national graduate survey could be substituted by a European graduate survey.		
Capacity building	<ul style="list-style-type: none">• Explore how to align the questionnaires of the national and the European survey• Explore measures to improve on response rates and reduce drop out	


Poland	Background information on data collection conditions	
	Size of graduate cohort (2016/17): Bachelors & equivalent: 222,746; Masters & equivalent: 164,785	
	Current graduate tracking surveys: Poland has no national level graduate survey but applies graduate tracking based on administrative data. A monitoring system called ELA provides information and analyses on graduates' careers using data from an information system on science and higher education called POL-on and data from the national social insurance institution system. Most HEIs do their own alumni survey with those graduates who gave consent to a further usage of their e-mail addresses after graduation. The data from both sources can be merged.	
	Central register of graduates: The Polish ministry runs a comprehensive information system on science and higher education called POL-on that is also a register of graduates. HEIs are obliged to provide information to POL-on.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. Also, HEIs and the rector's conference have shown an interest. There are some doubts about the quality of survey data in general and about comparing ELA data with other countries, because the methodology for collecting them is different, in the Polish ministry but the comparative perspective of a European approach is seen as interesting. Moreover, survey data could complement administrative data with e.g. information on competences.		
Identifying & sampling of target cohort		
The POL-on database could be used for identifying the target cohort and drawing a sample centrally.		
Contacting of target cohort		
Going via the HEIs is advised because the HEIs (especially those with an institutional level survey) are expected to have contact information and they have been given the consent to use it by graduates. Typically, institutions have private e-mail and postal addresses. It is unknown whether this information is updated. Moreover, the availability of contact information at HEIs without institutional graduate surveys would need to be ensured.		
Conflict & coordination with existing graduate surveys		
There are no conflicts expected with the existing graduate surveys. A European survey is seen as a meaningful addition to the existing surveys and the monitoring by administrative data.		
Summary, key challenges, & possible solutions		
The participation of Poland in a European graduate survey seems feasible. There is an interest in participation under the condition of high data quality. Identifying and sampling the graduates of the target cohort could be done with the use of a central graduate register. The contacting of graduates can be provided for with the support of the HEIs. It is expected that most HEIs have contact information of reasonable quality, but the availability of up-to-date contact information across all HEIs should be checked.		
Capacity building	• Ensure the availability of up-to-date contact information across all HEIs	



<div>Romania</div> <div><div></div><div></div><div></div></div>	Background information on data collection conditions	
	Size of graduate cohort: Bachelors & equivalent: ~70,000; Masters & equivalent: ~28,000	
	Current graduate tracking surveys: Romania is currently not running a national graduate survey, but there are plans to conduct one in 2020 or 2021 and in the past three large graduate surveys were carried out. The HEIs do their own quality assurance studies at institutional level.	
	Central register of graduates: The National Student Enrolment Registry (RMU) identifies graduates and covers contact information (private e-mail and postal addresses) of the vast majority of students (88%). The information is not updated after graduation. Private HEIs are not fully registered but this is expected to improve as a new law will turn the provision of information to the register obligatory so that there is an approval of diplomas by the ministry only if data is reported by the HEI.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is highly interested in participating in a European graduate survey. Also, HEIs have shown an interest. Probably additional financial resources would be needed for the HEIs to do the extra work.		
Identifying & sampling of target cohort		
Graduates of the target cohort could be identified with the central register. Presumably, sampling of graduates could be done with the register as well.		
Contacting of target cohort		
The HEIs transfer private e-mail addresses and postal addresses to the RMU register. Only the HEIs are allowed to access the personal data of the RMU and are able to invite graduates to surveys. Therefore, the willingness of HEIs to participate in a European survey would be crucial. HEIs to collect all kinds of contact information (institutional e-mail, private e-mail, postal address, phone number) however it is not known to what extent this information is up-to-date for graduates. Practices of collecting and updating contact information vary between institutions. For successfully conducting a European graduate survey, it is recommended to update the contact information at an earlier stage.		
Conflict & coordination with existing graduate surveys		
There are no big conflicts expected with the existing surveys. Problems would arise if HEI's administrations would need to conduct several surveys in parallel. Therefore, it is recommended to integrate the national survey into the European one. Romania would be ready to adapt the national questionnaire to a European survey, but also country specific question would need to be covered. In case the integration of the national survey into a European survey would not work out, the former could be implemented in successive years with a different target cohort and a different thematic focus.		
Summary, key challenges, & possible solutions		
The participation of Romania in a European graduate survey seems feasible. There is a strong interest for participation. Graduates can be identified by use of the RMU register. A suitable method of sampling graduates should be further clarified. The contacting of graduates can be provided with the support of the HEIs. It is recommended to take steps for updating contact information at an early stage.		
Capacity building	<ul style="list-style-type: none">• Updating of contact information at an early stage• Developing a concept to integrate or coordinate the Romanian and the European graduate survey• Providing additional resources to act against overburdening the HEIs	

Slovakia	Background information on data collection conditions	
	Size of graduate cohort (2017): Bachelors & equivalent: 21,750; Masters & equivalent: 23,250	
	Current graduate tracking surveys: There is no regular graduate survey in Slovakia, but national graduate surveys have been conducted irregularly at least three times (2008, 2013, and 2014). A regular national graduate survey is currently being established covering graduates one and five years after graduation. The first data collection for this survey will take place in 2020. The survey is planned to be repeated every 2 years. Some few HEIs have institutional level surveys with very diverse practices.	
	Central register of graduates: There is a central register that contains the postal addresses of students. At the moment it is only updated during the studies, but it might be possible to update it with information from the population register (with forward planning of one year).	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The HE section of the ministry is interested in participating in a European graduate survey. For a decision it would be necessary to clarify the exact conditions for participation in terms of resources, organization and survey design.		
Identifying & sampling of target cohort		
Identification of the target cohort and sampling of graduates could be done with the central register.		
Contacting of target cohort		
The central register contains the postal addresses of students. Though postal addresses might not be up to date, they are deemed to provide a good basis for contacting graduates. In most cases the address stored is the family residence and parents would forward official letters to their children. Moreover postal addresses could be updated with information from the population register if planned for early enough (about 1 year in advance). Another option would be going via the HEIs. About half of the HEIs are expected to hold contact information (mostly institutional e-mail addresses), but there is a common insecurity on how to treat contact data due to the GDPR.		
Conflict & coordination with existing graduate surveys		
There are currently no conflicts expected with existing surveys. As there is no regular Slovak graduate survey at the moment, there is leeway for coordinating a European and a national survey (e.g. harmonization of questionnaires and sampling).		
Summary, key challenges, & possible solutions		
The participation of Slovakia in a European graduate survey seems feasible. There is an interest for participation in the ministry. Identifying and sampling the graduates of the target cohort as well as the contacting of graduates can be done with the use of register data and possibly the support of the HEIs.		
Capacity building	<ul style="list-style-type: none">• Check on the option of updating the student register with contact information from the population register• Initiate a dialogue with the ministry and HEIs on graduate tracking• Coordinate the European and the Slovak graduate survey regarding questionnaire design, timing etc.• Clarify the legal basis for the usage of contact data at HEIs for a European survey	

Slovenia	
	Background information on data collection conditions
	Size of graduate cohort (2018): Bachelors & equivalent: 8,802; Masters & equivalent: 5,425
	Current graduate tracking surveys: In Slovenia there is no regular graduate survey. A national monitoring project to establish a system about the employability of HE graduates based on analyses of administrative data was started in 2018. Besides several HEIs run their own institutional surveys (in a very diverse manner).
	Central register of graduates: There is a national database on students and graduates with updated postal addresses. To be able to use this data for research purposes in line with the GDPR an amendment to HE Act is being proposed that would allow such use. At this moment the legal basis allows the ministry to use anonymized data for the scientific research purposes of analysing the employability of students and graduates.
Evaluation of data collection conditions	
Interest in participation in European graduate survey	
The ministry is interested in participating in a European graduate survey. A European graduate survey should complement existing data and enable European comparisons; however the data should also allow comparison at the level of HEIs. Topics of interest are e.g. competences, entry into the labour market, working on contractual basis, and international mobility.	
Identifying & sampling of target cohort	
The sampling of graduates can be done with the national register.	
Contacting of target cohort	
Contacting graduates via the central register is seen as most adequate option but an amendment to the HE Act would be needed to use the register. If the legal basis is ensured, the central register would facilitate contacting graduates by postal mail. It is not entirely clear if contacting by postal mail only works sufficiently well. Another way would be to go via the HEIs, but the quality of the contact data at HEIs is unclear. Although HEIs make efforts to update e-mail addresses at graduation for quality assurance, the amount of updated information might be rather small and HEIs would need the permission to contact graduates again afterwards (which is often refused). HEIs are somewhat unsure about the use of contact information within the framework of the GDPR.	
Conflict & coordination with existing graduate surveys	
There are no conflicts expected with the existing surveys. A European graduate survey could be introduced as a means of national level graduate tracking. However consensus on this should be obtained with the HEIs who see graduate tracking as their autonomous responsibility.	
Summary, key challenges, & possible solutions	
The participation of Slovenia in a European graduate survey does not seem immediately feasible. There is an interest for participation. Identifying and sampling the graduates of the target cohort could be done with the use of the national register. For contacting graduates, the national register is seen as most adequate option as well, however, the legal basis for using personal contact data (also for postal addresses) needs to be provided first and the suitability of postal invitations only should be checked, especially as there are concerns about potentially low response rates.	
Capacity building	<ul style="list-style-type: none"> • Ensure that national register could be used for contacting graduates • Check the adequacy of postal invitations only and seek for alternative modes to boost response rates • Improve the availability of up-to-date contact information at HEIs • Initiating a dialogue with the HEIs on graduate tracking 

<div>Spain</div>	Background information on data collection conditions	
	Size of graduate cohort (2017/18): Bachelors & equivalent: 189,155; Masters & equivalent: 112,122	
	Current graduate tracking surveys: In 2014/15 the national statistics office conducted the “Encuesta de inserción laboral de titulados universitarios” (survey on the labour insertion of university graduates) which was repeated in 2018/2019 and is expected to be repeated every 4 years. Moreover there are many regional surveys, i.e., in Castile-La Mancha and Catalonia. There is wide use of administrative data as, for instance, in Andalusia.	
	Central register of graduates: There is a central register of all students in Spain which is administered by the ministry of Science, Innovation and Universities and includes the national ID as identifier so that it can be linked with other data sources. The register contains information on the studies, demographics, postal addresses, and private –and, sometimes, institutional– e-mail addresses and telephone numbers. The HEIs are obliged to transfer this information to the HE register.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is strongly interested in participating in a European graduate survey. A topic especially interesting is the career paths of mobile graduates. The willingness of the HEIs depends on the work load. The ministry has monthly meetings with the HEIs and is in dialogue with the autonomous communities. It would be an important precondition of Spain’s participation in a full rollout that the ministry acts as coordinator and that the national statistics office as well as the autonomous communities are involved.		
Identifying & sampling of target cohort		
Identifying and sampling of the target cohort could be done with the use of the central register		
Contacting of target cohort		
Contact information is collected by the HEIs and transferred to the central register of the ministry. Generally the quality of the contact details is assumed to be very good; however it is not fully clear if the private e-mail addresses are still in use. The contacting for the national survey on the labour insertion of university graduates is usually done by the national statistics office. It could also be organized by the HEIs themselves (who have little experience in that) and the autonomous communities. The optimal way would need to be decided on.		
Conflict & coordination with existing graduate surveys		
There are no major conflicts to be expected with existing surveys in Spain. If budgetary questions are solved, the national survey should not be a problem.		
Summary, key challenges, & possible solutions		
The participation of Spain in a European graduate survey seems feasible. There is a strong interest for participation. Identifying, sampling and contacting the target cohort could be done by the ministry in cooperation with the national statistics office using the central register. Alternatively graduates could be contacted via HEIs or via organizations of the autonomous regions if this is seen as preferable.		
Capacity building	<ul style="list-style-type: none">• Test the quality of contact information and identify the optimal way of contacting• Find strategies to contact mobile graduates abroad	

<div>Sweden</div> 	Background information on data collection conditions	
	Size of graduate cohort (2016/17): Bachelors & equivalent: ~34,000; Masters & equivalent: ~27,000	
	Current graduate tracking surveys: The Swedish graduate survey is conducted every 2-3 years with the next fieldwork planned for 2020. Graduates are surveyed 3 years after graduation. In Sweden, usually administrative and survey data are combined in graduate tracking. This is legally secured by an informed consent in the survey's cover letter. Some HEIs do institutional level surveys.	
	Central register of graduates: There is a central register of graduates. It does not cover contact information, but this could be supplemented.	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is interested in participating in a European graduate survey. Important preconditions are: a short, comprehensive questionnaire, high quality of the survey data, and the opportunity to integrate register data into the survey so that information already at hand can be used. The HEIs have shown only little interest because they have their own surveys. The possibility to add country specific questions would be appreciated.		
Identifying & sampling of target cohort		
The members of the target cohort can be identified and sampled with the central register.		
Contacting of target cohort		
Up-to-date postal addresses can be supplemented to the graduate register by use of the residents register. For the Swedish graduate survey, respondents are contacted by postal mail only providing an access link to the online survey. This works well, provides good response rates, and is also recommended for a European graduate survey. Updated telephone numbers can be collected on request but this is rather expensive. By using the central register and the residents register, graduates can be contacted without the active participation of the HEIs. But graduates living abroad could not be contacted this way. For this group it is suggested to identify them as well by combining the residents register with the graduates register and ask the HEIs for their supported in contacting these graduates. HEIs usually store postal addresses, e-mail addresses (HEI-addresses and not private), and phone numbers. It is unknown however if this contact information is updated, and if this contact information could be used for contacting them (GDPR).		
Conflict & coordination with existing graduate surveys		
Currently Sweden carries out a national survey every 2-3 years. If the preconditions for a Swedish participation in a European graduate survey are fulfilled, the European survey could replace the national survey or specific repetitions of the national survey. Thus, conflict between both surveys could be avoided.		
Summary, key challenges, & possible solutions		
The participation of Sweden in a European graduate survey seems feasible. There is an interest in participation which however presupposes on the quality of the questionnaire and on the possibility to integrate register data. For the latter, the legal basis of data hosting would need to be clarified: may register data be saved centrally? How about the anonymization? It is assumed that legal conditions can be met, as Sweden for example provides anonymized micro data to Eurostat for the Adult Education Study (AES). Identifying and sampling the graduates of the target cohort as well as the contacting of graduates can be done with the use of register data. The availability of suitable contact data for graduates living abroad would need to be checked.		
Capacity building	<ul style="list-style-type: none">• Clarify the legal basis for a combination of survey and register data for a European survey• Check the availability of suitable contact data for graduates living abroad	

<div>United Kingdom</div> 	Background information on data collection conditions	
	Size of graduate cohort (2017/18): Bachelors & equivalent: ~418,900; Masters & equivalent: ~183,500	
	Current graduate tracking surveys: In the UK, graduates are invited to take part in the Graduates Outcomes Survey annually 15 months after graduation. Some revisions have recently taken place, including centralizing the collection organization. There is no panel design.	
	Central register of graduates: There is a central register of students that is run by the Higher Education Statistics Agency (HESA); however, contact details are supplied by HE providers in time for the survey	
Evaluation of data collection conditions		
Interest in participation in European graduate survey		
The ministry is currently not interested in participating in a European graduate survey as they see a risk of overburdening graduates with another survey and do not want to disturb the existing national surveys. However, there is an interest in international comparison, especially in the topic of adequacy of teaching experience.		
Identifying & sampling of target cohort		
The register of HESA can be used to identify and sample the graduates of the target population for the national graduate survey.		
Contacting of target cohort		
The HEIs hold institutional and private e-mail addresses, postal addresses, as well as phone numbers as contact information of their graduates. There are slight differences in the quality of the data but generally the quality of contact information is very good. Contact information is kept up-to-date as this is a regulatory expectation and in order to keep in touch with alumni, e.g. for fundraising activities. Telephone contacts are used to follow-up non-respondents. Contacting for the national survey has recently moved from the HE providers to being centrally organised collection by HESA.		
Conflict & coordination with existing graduate surveys		
There are conflicts expected with the existing national graduate survey. Since the design of the British questionnaire is achieved through a consultative process including the HEIs and the ministry, a strong adaptation of the survey questionnaire to a European one is unlikely. An option of cooperation would be ex-post-harmonization of data without participating in a European graduate survey. Taking a subsample for a European survey is not seen as realistic.		
Summary, key challenges, & possible solutions		
The participation of UK in a European graduate survey seems not to be feasible at the moment. Identifying, sampling, and contacting the graduates of the target cohort would technically be feasible but there is little interest for participation in the ministry. Worries about harming the British graduate tracking system, which is used in regulation of HE providers, were expressed. Drawing a subsample, adapting the questionnaire, or substituting certain repetitions of the national survey are not seen as more realistic options.		
Capacity building	<ul style="list-style-type: none">Initiating a dialogue with the ministry and HEIs on graduate tracking to find ways of cooperation	
		

6. Conclusions and recommendations

This final chapter presents, firstly, the main conclusions to be drawn from the technical assessment of the EUROGRADUATE pilot survey and the feasibility analyses in the Erasmus+ countries. Secondly, it presents a set of core recommendations for a future full rollout of a European graduate survey on the lessons learned by the EUROGRADUATE pilot survey. Finally, a recommended planning for a first new EUROGRADUATE in 2022 is presented.

6.1. Conclusions

The results of the EUROGRADUATE pilot survey as presented in the EUROGRADUATE comparative report (Meng et al. 2020) and the EUROGRADUATE country reports (forthcoming) show that a European graduate survey could provide highly relevant and comparable information to policy makers on questions such as the successful transition to the labour market, match and mismatch of education and occupation and reasons for this, the level and relevance of skills of graduates, or how higher education is interlinked with political values and political participation. Hence, from this point of view, a full rollout would be advisable.

The definition of the graduate and the cohorts surveyed by the EUROGRADUATE pilot survey were found to be valuable and of high importance for policy makers. At the same time, based on the discussion in Chapter 2, we concluded that attempting to survey Bachelor-level graduates, who quite often directly continue to study in Master-level programmes, requires specific handling in both sampling as well as inviting to guarantee high enough response to analyse outcomes at the desired level of detail. With respect to the question of the design for a survey five years after graduation, it was furthermore concluded that a mixed approach, combination between panel approach and cross-sectional approach, might be best. To lay the basis for the panel approach, collection of private e-mails during the survey one year after graduation is necessary.

A result of the discussion of the design of the questionnaire in Chapter 2 was that the topics covered by the questionnaire are highly relevant. At the same time the questionnaire used for the EUROGRADUATE pilot survey appeared to be too long. A relatively large share of respondents dropped out during filling-in the questionnaire. The large and growing share of respondents using mobile devices might have an increased risk of dropping out.

Translation of the master questionnaire, verification of translations as well as programming the online questionnaires has been discussed in Chapter 3. We concluded that the high-quality translation verification used in the EUROGRADUATE pilot survey led to linguistically equivalent language versions of the questionnaire for all official languages of the eight pilot countries. The technical approach used to design the online programming of the questionnaires worked without problems and laid a basis that could be applied in future EUROGRADUATE surveys. However, we also concluded that the time period available to carry out the EUROGRADUATE pilot survey was too limited and certain aspects of the translation, verification, and programming part could benefit clearly from an extended preparation period.

The EUROGRADUATE pilot survey, given the restricted time period available, successfully collected data from graduates of two cohorts and from both, Bachelor-level and Master-level graduates, in eight countries with strongly differing situations concerning data availability. The lessons learned from the data collection in these eight pilot countries can be an important basis for future repetitions of EUROGRADUATE or European graduate surveys more generally.

The evaluation of the data collection conditions in the Erasmus+ countries showed that there is widespread interest in participating in a full rollout. The vast majority of higher education systems signalled to be interested. Many countries with existing tracking systems see a European survey as an important complement to national level information in order to compare themselves with neighbouring European countries for mutual learning and benefit. For countries without regular graduate surveys, a European survey would either enhance or build from scratch graduate tracking capacities that are strongly needed for an efficient and effective steering of higher education.

At the same time, several countries have voiced conditions to be met by a European graduate survey: e.g. the added value for institutions needs to be very clear, the topics must be relevant to policy making in the country, the data quality must be high in all countries, there must be no conflict with existing surveys and ways for cooperation need to be found (often they were already identified), and the tasks of countries and required resources need to be clearly spelled out before decisions on participation can be taken.

Regarding the technical conditions the assessment showed that, identifying the graduates and sampling seem manageable problems in the Erasmus+ countries. For most systems, contacting of graduates is seen as feasible as well. However, many systems also reported leeway for improving the availability of up-to-date contact information. For three quarters of the systems covered, there is either no conflict with existing surveys or solutions for cooperating with a European survey are seen as feasible. Still, for several countries this is a problem with the potential to preclude participation. Finally, for 18 countries, and thus in the majority of the Erasmus+ systems with available information, participation has been assessed as feasible. Further countries could join this group if known problems are overcome for which we were able to specify realistic solutions.

All in all, the results of the technical report, in combination with the results presented in the comparative report and the national reports, lead to the conclusion that the full rollout of a European graduate survey could be initiated and also that it should be initiated.

6.2. Recommendations

Many valuable experiences have been made in the pilot surveys resulting in a series of recommendations for further improving the data collection processes at coordinating level as well as within countries.

6.2.1. Overview of recommendations

The chart below summarizes the six main recommendations for a full rollout of a European graduate survey. More details and background information on the recommendations is presented in the next chapter.

1) Early planning & preparatory phase	<ul style="list-style-type: none"> • ~2 years of preparation before the fieldwork • Select countries & research partner within countries early • Ensure countries are well-prepared • Coordinate with existing surveys
2) Ensure support of higher education institutions	<ul style="list-style-type: none"> • Support of institutions needed for conducting the survey • Get in touch with institutions early • Support institutions as far as possible • Offer incentives for participation, e.g. institution-specific data
3) Concise questionnaire with policy-relevant topics	<ul style="list-style-type: none"> • Key topics are: transition to the labour market, labour market relevance of education, skills, (international) mobility, social background, as well as social outcomes like democratic values and political participation
4) Adequate target groups for survey	<ul style="list-style-type: none"> • Bachelor-level & Master-level graduates as main focus • All graduates, all types of higher education institutions • Short-courses if relevant, doctoral graduates perspectively • Cohorts 1 year & 5 years after graduation
5) Collect contact information at time of graduation	<ul style="list-style-type: none"> • Collect contact information of graduates directly when they graduate throughout the higher education system • Ensures up-to-date contact information is available • Collect consent to use the contacts at the same time
6) Maintain databases for adequate population data	<ul style="list-style-type: none"> • Central databases with data on graduate population needed • Streamline information in these databases across countries • If possible, supplement contact information to central database

6.2.2. Recommendations in detail

Recommendation 1: Early planning and preparatory phase

To guarantee a successful future EUROGRADUATE, early planning and time for preparation is the most crucial requirement. A successful future EUROGRADUATE requires about two years of preparation before the start of the fieldwork. Countries need time to prepare data collection capacities and to reserve financial resources. To coordinate existing surveys with the data collection of a European survey, the schedule of the latter as well as the target cohorts need to be known well in advance.

Recommendation 1a: Ensure participating countries are well prepared

For the success of a European graduate survey and highest quality of the data, it is indispensable that countries are well prepared to participate. Therefore, it is

recommended to define minimum requirements participating countries need to meet. Countries wanting to participate should be able to provide the following information:

- Demonstrate by which sources graduates of the target population can be identified and how they can be distinguished from non-targeted graduates
- Spelling out how samples of graduates can be drawn if the size of the country makes this advisable
- Proving that adequate contact information (current postal or e-mail address) is available for the whole target group (incl. private institutions) and that it can be used in accordance with data protection regulations. Of what kind are these contact details (mail or e-mail address (from university or private)), how old are these and can they be updated?
- Defining the database to be used for sampling and contacting and the manners of approach chosen for the survey.
- Proposing a national research team capable of conducting the survey in the country.

The information of the countries wanting to participate should then be evaluated. This assessment could probably be performed by or with support of the recently started Commission project “Capacity building for a European Graduate Tracking Initiative” and could result in three groups of countries:

- Green: Countries are ready to participate.
- Yellow: Countries that need minor adjustments to be ready to participate. Minor adjustments are defined as adjustments that can be done until at the latest 9 months before the start of the fieldwork. In this case, a second and final decision will take place at the latest 9 months before the fieldwork.
- Red: Countries not ready to participate. These countries will require significant further steps to be taken before they will be able to participate in a European graduate survey to guarantee that the survey outcomes form a strong basis for scientific analyses. Countries in this group would be recommended to conduct further capacity building.

Recommendation 1b: Coordinate with existing surveys as early as possible

About half of the Erasmus+ countries conduct graduate surveys with which a European graduate survey would need to be coordinated to avoid double-surveying of graduates. Regular surveys run with a specific rhythm that is hard to change and thus coordination needs to start as early as possible. A key outcome of the EUROGRADUATE pilot survey is that ways of coordination or cooperation need to reflect the specific situation of the country. In exchanging with the country experts, mostly viable or at least realistic options were identified. For example, a European graduate survey could replace certain repetitions of the national survey, it could survey different cohorts, the national questionnaire could be aligned and the European survey could be supplemented by country-specific modules. It is strongly recommended to keep up an intense communication with researchers or contracting bodies of national-level surveys to avoid conflict and ensure that envisaged ways of cooperation and coordination work out and are mutually beneficial.

To guarantee full international comparability, post-harmonization of national graduate surveys to align with the EUROGRADUATE survey is not wishful. To ensure international comparability it is strongly recommended to use one central questionnaire. To increase the incentive for countries with an existing graduate survey to join a European graduate survey, the questionnaire should allow for a small country specific extension of questions. Moreover, in designing the questionnaire, a European graduate survey should seek for comparability with previous (or future) national level surveys.

Recommendation 1c: Selection of a research partner for EUROGRADUATE

The contractor for a European graduate survey needs to know before filing a tender how many and which countries are participating and under what conditions a survey can be conducted in each country. Otherwise, it is not possible to calculate the necessary resources to carry out the study. Alternatively, the contract with the contractor would have to be very flexible in order to be able to respond adequately to changing circumstances (participating countries, circumstances for the national surveys). This is even more important if the research partner should be involved in the evaluation of conditions in the countries.

Recommendation 1d: Time for testing the questionnaire and the organisational set-up

A longer preparation time also makes it possible to test the entire project. This applies first to the questionnaire in technical terms (scale questions, length, drop-outs) but also in terms of wording or translations. Second, the organizational set-up for conducting the survey within countries can be tested. This concerns e.g. a possible sampling by HEIs, the sending of invitations by HEIs, group-specific response rates or the attractiveness of various incentives for participation in the survey. In principle, every survey, every research project, should be intensively tested before the actual implementation in order to increase the quality of the results. However, this requires adequate time and financial resources.

Recommendation 2: Ensure support of higher education institutions

Gaining the support of HEIs has been proven to be a big challenge in several countries of the EUROGRADUATE pilot survey. In most countries, the support of HEIs is a precondition for successfully running a graduate survey, because they are only ones to have the necessary contact details of their graduates. Moreover, clearly any graduate survey should aim at helping institutions to improve their education. Institutions are needed for contacting when contact details are not available at central databases or when the contact information of institutions is of better quality. Graduates may as well be more motivated to react to an invitation by their former home institution than by a central organization. For getting institutions on board it is necessary to get in touch with them at an early stage and ensure widespread participation to picture the graduate population. Many institutions are motivated to support non-institutional graduate surveys if they are in the public benefit. Organizers of the graduate survey should aim at easing the burden on institutions' administrations as far as possible by providing well-prepared contacting material, clear communication of what is needed, methodological expertise or tools facilitating contacting or sampling (serial e-mail tools, sampling tools).

For many HEIs, institution-specific data for non-public use and the opportunity to compare against national or international benchmarks would be a clear added value. A European graduate survey should aim at offering such data, provide the institution wishes for that and support the data collection accordingly. Two things are necessary for this: involvement of university representatives in the development of the questionnaire and a sufficiently large sample that enables analysis at university level or even at study level.

Recommendation 3: A concise questionnaire with policy-relevant topics

Generally, it is recommended to keep the core topics of the EUROGRADUATE pilot survey for a future European graduate survey as they address the agenda of higher education politics and have proven useful in analysing the EUROGRADUATE pilot survey data. The core topics are: course and characteristics of higher education, previous and further education, transition to the labour market and labour market relevance of the completed programme, skills, (international) mobility, and social outcomes. Basic socio-demographic characteristics are important background variables. Yet, more attention should be paid to the needs of the HE institutions when revising the questionnaire.

Still, the future questionnaire should be significantly shorter, to reduce drop-out during the survey. Potential for cuts has been identified in the topics of previous and further education, social outcomes, and in the background variables. Some topics could be used as modules instead of being completely addressed to all cohorts (see Chapter 2.3.4 for suggestions). In countries with a particularly high drop-out rate of the questionnaire, accompanying research should be carried out (for example with qualitative methods) to improve the situation in the future.

Recommendation 4: Target groups of EUROGRADUATE should be maintained

Recommendation 4a: Graduates of ISCED levels 6 and 7 of all types of HEIs as focus

A future EUROGRADUATE survey should in line with the EUROGRADUATE pilot survey include all graduates from ISCED levels 6 and 7 as focus and ISCED level 5 under certain conditions. All graduates means regardless of their current place of residence, their location of prior education, their previous enrolment status (e.g. full-time, part-time, or correspondence studies) and their country of birth or nationality. The definition also encompasses graduates from international joint-degree programmes as long as part of their degree was issued from a higher education institute within the country. All institutions (public and private) in a country offering programmes on ISCED 6 or 7 should be covered, however, it is reasonable to exclude institutions at which students are employed and that are run by an employer (e.g. military colleges).

ISCED 5 programmes (short courses) are very heterogeneous across countries and should only be included if they are regarded as part of the higher education system that plays a significant role in the respective country and if they are offered by institutions, which are also offering at least ISCED level 6 programmes.

For future repetitions of a EUROGRADUATE survey, it should be discussed whether to include graduates with a doctoral degree (ISCED 8).

The inclusion of online studies and consequences for the questionnaire should be further discussed.

Recommendation 4b: Cover cohorts at 1 and 5 years after graduation

The core of a future EUROGRADUATE survey should be the cohort one year after graduation (t+1). To cover mid-term developments, it is recommended to include the cohort five years after graduation as well. In the EUROGRADUATE pilot survey this group has proven to be less easy reachable than the t+1 cohort. To improve on that we recommend for future EUROGRADUATE surveys the following procedure:

- In the survey one year after, ask for private e-mail addresses of graduates willing to participate in future surveys.
- Offer incentives to increase the likelihood of graduates to be willing to participate in future research

This way, a graduate panel would be built, i.e. graduates that in the first survey have agreed to be contacted again would be surveyed for a second time five years after graduation. A panel design offers the possibility of analysing individual level developments (e.g. skills one year after graduation and skills five years after graduation). For a panel to work, the number of respondents in the first survey needs to be large enough and thus a panel design may not be possible for smaller countries. If a full panel approach is not feasible, a survey five years after graduation will require a mixed approach:

- Graduates that took part in the survey one year after graduation and indicated their willingness to participate in a future research are addressed through the panel setting.

- In countries where the panel setting will not allow reaching a minimum number of final respondents in the repeated wave, supplementary graduates are queried five years after graduation without having participated four years before.

Recommendation 4c: Graduates of 2020/21 (t+1) and 2016/17 (t+5) as target cohorts of a full rollout of a European graduate survey

It is recommended to survey graduates one and five years after graduation to monitor both, the transition to the labour market as well as the years in which graduates start establishing themselves in the labour market. For an indicative planning, it is recommended to choose the graduates of the academic year 2020/21 as target cohort for a full rollout of a European graduate survey. This would keep the time-lag between the pilot survey and a full rollout modest and be in line with the interval of surveying every fourth cohort. Countries are advised to start collecting contact information upon graduation and the consent for being contacted in autumn 2020. Thus, up-to-date contact information would be available. Accordingly, the graduates of 2016/17 would be the target cohort for the survey five years after graduation. As a caveat, targeting the cohort of 2020/21 might lead to an overly tight schedule, especially given the current challenges of the Covid19-crisis. If so, the graduate survey should switch to the cohorts 2021/22 and 2017/18 respectively.

Recommendation 5: Collect informed consent and contact information throughout the higher education system at the time of graduation

Most Erasmus+ countries have reported that the availability of up-to-date contact information and homogeneity of contact information across the higher education system could be improved. Thus, it is strongly recommended to collect or renew contact information and the consent to use this information for non-institutional graduate surveys at the time of graduation, in order to ensure the availability of up-to-date contact information. Countries should strive for a common practice across all institutions of the higher education system in collecting contact details and the consent to improve on the homogeneity of contact information and its usability. It is recommended to collect various kinds of contact information (private e-mail addresses, postal addresses at graduation, postal addresses of parents, phone numbers) to allow for using several channels to reach graduates.

To not only rely on the point of graduation, it is also recommended to ask students as soon as possible (ideally at enrolment) to agree that their contact details may be used for research purposes beyond the completion (or termination) of their studies.

Recommendation 6: Databases for adequate population data

Recommendation 6a: Creation or expansion of a central database with microdata of students/ graduates

In order to conduct a methodologically correct survey, detailed data of the target population are needed. Detailed data primarily means data on a micro level, i.e. on an anonymised individual level of graduates, so that the population data can be flexibly adapted to the target and reached groups and variable evaluations can be carried out.

These data are needed for three reasons: Firstly, to draw a random sample (if this requires the size of the higher education system); secondly to live monitor the return rate in order to intervene in a targeted manner if certain groups participate below average; and thirdly for the subsequent weighting of the data to ensure the representativeness of the survey. Statistical weighting is important to consider possible deviations in the composition of the respondents of a survey to the composition of the target population.

Thus all countries should improve or establish databases of (anonymised) microdata covering at least key aspects of the study behaviour and socio-demographic characteristics of their students and graduates. This information is needed by all graduates of the target group of all higher education institutions (also private!) and in a uniform format, ideally in one common database. This facilitates detailed analyses of the population of graduates, which is needed for a satisfactory performance of the survey. Minimum requirements of information in database are:

- Name of programme graduated from in academic year t/t+1 assignable to ISCED fields
- Type of programme graduated from in academic year t/t+1: ISCED 5 / ISCED 6 / ISCED 7
- Name of institution graduated from in academic year
- Location of branch, if institutions have more than one site.
- Age at graduation
- Sex

Preferred additional information in database would be:

- Birth country of graduate
- Birth country of the parents of the graduate
- Pathways through education system (study programmes followed, study programmes graduated in, study programmes enrolled in, transition into other programmes after graduation, etc.)
- Qualifications that justified the admission to the study or access route (type of secondary school certificate, non-traditional access route)
- Socio-economic background of the graduate

In addition, it would be advantageous if each student in the country (regardless of the type of institution) receives a unique matriculation number (stored in the central database) to track the student's path through the higher education system. Otherwise information is missing if a student / graduate has changed the university, e.g. (s)he did the Bachelor at one and the Master at another University. If one relies only on information from individual higher education institutions, inter-university changes remain unknown. In general, a unique student ID would be very valuable for numerous analyses of the higher education system, not just for graduate studies.

Recommendation 6b: Expand central database with contact information and registry data

Contacting graduates centrally ensures a homogeneous way of contacting and is less cost-intensive than contacting via the HEIs. In addition, postal addresses may possibly be updated centrally but hardly by any single HEI. Thus, if possible, central student database should include contact details of students and graduates (or should be able to be linked to a central database with contact details), which can be updated with the help of the population register. It needs to be ensured that using these contact details for research purposes is in line with data protection legislation (even if the contact details remain with the higher education institutions).

Moreover, the central database could be used to link the survey data with register data – if this is in line with data laws (e.g. the consent of the students might be needed). If this is possible, the questionnaire could be shortened and some particularly complex questions (for example, exact identification of completed studies) could be replaced by official data. Thus, it is recommended to check the possibility of linking and using register data in combination with the survey data in the participating countries.

Recommendation 6c: Ensure adequate databases at higher education institutions

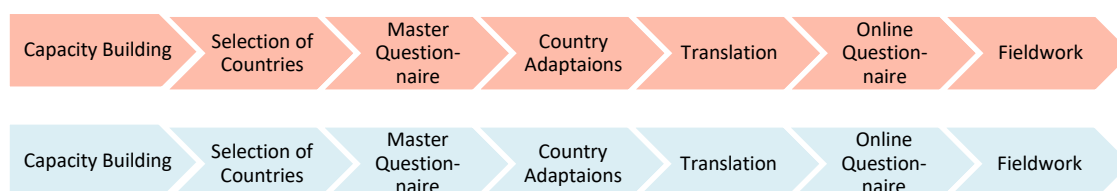
In many countries, HEIs are not allowed to pass on the contact information of their graduates. In these cases, it will only be possible to contact graduates through the HEIs.

To ensure availability of contact information and consent to use this contact information for non-institutional graduate surveys, collecting contact information and consent should take place as early as possible and the contact information should be renewed at the time of graduation (see recommendation 5). Countries should prescribe or at least encourage common practice in the higher education institutions to ensure a high-standard quality of contact information and an identical legal situation across institutions. Institutions should be required to digitally save the contact details of their students and graduates in a given uniform format. The databases of the HE institutions should contain at least the minimum required information described above for the central database (see recommendation 6a).

6.3. Indicative planning for a EUROGRADUATE survey in 2022

Below, we briefly present an indicative planning for a EUROGRADUATE survey taking place in 2022 covering the graduates of the academic year 2020/21 (one year after graduation) and the graduates of 2016/17 (five years after graduation). It takes into account other Commission activities on improving graduate tracking in Europe, namely the Commission's experts group on graduate tracking and the project "Capacity building for a European Graduate Tracking Initiative (EGTI)". It is based on the assumption that the Commission's experts group on graduate tracking will recommend initiating a European survey of higher education graduates in some form and that the Commission and the member states are taking up this recommendation.

It should be noted that indicative planning assumes that the graduates of 2020/21 are the target cohort. This is in line with the planning of the Commission's experts group on graduate tracking at the time this report is laid down. The consortium is aware that this indicative planning might be over-ambitious, especially given the current Covid-19 crisis. Moreover, the planning foresees a decision on the participation of countries in July 2021 to allow for enough time to prepare the survey in participating countries. However, at this time, the capacity building within the framework of the project "Capacity building for an EGTI" will not yet be finalized. Thus to date it is unclear, whether it will be possible to take a well-informed decision on the participation of countries at this stage.



Time	Activity
July 2020	Start of project "Capacity building for a European Graduate Tracking Initiative (EGTI)"
Oct. 2020	Publication of recommendation of the "Commission's experts group on graduate tracking" on how to set up European graduate tracking
Oct. 2020	Start gathering contact information & informed consent among graduates of cohort 2020/21 in countries
Nov. 2020	EC informs countries on plans for EUROGRADUATE survey 2022
Dec. 2020	Countries apply for participating in EUROGRADUATE survey 2022
Jan. 2021	Project "Capacity building for an EGTI" starts building capacities in countries (e.g. databases for sampling & contacting graduates, guidelines for sampling, guidelines for GDPR)
June 2021	Start of EUROGRADUATE full rollout project

July 2021	Decision on country applications based on capacity assessment & progress made in project "Capacity building for an EGTI"
July 2021	Start discussion EUROGRADUATE master questionnaire
Oct. 2021	English master questionnaire finalized
Oct. 2021	Start country adaptations master questionnaire
Dec. 2021	Databases for sampling & contacting graduates, guidelines for sampling, guidelines for GDPR finalized
Dec. 2021	Country adaptations master questionnaire finalized
Jan. 2022	Start translation procedure master questionnaire
Jan. 2022	Start final sampling procedure
Feb. 2022	Start online programming master questionnaire including country adaptations (English)
March 2022	Translation procedure master questionnaire finalized
March 2022	Control online survey (English) by countries
March 2022	Start preparation invitation letters
April 2022	Start online programming master questionnaire including country adaptations (country languages)
April 2022	Start translation procedure invitation letters (if required)
May 2022	Translation procedure invitation letters (if required) finalized
June 2022	Control online survey (country languages) by countries
June 2022	Sampling procedure finalized
July 2022	Online questionnaire fully ready
Aug. 2022	Distribution of personalized respondents access ID's to countries
Oct. 2022	Start fieldwork EUROGRADUATE survey 2022
Dec. 2022	End fieldwork EUROGRADUATE survey 2022

7. References

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8. Annexes

8.1. Annex 1: Legend for colour code scheme of feasibility assessment

Interest in participation in European graduate survey	(Strongly) interested without major qualifications	<ul style="list-style-type: none"> For being interested key obstacles would need to be solved <i>and/or</i> For expressing interest more information is required 	(To date) not interested
Identifying & sampling of target cohort	Identifying & sampling of target cohort feasible without major changes (not precluding the possibility of improvements)	Identifying & sampling of target cohort requires major changes; realistic solution(s) can be specified	Identifying & sampling of target cohort currently not possible and a realistic solution cannot be specified
Contacting of target cohort	Contacting of target cohort feasible without major changes (not precluding the possibility of improvements)	Contacting of target cohort requires major changes; realistic solution(s) can be specified	Contacting of target cohort currently not possible; a realistic solution cannot be specified
Conflict & coordination with existing graduate surveys or databases	<ul style="list-style-type: none"> No (major) conflict with existing graduate surveys or databases <i>and/or</i> Options for coordinating with existing graduate surveys or databases seen as feasible 	There are options for coordinating with existing graduate surveys or databases but their feasibility requires major improvements and/or cannot yet be assessed	(To date) no realistic solutions for coordinating with existing graduate surveys or databases
Summary, key challenges, & possible solutions	The country is interested and participation feasible without major changes (not precluding the possibility of improvements)	<ul style="list-style-type: none"> Interest depends on overcoming major obstacles and/or cannot yet be expressed Participation requires major changes The feasibility of possible solutions cannot yet be assessed 	Participation (to date) not feasible due to lack of interest and/or major problems without realistic solutions

8.2. Annex 2: EUROGRADUATE master questionnaires cohort 2016/17 (t+1)



Education History

Study Programme graduated from in 2016/2017

The following questions concern the study programme that you graduated from in the academic year of 2016/2017. If you graduated that year from more than one programme, please provide the information for the study programme that you yourself consider the most relevant.

A1.1a1	Start date of the study programme (month) (year)
A1.1a2	Date of graduation (month) (year)
A1.1a3	Type of qualification	Country-specific (drop down menu, open field etc.)
A1.1a4	Name of institution	Country-specific (drop down menu, open field etc.)
A1.1a5	Field of Study: Major	Country-specific (drop down menu, open field etc.)
A1.1a6	What was your formal enrolment status?	<input type="radio"/> Fulltime student <input type="radio"/> Part time student <input type="radio"/> other, namely
A1.1a7	Were any credits/competencies you obtained outside of this study programme recognized towards the fulfilment of it?	<input type="radio"/> yes, credits/competencies gained in another higher education study programme <input type="radio"/> yes, credits/competencies gained outside higher education programmes <input type="radio"/> no
A1.2a	What was the main language of instruction in your study programme?	Drop down menu with languages
A1.2b	Did you follow as part of your study programme also courses in a different language than the main language of instruction?	<input type="radio"/> no <input type="radio"/> yes, namely in the following languages (multiple answers possible): Drop down menu with languages
A1.3	What was your average final grade?	Country-specific question, including grading schemes

A1.4	How did you finance your study and living costs during your study time? The sum of the following categories has to be 100%.	a. Parents or support by other family-members ...% b. Income from working ...% c. Student loan ...% d Scholarship ...% e. Other sources, namely (<i>please specify</i>).... ...%
A1.5	To what extent were the following modes of teaching, assessment and learning emphasised in your study programme?	to a very high extent ↔ not at all
	a. Lectures	1 2 3 4 5
	b. Group assignments	1 2 3 4 5
	c. Participation in research projects	1 2 3 4 5
	d. Internships, work placement (as formal part of your study programme)	1 2 3 4 5
	e. Project and/or problem-based learning	1 2 3 4 5
	f. Written assignments	1 2 3 4 5
	g. Oral presentations by students	1 2 3 4 5
	h. E-learning (including distance learning)	1 2 3 4 5
	i. Self-study	1 2 3 4 5
A1.6	To what extent did the following descriptions apply to your study behaviour?	to a very high extent ↔ not at all
	a. I did extra work above what was required to pass my exams	1 2 3 4 5
	b. I strived for the highest possible marks	1 2 3 4 5
	c. I focused on my personal study interests rather than straightly follow the curriculum	1 2 3 4 5
A1.7	To what extent has your study programme been a good basis for ...?	to a very high extent ↔ not at all
	a. Starting to work	1 2 3 4 5
	b. Further learning	1 2 3 4 5
	c. Performing your current (work) tasks	1 2 3 4 5
	d. Future career	1 2 3 4 5
	e. Development of social skills	1 2 3 4 5
	f. Development of entrepreneurial skills	1 2 3 4 5
	g. Development of advanced literacy skills (e.g. Writing reports, handbooks, articles or books)	1 2 3 4 5
	h. Development of advanced numeracy (e.g. calculations using advanced mathematical or statistical principles)	1 2 3 4 5
	i. Development of advanced ICT skills (e.g. programming, syntax in statistical software)	1 2 3 4 5
	j. Development of managerial/leaderships skills	1 2 3 4 5
	k. Personal development	1 2 3 4 5
	l. Increasing political interest and participation in politics	1 2 3 4 5
	m. Building a social network	1 2 3 4 5
A1.8	Looking back, if you were free to choose again would you choose the same study programme at the same institution?	o yes o no, different study programme at the same institution o no, same study programme at different institution o no, a different study program at different institution o no, I would decide not to study at all

Other Activities during time of studying

The following questions concern activities that you took part during your time as a student in the programme that you graduated from in 2016/2017.

- | | | |
|--------|--|---|
| A2.1a1 | During your study time, did you study in another country (e.g. semester abroad)? | <input type="radio"/> yes
<input type="radio"/> no |
| A2.1a2 | (If a1=yes) For how many months in total? | <input type="radio"/> 0-2 months,
<input type="radio"/> 3-6 months,
<input type="radio"/> 7 - 12 months,
<input type="radio"/> > 12 months |
| A2.1a3 | (If a1=yes) To what extent to you consider the experiences relevant for your professional career? | to a very high extent ↔ not at all
1 2 3 4 5 |
| A2.1a4 | (If a1=yes) To what extent to you consider the experiences relevant for your personal development? | to a very high extent ↔ not at all
1 2 3 4 5 |
| A2.1a5 | (If a1=yes) In which country? (multiple answer possible) | Drop down menu with countries |
| A2.1a6 | (If a1=yes) Was your study period abroad part of a mobility programme? | <input type="radio"/> yes: EU programme (e.g. Erasmus)
<input type="radio"/> yes: other programme
<input type="radio"/> no |
| A2.1a6 | (If a1=yes) Could the credits you obtained during your study abroad be transferred to the study programme you graduated from in 2016/2017? Credits (e.g., ECTS) I obtained were... | <input type="radio"/> fully transferred
<input type="radio"/> partly transferred
<input type="radio"/> not transferable at all |
| A2.2a1 | During your study time, did you take part in an internship/study related work experiences (both as part of the curriculum as well as outside of the curriculum) in [country of HEI]? | <input type="radio"/> yes
<input type="radio"/> no |
| A2.2a2 | (If a1=yes) For how many months in total? | <input type="radio"/> 0-2 months,
<input type="radio"/> 3-6 months,
<input type="radio"/> 7 - 12 months,
<input type="radio"/> > 12 months |
| A2.2a3 | (If a1=yes) To what extent to you consider the experiences relevant for your professional career? | to a very high extent ↔ not at all
1 2 3 4 5 |
| A2.2a4 | (If a1=yes) To what extent to you consider the experiences relevant for your personal development? | to a very high extent ↔ not at all
1 2 3 4 5 |
| A2.3a1 | During your study time, did you take part in an internship/study related work experiences in another country (both as part of the curriculum as well as outside of the curriculum)? | <input type="radio"/> yes
<input type="radio"/> no |
| A2.3a2 | (If a1=yes) For how many months in total? | <input type="radio"/> 0-2 months,
<input type="radio"/> 3-6 months,
<input type="radio"/> 7 - 12 months,
<input type="radio"/> > 12 months |

A2.3a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.3a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.3a5	(If a1=yes) In which country? (multiple answer possible)	Drop down menu with countries
A2.4a1	During your study time, did you have any work experience not related to the study programme in [country of HEI]?	<input type="radio"/> yes <input type="radio"/> no
A2.4a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.4a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.4a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a1	During your study time, did you have any work experience not related to the study programme in another country?	<input type="radio"/> yes <input type="radio"/> no
A2.5a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.5a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a5	(If a1=yes) In which country? (multiple answer possible)	Drop down menu with countries
A2.6a1	During your study time, did you do any voluntary activity related to your higher education institution (e.g. student organisation)?	<input type="radio"/> yes <input type="radio"/> no
A2.6a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.6a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.6a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5

- A2.7a1 During your study time, did you do any voluntary activity not related to your higher education institution? ☐ yes ☐ no
- A2.7a2 (If a1=yes) For how many months in total? ☐ 0-2 months, ☐ 3-6 months, ☐ 7 - 12 months, ☐ > 12 months
- A2.7a3 (If a1=yes) To what extent to you consider the experiences relevant for your professional career? to a very high extent ↔ not at all
1 2 3 4 5
- A2.7a4 (If a1=yes) To what extent to you consider the experiences relevant for your personal development? to a very high extent ↔ not at all
1 2 3 4 5

Previous educational and working career

- A3.1a In which year did you obtain your highest secondary education degree before you entered higher education for the first time?
- A3.1b In which country did you receive your highest secondary degree before you entered higher education for the first time? ☐ In [country of HEI] ☐ In another country --> **Go to A3.2**
- A3.1c What was your highest secondary degree before you entered higher education for the first time? (country-specific question) Country-specific degrees
- A3.1d What was your average final examination grade when you finished secondary education? (country-specific question) Country-specific grading scheme
- A3.2a Did you obtain any vocational degree before you entered higher education? (country-specific question) Country-specific degrees
- A3.2b Year of obtaining degree? ...
- A3.3.1 Before you graduated from your programme in 2016/2017, did you obtain another higher education degree? ☐ yes ☐ no --> **go to A3.4.1**

In case you have more than 5 degrees, please focus on the 5 most recent study programmes you completed.

- A3.3.2 a1) Year of graduation
- A3.3.2 a2) Type of qualification ☐ short-cycle programme ☐ Bachelor ☐ Master ☐ Doctoral programme/PhD ☐ other, namely ...
- A3.3.2 a3) Does the study programme belong to the same field of the one that you graduated in 2016/2017? ☐ yes ☐ no
- A3.3.2 a4) At which higher education institution? ☐ The same institution I graduated from in 2016/2017 ☐ It is in the same country but at another institution ☐ It is in another country

A3.3.2 a5) (If a4 = 3 -->) In which country? Drop down menu with countries

A3.3.2 a6) Did you get another degree? ☐ yes
☐ no --> go to A3.4.1

....if a6=yes, repeat A3.3.2a1-a6 (four times max.)

A3.4.1 Prior to the start of the study programme that you graduated from in 2016/2017, did you acquire any labour market experiences for at least six months without interruptions? ☐ yes
☐ no → go to A3.5.1

A3.4.2 Were your labour market experiences related to the study programme that you graduated from in **2016/2017**? ☐ yes
☐ no

A3.5.1 After you graduated in **2016/2017**, did you study in another Higher Education programme? ☐ yes
☐ no → go to A3.6

A3.5.2 a1) Year of start

A3.5.2 a2) Type of qualification ☐ short-cycle programme
☐ Bachelor
☐ Master
☐ Doctoral programme/PhD
☐ other, namely

A3.5.2 a3) Does the study programme belong to the same field of the one that you graduated in 2016/2017? ☐ yes
☐ no

A3.5.2 a4) At which higher education institution? ☐ The same institution I graduated from in 2016/2017
☐ It is in the same country but at another institution
☐ It is in another country

A3.5.2 a5) (If a4 = 3 -->) In which country? Drop down menu with countries

A3.5.2 a6) Did you graduate from the study programme? ☐ yes
☐ no, I left without degree
☐ I am still enrolled

A3.5.2 a7) Where any credits/competencies you gained outside of this study programme recognized towards the fulfilment of it? ☐ yes, credits/competencies gained in another higher education study programme
☐ Yes, credits/competencies gained outside higher education programmes
☐ no

A3.5.3	How important were the following reasons for you to continue studying after you graduated in the academic year 2016/2017?	Very important ↔ not at all important				
	a) It is usual to continue studying after graduation from that study programme.	1	2	3	4	5
	b) To avoid becoming unemployed	1	2	3	4	5
	c) To increase my chances to get a well-paid job	1	2	3	4	5
	d) To increase my chances to get an interesting job	1	2	3	4	5
	e) For academic reasons	1	2	3	4	5

A3.7 is asked if **A3.5.1 = no** or if **A3.5.1 = yes** and if the answer in **A3.5.2a6 never='I am still enrolled'**

A3.7	How would you describe your current situation?	<input type="radio"/> Employed <input type="radio"/> Unemployed <input type="radio"/> Retired <input type="radio"/> Unable to work due to long-standing health problems <input type="radio"/> Student, pupil <input type="radio"/> Fulfilling domestic tasks <input type="radio"/> Compulsory military or civilian service <input type="radio"/> Other
------	--	---

A3.8 is asked if in **A3.5.2a6 one of the answers = 'I am still enrolled'**

A3.8	How would you describe your current situation?	<input type="radio"/> I am a student with no paid employment <input type="radio"/> I am primarily a student with side jobs <input type="radio"/> I primarily work and study alongside
------	--	---

ROUTING FOR t+1:

(If A3.5.1 = no) or (If A3.5.1 = yes and (If A3.5.2 = still enrolled & A3.8 = 3)) or (If A3.5.1 = yes and (if A3.5.2 degree = yes or degree = left without degree))	Group A	Respondent has no further education followed or respondent is enrolled in further education but study is not main activity or respondent is currently not enrolled but has further study experience	➔ All questions in section 'Transition, work and work history'
If A3.5.1 = yes and (If A3.5.2 = still enrolled & A3.8 = 1 or 2)	Group B	Respondent is currently enrolled and indicates that study is the main activity	➔ No questions in section 'Transition, work and work history'

Transition, Work and Work History

Transition from study to work

B1.1	Have you ever had paid work since graduation in 2016/2017? - Exclude jobs that you left within 3 months of graduation - Include self-employment - Include trainee jobs (national examples if needed/whished by country)	<input type="radio"/> yes, I continued (for more than 3 months) the work I already had during study --> go to B1.2a <input type="radio"/> yes, I have started to work --> go to B1.2b <input type="radio"/> no but I did/do unpaid work in family business --> go to B1.3 <input type="radio"/> no --> go to B1.3
B1.2a	When did you start being employed in this job?	...(month) ...(year) --> go to B1.4c
B1.2b	When did you start with this work?	...(month) ...(year) --> go to B1.4a
B1.3	Have you ever been unemployed (that is, not employed and seeking employment) since graduation in 2016/2017?	<input type="radio"/> no --> go to C1 <input type="radio"/> yes, ...times, for a total of approximately...months --> go to C1
B1.4a	When did you begin looking for this employment?	<input type="radio"/> Prior to graduation in 2016/2017 <input type="radio"/> Around the time of graduation in 2016/2017 <input type="radio"/> After graduation in 2016/2017 <input type="radio"/> Got employment without searching --> go to B2
B1.4b	How many months did you search before you obtained this employment	
	Before graduation	...months
	After graduation	...months
B1.4b	How did you find this employment?	a) Channels used (multiple answers) b) Successful channel (single answer only)
	<input type="radio"/> through advertisement in (online) newspaper <input type="radio"/> through public employment agency <input type="radio"/> through private employment agency <input type="radio"/> through social media <input type="radio"/> contacted employer on own initiative <input type="radio"/> approached by employer <input type="radio"/> through work placement during higher education <input type="radio"/> through family, friends or acquaintances <input type="radio"/> through help of higher education institution <input type="radio"/> through job fairs <input type="radio"/> through internships during my study programme <input type="radio"/> other, please specify	
B2.1a	How many (main) employers have you had altogether since graduation? - including yourself if you have been self-employed - including current employer - excluding small side jobs	...employers
B2.1b	How long in total have you been employed since graduation?	approximately ...months

- B2.1c Have you ever been unemployed (that is, not employed and seeking employment) since graduation? ☐ yes,...times, for a total of approximately... months ☐ no

Current situation

Please answer the following questions about your current (self)employment situation/employment. If you have more than one job or business, please answer the questions for the job which you consider most important.

- B4.1a Have you actively tried to obtain (other) paid work in the past 4 weeks? ☐ yes ☐ no ☐ no, but I am awaiting the results of an earlier job applications
- B4.1a Are you currently in paid employment? - Include self-employment ☐ yes, I have one job ☐ yes, I have more than one job ☐ no but I do unpaid work in family business → go to C1 ☐ no → go to C1
- B4.2a When did you start working with your current employer/in self-employment? ☐ ... (month)(year)
- B4.2b Where do you work? Drop down menu with countries
Postal code or drop down menu regions (are only asked if country = country of HEI)

Occupation

If your occupation is not in the list, please select the one that comes closest. Type the first letters of your occupation and select.

- B5.1a What is your occupation? Drop down menu
- B5.1b What do you mainly do in your job? ...
- B5.1c Do you directly or indirectly supervise other members of staff? ☐ yes, I supervise ... staff members ☐ no
- B5.2a What is the main activity of the organization where you work? Drop down menu
- B5.3 How many people work in your organization and, if applicable, your own location?
a) Total organization ☐ 1-9 ☐ 10-49 ☐ 50-99 ☐ 100-249 ☐ 250-999 ☐ 1000 or more
b) Location ☐ not applicable, only one location ☐ 1-9 ☐ 10-49 ☐ 50-99 ☐ 100-249 ☐ 250-999 ☐ 1000 or more
- B6.1a Are you self-employed? ☐ yes, self-employed with paid employees → go to B6.2.1 ☐ yes, self-employed without paid employees → go to B6.2.1 ☐ no
- B6.1b What is your current type of contract? ☐ unlimited term ☐ fixed-term, for ...months ☐ other, please specify....

- B6.2.1 Are you fulltime employed? ☐ yes
☐ no, I work part-time
- B6.2.2a How many hours on average did you work in your employment (excluding overtime) ...per week
- B.6.2.2b Do you usually have to work overtime in your current employment ? ☐ no
☐ yes, on average ...hours per week
- B6.2.2c Are you satisfied with the number of hours you are currently working (excluding overtime)? ☐ yes
☐ no, I would like to work more hours per week
☐ no, I would like to work less hours per week
- B6.3 What are your gross monthly earnings (excluding overtime, bonus or extra payments)? For self-employed (with or without staff) this is after deducting business expenses, but before deducting taxes. about ...per month
(drop down menu with currencies)
- B7.1 What type of education do you feel is most appropriate for this work? ☐ PhD
☐ Master
☐ Bachelor
☐ Short-cycle higher education
☐ lower than higher education
- B7.2 What field of study do you feel is most appropriate for this work? ☐ exclusively own field
☐ own or a related field
☐ a completely different field
☐ no particular field
- B7.3 Could you have your current job position without the degree you received in 2016/2017? very likely ↔ very unlikely
1 2 3 4 5
- B8.1 How satisfied are you with your current work? very satisfied ↔ not satisfied at all
1 2 3 4 5
- If B4.1b = yes; You reported to have more than one job; in the following we would like to know more about your additional jobs.
- B9a Are you employed or self-employed in your additional job(s)? ☐ employed
☐ self-employed
☐ employed and self-employed
- B9b How many hours per week do you work in the additional job(s) in total (excluding overtime)? ...per week
- B9c What are your gross monthly earnings in the additional job(s) in total (excluding overtime, bonus and extra payments)? For self-employed (with or without staff) this is after deducting business expenses, but before deducting taxes. about ...per month
(drop down menu with currencies)
- B10a Did you follow any work-related course/training in the past 12 months? ☐ yes
☐ no
- B10b What was the most important reason you had for following this course? (If more than one course, please refer to the most important one) ☐ to update my knowledge for my present work
☐ to prepare myself for working in another field
☐ to prepare myself for self-employment
☐ additional training is obligatory for my (desired) job
☐ other, (please specify): ...

Competencies and Job Aspects

C1	Below is a list of competencies. Please rate your level on each competence. If you currently work, please also rate on the same scale the required level of each competence in your current work.	a. Required level in job	b. Current own level
		Very high <-> very low	Very high <-> very low
	a. Own field-specific skills	1 2 3 4 5	1 2 3 4 5
	b. Communication skills (incl. presenting and teaching)	1 2 3 4 5	1 2 3 4 5
	c. Team-working skills	1 2 3 4 5	1 2 3 4 5
	d. Foreign language skills	1 2 3 4 5	1 2 3 4 5
	e. Learning skills	1 2 3 4 5	1 2 3 4 5
	f. Planning and organisation skills	1 2 3 4 5	1 2 3 4 5
	g. Customer handling skills (incl. counselling)	1 2 3 4 5	1 2 3 4 5
	h. Problem solving skills	1 2 3 4 5	1 2 3 4 5
	i. Advanced ICT skills (e.g. programming, syntax in statistical software)	1 2 3 4 5	1 2 3 4 5
C2a	To what extent are your knowledge and skills utilised in your current work?	to a very high extent ↔ not at all 1 2 3 4 5	
C2b	To what extent does your current work demand more knowledge and skills than you can actually offer?	to a very high extent ↔ not at all 1 2 3 4 5	
C3	Please indicate how important the following job characteristics are to you personally, and, if you currently work, to what extent they actually apply to your current work situation	a. Applies to current job	b. Importance
		Very high extent <-> very low extent	Very important <-> not at all
	a. Work autonomy	1 2 3 4 5	1 2 3 4 5
	b. Job security	1 2 3 4 5	1 2 3 4 5
	c. Opportunity to learn new things	1 2 3 4 5	1 2 3 4 5
	d. High earnings	1 2 3 4 5	1 2 3 4 5
	e. New challenges	1 2 3 4 5	1 2 3 4 5
	f. Good career prospects	1 2 3 4 5	1 2 3 4 5
	g.... Social status	1 2 3 4 5	1 2 3 4 5
	h. Chance of doing something useful for society	1 2 3 4 5	1 2 3 4 5
	i. Work-life balance	1 2 3 4 5	1 2 3 4 5

Place of residence

D1a	Where do/did you mainly live... ...at age 16?	Drop down menu countries Postal code or drop down menu region (if country = country HEI)
D1b	...during the study programme you graduated from in the academic year 2016/2017?	<input type="radio"/> same place as with age 16 <input type="radio"/> other place Drop down menu countries Postal code or drop down menu region (if country = country HEI)
D1c	...at present	<input type="radio"/> same place as with age 16 → go to D3 <input type="radio"/> other place Drop down menu countries Postal code or drop down menu region (if country = country HEI)

- | | | |
|----|--|---|
| D2 | What was the main reason for you to move to your current place of residence? | <input type="radio"/> my work
<input type="radio"/> my family or partner
<input type="radio"/> my study
<input type="radio"/> other reason, namely |
| D3 | Since when do you live in the country you currently live in? | <input type="radio"/> I was born in this country and never lived abroad for a period 1 year or more.
<input type="radio"/> I live in the country since (dropdown menu with months and years) |
| D4 | In what kind of area do you live at present? | <input type="radio"/> City
<input type="radio"/> Small town or suburbs
<input type="radio"/> Village or rural area |

Personal and social background

- | | | |
|------|---|---|
| E1a | Sex | <input type="radio"/> male → go to E2
<input type="radio"/> female → go to E2
<input type="radio"/> other |
| E1b | We apologize, but to compare the results of this survey to official registries, could you please provide us with the sex you were registered with at the institution you graduated from in 2016/2017? | <input type="radio"/> male
<input type="radio"/> female |
| E2 | a) Year of birth
b) Month of birth | Drop down menu
Drop down menu |
| E3 | Of which country do you have a citizenship? (If you have multiple citizenships, please select all that) | Drop down menu with countries |
| E4 | Country of birth:
a) Yourself
b) Mother/Guardian
c) Father/Guardian | Drop down menu with countries
Drop down menu with countries
Drop down menu with countries |
| E5 | What is your native language? (if you grew up with more than one language, please select all that apply) | Drop down menu with languages |
| E6a | How do you live at present? | <input type="radio"/> Alone / Single parent
<input type="radio"/> With a partner / with a partner and children
<input type="radio"/> With parents/guardians
<input type="radio"/> other, please specify |
| E6b | Do you have children? | <input type="radio"/> yes, drop down menu with number of children
<input type="radio"/> no → go to E7 |
| E6c1 | CHILD 1
a.) Age of child | ...years |
| E6c1 | b.) Did you interrupt work or study for parental leave for this child? | <input type="radio"/> yes
<input type="radio"/> no |
| E6c1 | c) (if E6b = yes) For how many months? | <input type="radio"/> 0-3 months |

-
- ☐ 4-6 months
 - ☐ 7-12 months
 - ☐ > 12 months

Continue for the number of according to **E6a**

- | | | |
|-----|--|---|
| E7a | What is or was your parent's and, if applicable, partner's highest education?

<div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;">Father/Guardian</div> | Country-specific representations of ISCED levels

<input type="radio"/> ISCED 1+2
<input type="radio"/> ISCED 3+4
<input type="radio"/> ISCED 5+6
<input type="radio"/> ISCED 7+8
<input type="radio"/> I don't know / not applicable |
| E7b | Mother/Guardian

<div style="background-color: #f0f0f0; height: 60px; margin-top: 10px;"></div> | <input type="radio"/> ISCED 1+2
<input type="radio"/> ISCED 3+4
<input type="radio"/> ISCED 5+6
<input type="radio"/> ISCED 7+8
<input type="radio"/> I don't know / not applicable |
| E7c | Partner

<div style="background-color: #f0f0f0; height: 60px; margin-top: 10px;"></div> | <input type="radio"/> ISCED 1+2
<input type="radio"/> ISCED 3+4
<input type="radio"/> ISCED 5+6
<input type="radio"/> ISCED 7+8
<input type="radio"/> I don't know / not applicable |

Question E8 is only asked if respondent is currently employed (**B4.1 = 'yes, I have one job' or B4.1 = 'yes, I have more than one job'**)

- | | | |
|-----|---|---|
| E8a | Is/was your father/guardian working in a similar professional field than you are?

<div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"></div> | <input type="radio"/> yes
<input type="radio"/> no
<input type="radio"/> I don't know/ not applicable |
| E8b | Is/was your mother/guardian working in a similar professional field than you are?

<div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"></div> | <input type="radio"/> yes
<input type="radio"/> no
<input type="radio"/> I don't know/ not applicable |
| E8b | Is/was your partner working in a similar professional field than you are?

<div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"></div> | <input type="radio"/> yes
<input type="radio"/> no
<input type="radio"/> I don't know/ not applicable |
| E9 | How well-off financially do you think your parents/guardians were during your time as a student compared with other families?

<div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"></div> | Very well-off ↔ Not at all well-off
1 2 3 4 5 |

Social outcomes

Personal life

F1.1	Taking all things together, how happy would you say you are?	Extremely unhappy ↔ extremely happy 0 1 2 3 4 5 6 7 8 9 10
F1.2	How is your health in general? Would you say it is...	Very good ↔ very bad 1 2 3 4 5
F1.3	Would you say that most people can be trusted or that you can't be too careful?	You can't be too careful ↔ most people can be trusted 0 1 2 3 4 5 6 7 8 9 10

Voluntary work

F2	In the last 12 months, have you done voluntary work in following areas? (you can select more than one area)	<input type="checkbox"/> In the area of sports and exercise <input type="checkbox"/> In the area of culture and music <input type="checkbox"/> In the area of leisure and social interaction <input type="checkbox"/> In the social area, health area, or rescue services <input type="checkbox"/> In the school or nursery area <input type="checkbox"/> In the area of youth work outside school or adult education <input type="checkbox"/> In the area of environment, nature protection or animal rights <input type="checkbox"/> In the area of politics and political interest groups <input type="checkbox"/> In the area of professional interest groups <input type="checkbox"/> In the church or religious area <input type="checkbox"/> In an area not yet mentioned, namely (please specify) <input type="checkbox"/> No, in none of these areas
----	--	---

Political attitudes and political interest

F3.1	How important do you think it is for democracy <u>in general</u> ...	Not at all important ↔ Extremely important
	a) ...that national elections are free and fair?	0 1 2 3 4 5 6 7 8 9 10
	b) ...that opposition parties are free to criticise the government?	0 1 2 3 4 5 6 7 8 9 10
	c) ...that the media provide citizens with reliable information to judge the government?	0 1 2 3 4 5 6 7 8 9 10
	d) ...that the courts treat everyone the same?	0 1 2 3 4 5 6 7 8 9 10
F3.2	To what extent do you think each of the following statements applies in the country you currently live?	Does not apply at all ↔ applies completely
	a) National elections are free and fair.	0 1 2 3 4 5 6 7 8 9 10
	b) Opposition parties are free to criticise the government.	0 1 2 3 4 5 6 7 8 9 10
	c) The media provide citizens with reliable information to judge the government.	0 1 2 3 4 5 6 7 8 9 10
	d) The courts treat everyone the same.	0 1 2 3 4 5 6 7 8 9 10

- F3.3 How important is it for you to live in a country that is governed democratically? Not at all important ↔ absolutely important
0 1 2 3 4 5 6 7 8 9 10
- F3.4a Would you say it is generally bad or good for your country's economy that people come to live here from other countries? Bad for the economy ↔ good for economy
0 1 2 3 4 5 6 7 8 9 10
- F3.4b Would you say that your country's cultural life is generally undermined or enriched by people coming to live here from other countries? Cultural life undermined ↔ cultural life enriched
0 1 2 3 4 5 6 7 8 9 10
- F3.4c Is your country made a worse or a better place to live by people coming to live here from other countries? Worse place to live ↔ better place to live
0 1 2 3 4 5 6 7 8 9 10
- F3.5a In general, does the EU conjure up for you a very positive or very negative image? Very positive ↔ very negative
1 2 3 4 5
- F3.5b How interested would you say you are in politics – are you...? Very interested ↔ Not at all interested
1 2 3 4 5
- F3.6 There are different ways of trying to improve things in your country or help prevent things from going wrong. During the last 12 months, have you done any of the following?
- a) Contacted a politician, government or local government official? ☐ yes ☐ no
 - b) Worked in a political party or action group? ☐ yes ☐ no
 - c) Worked in another organisation or association? ☐ yes ☐ no
 - d) Worn or displayed a campaign badge/sticker? ☐ yes ☐ no
 - e) Signed a petition? ☐ yes ☐ no
 - f) Taken part in a lawful public demonstration? ☐ yes ☐ no
 - g) Boycotted certain products? ☐ yes ☐ no
 - h) Posted or shared anything about politics online, for example on blogs, via email or on social media such as Facebook or Twitter? ☐ yes ☐ no

Final question

- G1a In the future, would you be willing to participate in follow-up surveys to the EUROGRADUATE pilot survey carried out or commissioned by the European Commission (directly or by its partners)? ☐ yes ☐ no → go to G2
- G1b Please fill in the e-mail address you allow the European Commission or a contractor to contact you on for further research. ...
- G2 Thanks for filling in the questionnaire! If you have any remaining remarks, please state them here ...

8.3. Annex 3: EUROGRADUATE master questionnaires cohort 2012/13 (t+5)



Education History

Study Programme graduated from in 2012/2013

The following questions concern the study programme that you graduated from in the academic year of 2012/2013. If you graduated that year from more than one programme, please provide the information for the study programme that you yourself consider the most relevant.

A1.1a1	Start date of the study programme (month) (year)
A1.1a2	Date of graduation (month) (year)
A1.1a3	Type of qualification	Country-specific (drop down menu, open field etc.)
A1.1a4	Name of institution	Country-specific (drop down menu, open field etc.)
A1.1a5	Field of Study: Major	Country-specific (drop down menu, open field etc.)
A1.1a6	What was your formal enrolment status?	<input type="radio"/> Fulltime student <input type="radio"/> Part time student <input type="radio"/> other, namely
A1.1a7	Were any credits/competencies you obtained outside of this study programme recognized towards the fulfilment of it?	<input type="radio"/> yes, credits/competencies gained in another higher education study programme <input type="radio"/> yes, credits/competencies gained outside higher education programmes <input type="radio"/> no
A1.2a	What was the main language of instruction in your study programme?	Drop down menu with languages
A1.2b	Did you follow as part of your study programme also courses in a different language than the main language of instruction?	<input type="radio"/> no <input type="radio"/> yes, namely in the following languages (multiple answers possible): Drop down menu with languages
A1.3	What was your average final grade?	Country-specific question, including grading schemes

A1.4	How did you finance your study and living costs during your study time? The sum of the following categories has to be 100%.	a. Parents or support by other family-members ...% b. Income from working ...% c. Student loan ...% d Scholarship ...% e. Other sources, namely (<i>please specify</i>).... ...%
A1.5	To what extent were the following modes of teaching, assessment and learning emphasised in your study programme?	to a very high extent ↔ not at all
	a. Lectures	1 2 3 4 5
	b. Group assignments	1 2 3 4 5
	c. Participation in research projects	1 2 3 4 5
	d. Internships, work placement (as formal part of your study programme)	1 2 3 4 5
	e. Project and/or problem-based learning	1 2 3 4 5
	f. Written assignments	1 2 3 4 5
	g. Oral presentations by students	1 2 3 4 5
	h. E-learning (including distance learning)	1 2 3 4 5
	i. Self-study	1 2 3 4 5
A1.6	To what extent did the following descriptions apply to your study behaviour?	to a very high extent ↔ not at all
	a. I did extra work above what was required to pass my exams	1 2 3 4 5
	b. I strived for the highest possible marks	1 2 3 4 5
	c. I focused on my personal study interests rather than straightly follow the curriculum	1 2 3 4 5
A1.7	To what extent has your study programme been a good basis for ...?	to a very high extent ↔ not at all
	a. Further learning	1 2 3 4 5
	b. Performing your current (work) tasks	1 2 3 4 5
	c. Future career	1 2 3 4 5
	d. Development of social skills	1 2 3 4 5
	e. Development of entrepreneurial skills	1 2 3 4 5
	f. Development of advanced literacy skills (e.g. Writing reports, handbooks, articles or books)	1 2 3 4 5
	g. Development of advanced numeracy (e.g. calculations using advanced mathematical or statistical principles)	1 2 3 4 5
	h. Development of advanced ICT skills (e.g. programming, syntax in statistical software)	1 2 3 4 5
	i. Development of managerial/leaderships skills	1 2 3 4 5
	j. Personal development	1 2 3 4 5
	k. Increasing political interest and participation in politics	1 2 3 4 5
	l. Building a social network	1 2 3 4 5
A1.8	Looking back, if you were free to choose again would you choose the same study programme at the same institution?	o yes o no, different study programme at the same institution o no, same study programme at different institution o no, a different study program at different institution o no, I would decide not to study at all

Other Activities during time of studying

The following questions concern activities that you took part during your time as a student in the programme that you graduated from in 2012/2013.

A2.1a1	During your study time, did you study in another country (e.g. semester abroad)?	<input type="radio"/> yes <input type="radio"/> no
A2.1a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.1a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.1a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.1a5	(If a1=yes) In which country? (multiple answer possible)	Drop down menu with countries
A2.1a6	(If a1=yes) Was your study period abroad part of a mobility programme?	<input type="radio"/> yes: EU programme (e.g. Erasmus) <input type="radio"/> yes: other programme <input type="radio"/> no
A2.1a6	(If a1=yes) Could the credits you obtained during your study abroad be transferred to the study programme you graduated from in 2012/2013? Credits (e.g., ECTS) I obtained were...	<input type="radio"/> fully transferred <input type="radio"/> partly transferred <input type="radio"/> not transferable at all
A2.2a1	During your study time, did you take part in an internship/study related work experiences (both as part of the curriculum as well as outside of the curriculum) in [country of HEI]?	<input type="radio"/> yes <input type="radio"/> no
A2.2a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.2a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.2a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.3a1	During your study time, did you take part in an internship/study related work experiences in another country (both as part of the curriculum as well as outside of the curriculum)?	<input type="radio"/> yes <input type="radio"/> no
A2.3a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months

A2.3a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.3a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.3a5	(If a1=yes) In which country? (multiple answer possible)	Drop down menu with countries
A2.4a1	During your study time, did you have any work experience not related to the study programme in [country of HEI]?	<input type="radio"/> yes <input type="radio"/> no
A2.4a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.4a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.4a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a1	During your study time, did you have any work experience not related to the study programme in another country?	<input type="radio"/> yes <input type="radio"/> no
A2.5a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.5a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5
A2.5a5	(If a1=yes) In which country? (multiple answer possible)	Drop down menu with countries
A2.6a1	During your study time, did you do any voluntary activity related to your higher education institution (e.g. student organisation)?	<input type="radio"/> yes <input type="radio"/> no
A2.6a2	(If a1=yes) For how many months in total?	<input type="radio"/> 0-2 months, <input type="radio"/> 3-6 months, <input type="radio"/> 7 - 12 months, <input type="radio"/> > 12 months
A2.6a3	(If a1=yes) To what extent to you consider the experiences relevant for your professional career?	to a very high extent ↔ not at all 1 2 3 4 5
A2.6a4	(If a1=yes) To what extent to you consider the experiences relevant for your personal development?	to a very high extent ↔ not at all 1 2 3 4 5

- A2.7a1 During your study time, did you do any voluntary activity not related to your higher education institution? ☐ yes ☐ no
- A2.7a2 (If a1=yes) For how many months in total? ☐ 0-2 months, ☐ 3-6 months, ☐ 7 - 12 months, ☐ > 12 months
- A2.7a3 (If a1=yes) To what extent to you consider the experiences relevant for your professional career? to a very high extent ↔ not at all
1 2 3 4 5
- A2.7a4 (If a1=yes) To what extent to you consider the experiences relevant for your personal development? to a very high extent ↔ not at all
1 2 3 4 5

Previous educational and working career

- A3.1a In which year did you obtain your highest secondary education degree before you entered higher education for the first time?
- A3.1b In which country did you receive your highest secondary degree before you entered higher education for the first time? ☐ In [country of HEI] ☐ In another country --> **Go to A3.2**
- A3.1c What was your highest secondary degree before you entered higher education for the first time? (country-specific question) Country-specific degrees
- A3.1d What was your average final examination grade when you finished secondary education? (country-specific question) Country-specific grading scheme
- A3.2a Did you obtain any vocational degree before you entered higher education? (country-specific question) Country-specific degrees
- A3.2b Year of obtaining degree? ...
- A3.3.1 Before you graduated from your programme in 2012/2013, did you obtain another higher education degree? ☐ yes ☐ no --> **go to A3.4.1**

In case you have more than 5 degrees, please focus on the 5 most recent study programmes you completed.

- A3.3.2 a1) Year of graduation
.....
- A3.3.2 a2) Type of qualification ☐ short-cycle programme ☐ Bachelor ☐ Master ☐ Doctoral programme/PhD ☐ other, namely ...
- A3.3.2 a3) Does the study programme belong to the same field of the one that you graduated in 2012/2013? ☐ yes ☐ no
- A3.3.2 a4) At which higher education institution? ☐ The same institution I graduated from in 2016/2017 ☐ It is in the same country but at another institution ☐ It is in another country

A3.3.2 a5) (If a4 = 3 -->) In which country? Drop down menu with countries

A3.3.2 a6) Did you get another degree? ☐ yes
☐ no --> go to A3.4.1

....if a6=yes, repeat A3.3.2a1-a6 (four times max.)

A3.4.1 Prior to the start of the study programme that you graduated from in 2012/2013, did you acquire any labour market experiences for at least six months without interruptions? ☐ yes
☐ no → go to A3.5.1

A3.4.2 Were your labour market experiences related to the study programme that you graduated from in **2012/2013**? ☐ yes
☐ no

A3.5.1 After you graduated in **2012/2013**, did you study in another Higher Education programme? ☐ yes
☐ no → go to A3.6

A3.5.2 a1) Year of start

A3.5.2 a2) Type of qualification ☐ short-cycle programme
☐ Bachelor
☐ Master
☐ Doctoral programme/PhD
☐ other, namely

A3.5.2 a3) Does the study programme belong to the same field of the one that you graduated in 2012/2013? ☐ yes
☐ no

A3.5.2 a4) At which higher education institution? ☐ The same institution I graduated from in 2016/2017
☐ It is in the same country but at another institution
☐ It is in another country

A3.5.2 a5) (If a4 = 3 -->) In which country? Drop down menu with countries

A3.5.2 a6) Did you graduate from the study programme? ☐ yes
☐ no, I left without degree
☐ I am still enrolled

A3.5.2 a7) Where any credits/competencies you gained outside of this study programme recognized towards the fulfilment of it? ☐ yes, credits/competencies gained in another higher education study programme
☐ Yes, credits/competencies gained outside higher education programmes
☐ no

A3.5.3	How important were the following reasons for you to continue studying after you graduated in the academic year 2012/2013?	Very important ↔ not at all important				
a)	It is usual to continue studying after graduation from that study programme.	1	2	3	4	5
b)	To avoid becoming unemployed	1	2	3	4	5
c)	To increase my chances to get a well-paid job	1	2	3	4	5
d)	To increase my chances to get an interesting job	1	2	3	4	5
e)	For academic reasons	1	2	3	4	5

A3.7 is asked if **A3.5.1 = no** or if **A3.5.1 = yes** and if the answer in **A3.5.2a6 never='I am still enrolled'**

A3.7	How would you describe your current situation?	<input type="radio"/> Employed <input type="radio"/> Unemployed <input type="radio"/> Retired <input type="radio"/> Unable to work due to long-standing health problems <input type="radio"/> Student, pupil <input type="radio"/> Fulfilling domestic tasks <input type="radio"/> Compulsory military or civilian service <input type="radio"/> Other
------	--	---

A3.8 is asked if in **A3.5.2a6 one of the answers = 'I am still enrolled'**

A3.8	How would you describe your current situation?	<input type="radio"/> I am a student with no paid employment <input type="radio"/> I am primarily a student with side jobs <input type="radio"/> I primarily work and study alongside
------	--	---

ROUTING FOR t+5:

If A3.5.1 = no OR

**If A3.5.1 = yes and
A3.5.2 = still enrolled
and
A3.8 = 3**

**If A3.5.1 = yes and
A3.5.2 degree = yes or
degree = left without
degree**

**If A3.5.1 = yes and
A3.5.2 = still enrolled
and
A3.8 = 1 or 2**

Group A	Respondent has no further education followed or respondent is enrolled in further education but study is not main activity	→ All questions in section 'Transition, work and work history'
Group B	Respondent is currently not enrolled but has further study experience	→ Questions in section 'Transition to work' start with B4 ('Current situation')
Group C	Respondent is currently enrolled and indicates that study is the main activity	→ Questions in section 'Transition, work and work history' include only B1 and B2 ('Transition to work')

Transition, Work and Work History

Transition from study to work

- | | | |
|-------|---|---|
| B1.1 | <p>Have you ever had paid work since graduation in 2012/2013?</p> <ul style="list-style-type: none"> - Exclude jobs that you left within 3 months of graduation - Include self-employment - Include trainee jobs (national examples if needed/whished by country) | <p><input type="radio"/> yes, I continued (for more than 3 months) the work I already had during study --> go to B1.2a</p> <p><input type="radio"/> yes, I have started to work --> go to B1.2b</p> <p><input type="radio"/> no but I did/do unpaid work in family business --> go to B1.3</p> <p><input type="radio"/> no --> go to B1.3</p> |
| B1.2a | <p>When did you start being employed in this job?</p> | <p>...(month) ...(year) --> go to B1.4c</p> |
| B1.2b | <p>When did you start with this work?</p> | <p>...(month) ...(year) --> go to B1.4a</p> |
| B1.3 | <p>Have you ever been unemployed (that is, not employed and seeking employment) since graduation in 2012/2013?</p> | <p><input type="radio"/> no --> go to C1</p> <p><input type="radio"/> yes, ...times, for a total of approximately...months --> go to C1</p> |
| B1.4a | <p>When did you begin looking for this employment?</p> | <p><input type="radio"/> Prior to graduation in 2012/2013</p> <p><input type="radio"/> Around the time of graduation in 2012/2013</p> <p><input type="radio"/> After graduation in 2012/2013</p> <p><input type="radio"/> Got employment without searching --> go to B2</p> |
| B1.4b | <p>How many months did you search before you obtained this employment</p> <p>Before graduation</p> <p>After graduation</p> | <p>...months</p> <p>...months</p> |
| B1.4b | <p>How did you find this employment?</p> <ul style="list-style-type: none"> <input type="radio"/> through advertisement in (online) newspaper <input type="radio"/> through public employment agency <input type="radio"/> through private employment agency <input type="radio"/> through social media <input type="radio"/> contacted employer on own initiative <input type="radio"/> approached by employer <input type="radio"/> through work placement during higher education <input type="radio"/> through family, friends or acquaintances <input type="radio"/> through help of higher education institution <input type="radio"/> through job fairs <input type="radio"/> through internships during my study programme <input type="radio"/> other, please specify | <p>a) Channels used (multiple answers) b) Successful channel (single answer only)</p> |
| B2.1a | <p>How many (main) employers have you had altogether since graduation?</p> <ul style="list-style-type: none"> - including yourself if you have been self-employed - including current employer - excluding small side jobs | <p>...employers</p> |
| B2.1b | <p>How long in total have you been employed since graduation?</p> | <p>approximately ...months</p> |

- B2.1c Have you ever been unemployed (that is, not employed and seeking employment) since graduation? ☐ yes,...times, for a total of approximately... months ☐ no

Situation in fall (Sep-Nov) 2014

Please answer the following questions about your situation in September-November 2014. If you have difficulty remembering your exact situation at the time, please describe to the best of your ability your work situation in that period. If you had more than one job or business at that time, please answer the questions for the job or business you consider most important for your career.

- B3.1a Were you in paid employment at that time? Include self-employment / Exclude jobs that you held in case your main activity at that time was studying ☐ yes → go to B3.2 ☐ no, no but I did unpaid work in family business ☐ no
- B3.1b Were you actively trying to find work at that time? ☐ yes → go to B4 ☐ no → go to B4
- B3.2 When did you start working with this employer / start this self-employment? ...(month) ...(year)
- B3.2 Where did you work? Drop down menu with countries
Postal code or drop down menu regions (are only asked if country = country of HEI)

Occupation in fall (Sep-Nov) 2014

If your occupation is not in the list, please select the one that comes closest. Type the first letters of your occupation and select.

- B3.3a What was your occupation? Drop down menu, open field
- B3.3b What did you mainly do in your job? ...
- B3.3c Do you directly or indirectly supervise other members of staff? ☐ yes, I supervise ... staff members ☐ no
- B3.4 What is the main activity of the organization where you work? Drop down menu
- B3.5a Were you self-employed at that time? ☐ yes, self-employed with paid employees → go to B3.6.1 ☐ yes, self-employed without paid employees → go to B3.6.1 ☐ no
- B3.5b What was your type of contract? ☐ unlimited term ☐ fixed-term, for ...months ☐ other, please specify....
- B3.6.1 Were you fulltime employed? ☐ yes ☐ no, I work part-time
- B3.6.2 How many hours on average did you work in your employment (excluding overtime) ...per week
- B3.7.1 What type of education do you feel is most appropriate for this work? ☐ PhD ☐ Master ☐ Bachelor ☐ Short-cycle higher education ☐ lower than higher education

- B3.7.2 What field of study do you feel is most appropriate for this work?
- ☐ exclusively own field
 - ☐ own or a related field
 - ☐ a completely different field
 - ☐ no particular field
- B3.7.3 Could you have your current job position without the degree you received in 2012/2013?
- very likely ↔ very unlikely
- 1 2 3 4 5

Current situation

Please answer the following questions about your current (self)employment situation/employment. If you have more than one job or business, please answer the questions for the job which you consider most important.

- B4.1a Have you actively tried to obtain (other) paid work in the past 4 weeks?
- ☐ yes
 - ☐ no
 - ☐ no, but I am awaiting the results of an earlier job applications
- B4.1a Are you currently in paid employment?
- Include self-employment
- ☐ yes, I have one job
 - ☐ yes, I have more than one job
 - ☐ no but I do unpaid work in family business → go to C1
 - ☐ no → go to C1
- B4.2a When did you start working with your current employer/in self-employment?
- ☐ ... (month)(year)
- B4.2b Where do you work?
- Drop down menu with countries
Postal code or drop down menu regions (are only asked if country = country of HEI)

Occupation

If your occupation is not in the list, please select the one that comes closest. Type the first letters of your occupation and select.

- B5.1a What is your occupation? Drop down menu
- B5.1b What do you mainly do in your job? ...
- B5.1c Do you directly or indirectly supervise other members of staff?
- ☐ yes, I supervise ... staff members
 - ☐ no
- B5.2a What is the main activity of the organization where you work? Drop down menu
- B5.3 How many people work in your organization and, if applicable, your own location?
- | | |
|------------------------------------|---|
| b) Total organization | b) Location |
| <input type="radio"/> 1-9 | <input type="radio"/> not applicable, only one location |
| <input type="radio"/> 10-49 | <input type="radio"/> 1-9 |
| <input type="radio"/> 50-99 | <input type="radio"/> 10-49 |
| <input type="radio"/> 100-249 | <input type="radio"/> 50-99 |
| <input type="radio"/> 250-999 | <input type="radio"/> 100-249 |
| <input type="radio"/> 1000 or more | <input type="radio"/> 250-999 |
| | <input type="radio"/> 1000 or more |
- B6.1a Are you self-employed?
- ☐ yes, self-employed with paid employees → go to B6.2.1
 - ☐ yes, self-employed without paid employees → go to B6.2.1
 - ☐ no

- B6.1b What is your current type of contract?
☐ unlimited term
☐ fixed-term, for ...months
☐ other, please specify....
- B6.2.1 Are you fulltime employed?
☐ yes
☐ no, I work part-time
- B6.2.2a How many hours on average did you work in your employment (excluding overtime) ...per week
- B.6.2.2b Do you usually have to work overtime in your current employment ?
☐ no
☐ yes, on average ...hours per week
- B6.2.2c Are you satisfied with the number of hours you are currently working (excluding overtime)?
☐ yes
☐ no, I would like to work more hours per week
☐ no, I would like to work less hours per week
- B6.3 What are your gross monthly earnings (excluding overtime, bonus or extra payments)? For self-employed (with or without staff) this is after deducting business expenses, but before deducting taxes. about ...per month (drop down menu with currencies)
- B7.1 What type of education do you feel is most appropriate for this work?
☐ PhD
☐ Master
☐ Bachelor
☐ Short-cycle higher education
☐ lower than higher education
- B7.2 What field of study do you feel is most appropriate for this work?
☐ exclusively own field
☐ own or a related field
☐ a completely different field
☐ no particular field
- B7.3 Could you have your current job position without the degree you received in 2012/2013?
 very likely ↔ very unlikely
 1 2 3 4 5
- B8.1 How satisfied are you with your current work?
 very satisfied ↔ not satisfied at all
 1 2 3 4 5
- If B4.1b = yes; You reported to have more than one job; in the following we would like to know more about your additional jobs.
- B9a Are you employed or self-employed in your additional job(s)?
☐ employed
☐ self-employed
☐ employed and self-employed
- B9b How many hours per week do you work in the additional job(s) in total (excluding overtime)? ...per week
- B9c What are your gross monthly earnings in the additional job(s) in total (excluding overtime, bonus and extra payments)? For self-employed (with or without staff) this is after deducting business expenses, but before deducting taxes. about ...per month (drop down menu with currencies)
- B10a Did you follow any work-related course/training in the past 12 months?
☐ yes
☐ no

- B10b What was the most important reason you had for following this course?
(If more than one course, please refer to the most important one)
- o to update my knowledge for my present work
 - o to prepare myself for working in another field
 - o to prepare myself for self-employment
 - o additional training is obligatory for my (desired) job
 - o other, (please specify): ...

Competencies and Job Aspects

- C1 Below is a list of competencies. Please rate your level on each competence. If you currently work, please also rate on the same scale the required level of each competence in your current work.
- | | a. Required level in job | b. Current own level |
|---|-------------------------------------|-------------------------------------|
| a. Own field-specific skills | Very high <-> very low
1 2 3 4 5 | Very high <-> very low
1 2 3 4 5 |
| b. Communication skills (incl. presenting and teaching) | 1 2 3 4 5 | 1 2 3 4 5 |
| c. Team-working skills | 1 2 3 4 5 | 1 2 3 4 5 |
| d. Foreign language skills | 1 2 3 4 5 | 1 2 3 4 5 |
| e. Learning skills | 1 2 3 4 5 | 1 2 3 4 5 |
| f. Planning and organisation skills | 1 2 3 4 5 | 1 2 3 4 5 |
| g. Customer handling skills (incl. counselling) | 1 2 3 4 5 | 1 2 3 4 5 |
| h. Problem solving skills | 1 2 3 4 5 | 1 2 3 4 5 |
| i. Advanced ICT skills (e.g. programming, syntax in statistical software) | 1 2 3 4 5 | 1 2 3 4 5 |
- C2a To what extent are your knowledge and skills utilised in your current work?
- to a very high extent ↔ not at all
1 2 3 4 5
- C2b To what extent does your current work demand more knowledge and skills than you can actually offer?
- to a very high extent ↔ not at all
1 2 3 4 5
- C3 Please indicate how important the following job characteristics are to you personally, and, if you currently work, to what extent they actually apply to your current work situation
- | | a. Applies to current job | b. Importance |
|---|--------------------------------------|-------------------------------|
| | Very high extent <-> very low extent | Very important <-> not at all |
| a. Work autonomy | 1 2 3 4 5 | 1 2 3 4 5 |
| b. Job security | 1 2 3 4 5 | 1 2 3 4 5 |
| c. Opportunity to learn new things | 1 2 3 4 5 | 1 2 3 4 5 |
| d. High earnings | 1 2 3 4 5 | 1 2 3 4 5 |
| e. New challenges | 1 2 3 4 5 | 1 2 3 4 5 |
| f. Good career prospects | 1 2 3 4 5 | 1 2 3 4 5 |
| g.... Social status | 1 2 3 4 5 | 1 2 3 4 5 |
| h. Chance of doing something useful for society | 1 2 3 4 5 | 1 2 3 4 5 |
| i. Work-life balance | 1 2 3 4 5 | 1 2 3 4 5 |

Place of residence

- D1a Where do/did you mainly live...
...at age 16?
- Drop down menu countries
Postal code or drop down menu region (if country = country HEI)

D1b	...during the study programme you graduated from in the academic year 2012/2013?	<input type="radio"/> same place as with age 16 <input type="radio"/> other place	Drop down menu countries Postal code or drop down menu region (if country = country HEI)
D1c	...in September 2014	<input type="radio"/> same place as during study <input type="radio"/> other place	Drop down menu countries Postal code or drop down menu region (if country = country HEI)
D1d	...at present	<input type="radio"/> same place as with age 16 → go to D3 <input type="radio"/> other place	Drop down menu countries Postal code or drop down menu region (if country = country HEI)
D2	What was the main reason for you to move to your current place of residence?	<input type="radio"/> my work <input type="radio"/> my family or partner <input type="radio"/> my study <input type="radio"/> other reason, namely	
D3	Since when do you live in the country you currently live in?	<input type="radio"/> I was born in this country and never lived abroad for a period 1 year or more. <input type="radio"/> I live in the country since (dropdown menu with months and years)	
D4	In what kind of area do you live at present?	<input type="radio"/> City <input type="radio"/> Small town or suburbs <input type="radio"/> Village or rural area	

Personal and social background

E1a	Sex	<input type="radio"/> male → go to E2 <input type="radio"/> female → go to E2 <input type="radio"/> other	
E1b	We apologize, but to compare the results of this survey to official registries, could you please provide us with the sex you were registered with at the institution you graduated from in 2012/2013?	<input type="radio"/> male <input type="radio"/> female	
E2	a) Year of birth b) Month of birth	Drop down menu Drop down menu	
E3	Of which country do you have a citizenship? (If you have multiple citizenships, please select all that)	Drop down menu with countries	
E4	Country of birth: a) Yourself b) Mother/Guardian c) Father/Guardian	Drop down menu with countries Drop down menu with countries Drop down menu with countries	
E5	What is your native language? (if you grew up with more than one language, please select all that apply)	Drop down menu with languages	

- E6a How do you live at present?
- ☐ Alone / Single parent
 - ☐ With a partner / with a partner and children
 - ☐ With parents/guardians
 - ☐ other, please specify
- E6b Do you have children?
- ☐ yes, drop down menu with number of children
 - ☐ no → go to E7
- E6c1 CHILD 1
- a.) Age of child ...years
- E6c1 b.) Did you interrupt work or study for parental leave for this child?
- ☐ yes
 - ☐ no
- E6c1 c) (if E6b = yes) For how many months?
- ☐ 0-3 months
 - ☐ 4-6 months
 - ☐ 7-12 months
 - ☐ > 12 months

Continue for the number of according to **E6a**

- E7a What is or was your parent's and, if applicable, partner's highest education?
- Father/Guardian
- Country-specific representations of ISCED levels
- ☐ ISCED 1+2
 - ☐ ISCED 3+4
 - ☐ ISCED 5+6
 - ☐ ISCED 7+8
 - ☐ I don't know / not applicable
- E7b Mother/Guardian
- ☐ ISCED 1+2
 - ☐ ISCED 3+4
 - ☐ ISCED 5+6
 - ☐ ISCED 7+8
 - ☐ I don't know / not applicable
- E7c Partner
- ☐ ISCED 1+2
 - ☐ ISCED 3+4
 - ☐ ISCED 5+6
 - ☐ ISCED 7+8
 - ☐ I don't know / not applicable

Question E8 is only asked if respondent is currently employed (**B4.1 = 'yes, I have one job' or B4.1 = 'yes, I have more than one job'**)

- E8a Is/was your father/guardian working in a similar professional field than you are?
- ☐ yes
 - ☐ no
 - ☐ I don't know/ not applicable
- E8b Is/was your mother/guardian working in a similar professional field than you are?
- ☐ yes
 - ☐ no
 - ☐ I don't know/ not applicable
- E8b Is/was your partner working in a similar professional field than you are?
- ☐ yes
 - ☐ no
 - ☐ I don't know/ not applicable

- E9 How well-off financially do you think your parents/guardians were during your time as a student compared with other families? Very well-off ↔ Not at all well-off
1 2 3 4 5

Social outcomes

Personal life

- F1.1 Taking all things together, how happy would you say you are? Extremely unhappy ↔ extremely happy
0 1 2 3 4 5 6 7 8 9 10
- F1.2 How is your health in general? Would you say it is... Very good ↔ very bad
1 2 3 4 5
- F1.3 Would you say that most people can be trusted or that you can't be too careful? You can't be too careful ↔ most people can be trusted
0 1 2 3 4 5 6 7 8 9 10

Voluntary work

- F2 In the last 12 months, have you done **voluntary work** in following areas? (you can select more than one area)
- ☐ In the area of sports and exercise
 - ☐ In the area of culture and music
 - ☐ In the area of leisure and social interaction
 - ☐ In the social area, health area, or rescue services
 - ☐ In the school or nursery area
 - ☐ In the area of youth work outside school or adult education
 - ☐ In the area of environment, nature protection or animal rights
 - ☐ In the area of politics and political interest groups
 - ☐ In the area of professional interest groups
 - ☐ In the church or religious area
 - ☐ In an area not yet mentioned, namely (please specify)
 - ☐ No, in none of these areas

Political attitudes and political interest

- F3.1 How important do you think it is for democracy in general... Not at all important ↔ Extremely important
- a) ...that national elections are free and fair? 0 1 2 3 4 5 6 7 8 9 10
- b) ...that opposition parties are free to criticise the government? 0 1 2 3 4 5 6 7 8 9 10
- c) ...that the media provide citizens with reliable information to judge the government? 0 1 2 3 4 5 6 7 8 9 10
- d) ...that the courts treat everyone the same? 0 1 2 3 4 5 6 7 8 9 10
- F3.2 To what extent do you think each of the following statements applies in the country you currently live? Does not apply at all ↔ applies completely
- a) National elections are free and fair. 0 1 2 3 4 5 6 7 8 9 10
- b) Opposition parties are free to criticise the government. 0 1 2 3 4 5 6 7 8 9 10
- c) The media provide citizens with reliable

	information to judge the government.	0 1 2 3 4 5 6 7 8 9 10
	d) The courts treat everyone the same.	0 1 2 3 4 5 6 7 8 9 10
F3.3	How important is it for you to live in a country that is governed democratically?	Not at all important ↔ absolutely important 0 1 2 3 4 5 6 7 8 9 10
F3.4a	Would you say it is generally bad or good for your country's economy that people come to live here from other countries?	Bad for the economy ↔ good for economy 0 1 2 3 4 5 6 7 8 9 10
F3.4b	Would you say that your country's cultural life is generally undermined or enriched by people coming to live here from other countries?	Cultural life undermined ↔ cultural life enriched 0 1 2 3 4 5 6 7 8 9 10
F3.4c	Is your country made a worse or a better place to live by people coming to live here from other countries?	Worse place to live ↔ better place to live 0 1 2 3 4 5 6 7 8 9 10
F3.5a	In general, does the EU conjure up for you a very positive or very negative image?	Very positive ↔ very negative 1 2 3 4 5
F3.5b	How interested would you say you are in politics – are you...?	Very interested ↔ Not at all interested 1 2 3 4 5
F3.6	There are different ways of trying to improve things in your country or help prevent things from going wrong. During the last 12 months, have you done any of the following?	
	a) Contacted a politician, government or local government official?	<input type="radio"/> yes <input type="radio"/> no
	b) Worked in a political party or action group?	<input type="radio"/> yes <input type="radio"/> no
	c) Worked in another organisation or association?	<input type="radio"/> yes <input type="radio"/> no
	d) Worn or displayed a campaign badge/sticker?	<input type="radio"/> yes <input type="radio"/> no
	e) Signed a petition?	<input type="radio"/> yes <input type="radio"/> no
	f) Taken part in a lawful public demonstration?	<input type="radio"/> yes <input type="radio"/> no
	g) Boycotted certain products?	<input type="radio"/> yes <input type="radio"/> no
	h) Posted or shared anything about politics online, for example on blogs, via email or on social media such as Facebook or Twitter?	<input type="radio"/> yes <input type="radio"/> no

Final question

G1a	In the future, would you be willing to participate in follow-up surveys to the EUROGRADUATE pilot survey carried out or commissioned by the European Commission (directly or by its partners)?	<input type="radio"/> yes <input type="radio"/> no → go to G2
G1b	Please fill in the e-mail address you allow the European Commission or a contractor to contact you on for further research.	...
G2	Thanks for filling in the questionnaire! If you have any remaining remarks, please state them here	...

8.4. Annex 4: EUROGRADUATE privacy statement (English version)

Specific Privacy Statement Pilot European graduate survey

1. Objective

The objective of this survey is to collect the information from higher education graduates in European countries on their experience in higher education and their transition into the world of work. The survey is commissioned by the Higher Education unit (see point 7. Contact) of the Directorate General for Education, Youth, Sport and Culture (DG EAC) under the responsibility of the Director for Resources acting as Controller.

As this online survey collects and further processes personal data, the legislation to apply is Regulation (EC) 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

2. What personal information do we collect and through which technical means?

Identification Data

The personal data collected and further processed are contextual data necessary for a meaningful analysis of the survey results, such as gender, date and place of birth, native languages, socio-economic background, education and professional history, current employment and family status, place of residence and past geographical mobility, and the views on the topics concerned such as relevance of skills acquired during tertiary studies.

Name and surname are not collected as identifying data. At the end of the survey, the respondent is asked if he or she is willing to participate in possible future longitudinal follow up studies¹. If the respondent indicates explicitly the willingness to participate in such follow up studies, the respondent is asked to enter an e-mail address that will be stored (separately from all other answers) for a period of up to 10 years (until 2028) for the sole purpose of re-contacting graduates for possible future longitudinal follow-up studies.

Technical information

Access to the questionnaires is provided by URL and login code, which is unique for every respondent and ensures that no third party can access the previously saved

¹ Longitudinal study (or panel study) is a research design that involves repeated observations over a longer period of time, which enables the researcher to gain deeper insights into the patterns and trends over time. For instance, on-off survey may show that graduates of some study fields have a difficult time finding a job, but a longitudinal survey may reveal that once they started working, these graduates have better career progression and higher salaries than those who found jobs more quickly.

responses. In case respondents are invited by regular e-mail or any other digital way, the login will be hidden in the link provided to the respondent. If the invitation goes out by paper mail inviting graduates to type into the web browser the link to the questionnaire online, there is no other option but to mention URL and login in the letter to the respondent.

The web-tool used to collect responses to the survey is called Computer Assisted Interviewing-framework (CAI-framework) and is administered by an external company (a "processor"), DESAN Research Solutions, with experience in large-scale surveys. The CAI-framework and application will be designed and implemented according to the latest standards and hosting will take place in a secure environment. DESAN is both ISO 20252 (quality of data collection) as well as ISO 27001 (data security) certified. All software solutions developed for the project are compliant with the EU General Data Protection Regulation (GDPR; in effect since 25 May 2018).

The CAI- framework logs respondent behaviour, in order to provide the data analysts with detailed but anonymous tracking information of the way respondents complete the questionnaire. This information can be used for further optimization of the questionnaire or to check for speeders and straight liners (respondents that complete the questionnaire in record time combined with answer patterns on grid questions that are suspicious), thus allowing for a higher quality of the final data set. Analyses of this information will form part of the Final Technical Report and will be completely anonymised.

Information used to invite respondents to the survey (e.g. postal addresses, e-mail addresses) is stored separately from actual data as delivered by the respondents.

After the end of the data collection phase, transfer of data from DESAN to other consortium partners as well as any other sensitive exchange of information will be done using Cryptshare for security reasons.

Upon project completion, the data will be anonymised and publicly available for research purposes as a Scientific Use File, making sure that all personal data that could lead to identification of one individual are removed.

The project deliverables including both responses to survey questions and the e-mail addresses provided by the respondent during the survey (see above) , will be transferred to the European Commission upon project end. The European Commission may put the data at the disposal of a contractor for the purpose of longitudinal research².

² This means that email addresses will be used to invite previous respondents to fill in a follow-up questionnaire and once they have done that, their responses will be compared to the responses they gave during the first survey.

3. Who has access to your information and to whom is it disclosed?

The access to all personal data as well as all information collected in the context of this survey is only granted through UserId/Password to a defined population of users, without prejudice to a possible transmission to the bodies in charge of a monitoring or inspection task in accordance with Community legislation. These users typically are members of the Unit organising the survey inside DG EAC, and DG EAC's subcontractor – the Eurograduate consortium consisting of the:

1. LIBER/Research Centre for Education and the Labour Market (Maastricht, The Netherlands)
2. German Centre for Higher Education Research and Science Studies (Hanover, Germany)
3. IHS Institute for Advanced Studies (Vienna, Austria)
4. DESAN Research Solutions (Amsterdam, The Netherlands)
5. cApStAn (Brussels, Belgium)
6. GESIS Leibnitz-Institut für Sozialwissenschaften (Cologne, Germany)
7. University of Zagreb - Faculty of Law (Zagreb, Croatia)
8. Centre for Higher Education Studies (Prague, Czech Republic)
9. PANTEION UNIVERSITY OF SOCIAL AND POLITICAL SCIENCES (Athens, Greece)
10. MOSTA (Vilnius, Lithuania)
11. Nordic Institute for Studies in Innovation, Research and Education (Oslo, Norway)
12. National Commission for Further and Higher Education (San Gwann, Malta)

No personal data is transmitted to parties which are outside the recipients and the legal framework mentioned.

The European Commission will not share your personal data with third parties for any purpose other than that stated in section 1.Objectives.

4. How do we protect and safeguard your information?

The collected personal data and all information related to the above mentioned survey is stored in the EU on a computer/server of the external contractor, acting as processor, who has to guarantee the data protection and confidentiality required by the Regulation (EC) 45/2001.

5. How can you verify, modify or delete your information?

In case you wish to verify which personal data are stored, have them modified, corrected or deleted, there are two different procedures in place depending on the type of data in question:

- a) For the survey answers (excluding the e-mail address), there are three phases:
 - a. Before the survey responses are submitted, the respondent is able to log in to the survey and change answers until the specific date set as the end of the fieldwork.
 - b. Once the respondent has submitted the responses and until the specific date set as the end of the fieldwork, the respondent can send a request to the national research partner in charge to have his or her data deleted. The

contact details of national research partners can be found on the project website at www.eurograduate.eu.

- c. After the fieldwork has been finalized, no further changes of survey responses are possible

- b) For the e-mail address, please contact the entity identified in section “7. Contact Information” by explicitly specifying your request.

6. How long do we keep your data?

Your responses will be part of a list of contact details for up to 10 years and used for the purpose of continuing the research and/or contacting you in the future. If you do not agree with this, please contact the Controller by using the Contact Information below and by explicitly specifying your request.

7. Contact Information

In case you have questions regarding the survey, or concerning any information processed in the context of the survey, or on your rights, feel free to contact the support team, operating under the responsibility of the Controller, using the following contact information:

Unit Higher Education
Directorate General for Education, Youth, Sport and Culture (DG EAC) European
Commission
BE - 1049 BRUSSELS
EAC-UNITE-B1@ec.europa.eu

8. Recourse

Complaints can be addressed to (in this order)

1. Data protection at Directorate-General for Education, Youth, Sport and Culture of the European Commission:
EAC-DATA-PROTECTION@ec.europa.eu
2. If no answer within 10 working days or answer not satisfactory, please contact the DPO of the European Commission:
DATA-PROTECTION-OFFICER@ec.europa.eu
3. If no satisfaction is obtained with the DPO of the European Commission you can file a complaint with the European Data Protection Supervisor
(<http://edps.europa.eu/EDPSWEB/>)

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by email via: https://europa.eu/european-union/contact_en

Finding information about the EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications at: <https://publications.europa.eu/en/publications>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see



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