



Establishing a European Tertiary Education Register

Final report. Executive summary

Contract EAC 2013-0308

Brussels, 2016

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Excutive summary

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Disclaimer: The opinions expressed in his study are those of the authors and do not necessarily reflect the views of the European Commission.

What is the European Tertiary Education Register?

The European Tertiary Education Register (ETER) is a database that provides a core set of data on a subset of educational institutions delivering degrees at the tertiary level.

ETER is a project funded by the European Commission's Directorate General for Education and Culture (contract EAC-2013-0308). The project began in August 2013 and ended in July 2015. A new contract for a further two years will begin in August 2015 and cover data collection for the years 2013 and 2014. It is a joint undertaking of four partners - USI, Università della Svizzera Italiana, Lugano, JOANNEUM RESEARCH, POLICIES, Graz, NIFU - Nordic Institute for Studies in Innovation, Research and Education, Oslo, University of Rome La Sapienza, Rome - in close collaboration with EUROSTAT, with a network of national experts and with the National Statistical Authorities of the participating countries.

ETER currently provides information on 2,239 HEIs in 31 European Research Area countries for the years 2011 (academic year 2011/2012) and 2012 (2012/2013); data are available for all EU-28 countries, except the French part of Belgium, Slovenia and Romania, plus the Former Yugoslav Republic of Macedonia, Iceland, Liechtenstein, Norway and Switzerland.

Most ETER data can be freely downloaded from the project website (<http://eter.joanneum.at/imdas-eter/>) and reused for analytical purposes, making ETER a truly common resource for policy-makers, administrators and scholars. A small part of ETER data is available only for research purposes under the signature of a non-disclosure agreement.

What is the rationale for ETER?

ETER represents an important contribution to the strategy for the modernization of European higher education, as a fundamental component of the Europe 2020 strategy. In this respect, higher education is facing fundamental challenges, like increasing the number of graduates, reaching international excellence, and contributing to economic development.

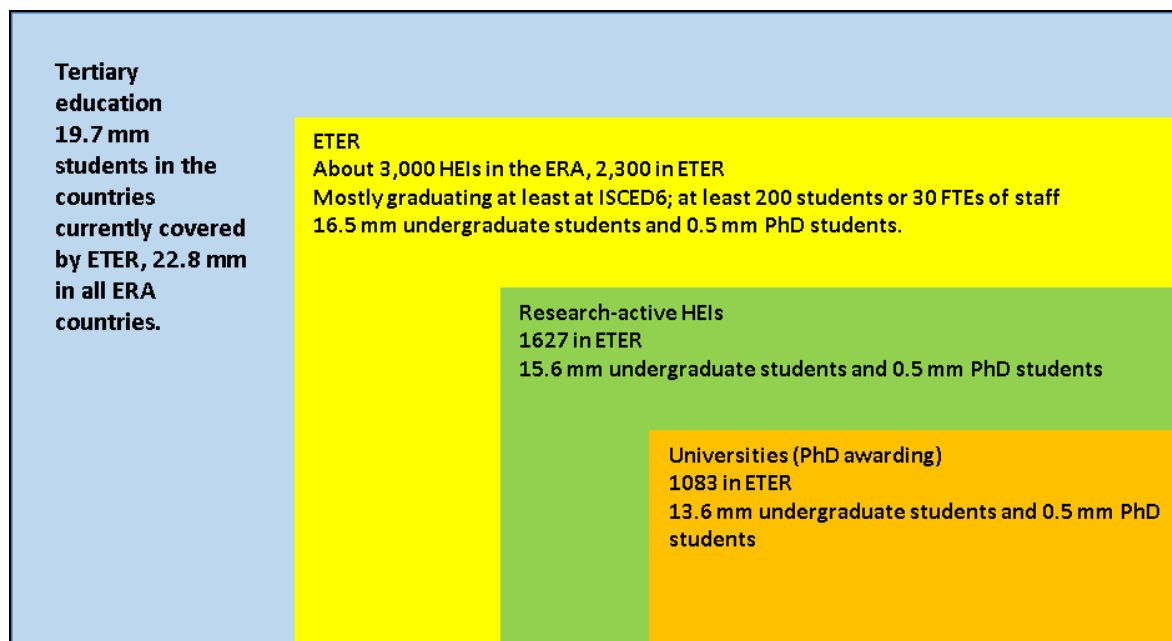
Reliable information is key for this process as it lays the groundwork for evidence-based policies: for example concerning the promotion of excellence, differentiation of higher education institutions, and the design of competitive funding policies. Information at the institutional level is also important to allow stakeholders to make sensible choices, for example concerning the selection of study's location, by comparing HEIs across dimensions of interest, like the type of subjects offered, quality of education, employability, and research quality.

EUROSTAT has for many years provided statistical data on tertiary education and Research and Development, but data are only available at the national level or, at best, at the regional level. In this respect, ETER represents a significant advance since data are provided for each HEI individually. In this way, ETER allows one to fully grasp the diversity of characteristics, size and profiles of European higher education.

How many higher education institutions exist in Europe?

Answering this question depends on what we consider to be the constitutive characteristics of an HEI. If we take into account all institutions delivering degrees at the tertiary level, the overall figure in Europe is probably significantly higher, however most of them are smaller in size, deliver short-cycle professional diplomas and have no research activity. According to EUROSTAT data, they comprise more than 20 million students in ERA countries.

Figure 1. The structure of European tertiary education



Those institutions that award at least a bachelor degree and are officially considered to be part of the national higher education system make up a smaller perimeter. Their number in the ERA is around 3,000 and they enrol about 20 million students. This perimeter broadly corresponds to ETER's, with the lower figures mostly due to a few missing countries. Many of them perform some research activity, but in many cases at a low level. Finally, the smallest perimeter is composed by universities, i.e. those institutions which have the right to award doctoral degrees; ETER includes slightly more than 1,000 universities in the 31 countries currently covered, which enrol more than 13 million students and perform almost all research activity.

In summary, we can describe European tertiary education as being constituted by different layers: a core of slightly more than 1,000 universities which enrol most of the students and perform almost all of the research; a larger set of about 3,000 HEIs who deliver at least bachelor degrees, including universities of applied sciences (colleges), specialized HEIs like art and music schools and many private HEIs; a much larger set of professional education providers, mostly quite small, which are currently not covered by ETER.

Which types of data are provided by ETER?

ETER provides the following information on HEIs:

- *Institutional descriptors* identify the HEIs and their official status and provide information on their foundation, history and annexed units (university hospitals).
- *Geographical information* localizes HEIs in terms of region, city and geographical coordinates and provides information on additional campuses (not in the same city as the main seat).
- *Staff data* provide information on HEI personnel divided by academic and non-academic staff; for academic staff, information is provided on their gender, nationality, scientific field, and the number of full professors.
- Data on *students* and *graduates* are particularly rich in ETER: numbers of students and graduates are divided by educational level (diploma, bachelor, master), by educational field, gender, nationality and mobility. These data therefore allow for a fine-grained analysis of HEI's educational offerings and composition of the student body.

- Data on *expenditures* and *revenues* provide information on the overall level of resourcing, on the breakdown of revenues between core funding, third party funds and student's fees. They allow characterizing the competitive position of HEIs on different markets.
- Data on *R&D activities* include the number of PhD students and graduates, as a major component of HEI research activities, as well as the volume of R&D expenditures.

While ETER includes less data on research and technological output, such data are largely available from international databases, like in the case of publications and patents. The availability in ETER of an HEI reference list, allows researchers to easily combine different data sources for *ad hoc* analyses.

Can I trust ETER data?

ETER did not collect its own data: most of the data has been delivered by the National Statistical Authorities, based on an on-going data collection for educational and R&D statistics. Since these data are based on international guidelines from EUROSTAT and OECD, in principle the data is comparable across countries. Previous experience with ETER data collection shows however that for some aspects, national data might be based on different definitions, particularly concerning staff and financial data.

To cope with these issues, as well as with possible mistakes in the data collection process, ETER has developed a systematic approach to data validation and quality, where data has been systematically checked at different stages in the data collection process, also with the use of advanced statistical techniques to detect outliers. These procedures ensure a very high level of internal *data consistency* and allow the identification of a number of problematic cases, for example HEIs with very few staff members but an extremely large number of students. Such cases are now clearly identified and annotated in the database. Additionally, so-called *metadata* (i.e. information on definitions, data collection processes and methodological problems) are available for each country.

Experience with the ETER data shows that, in most cases, they can be used for meaningful analyses and they are quite robust. Data should however be used in a careful way and users should consider the provided metadata and annotations in the database, particularly when analysing individual HEIs (data are more robust for statistical analyses).

Data are almost complete when considering institutional descriptors and geographical information and very complete for students and graduates (including PhD students). Most countries managed to provide staff data (with the important exception of France and the UK), but breakdowns are not always available. Financial data (expenditures, revenues and R&D expenditures) are available only for slightly more than half of the countries.

The follow-up ETER project aims to substantially improve the comparability and availability of data concerning HEIs staff, revenues and expenditures.

What can we learn from ETER?

The purpose of ETER, when compared with EUROSTAT statistics, is to provide fine-grained information on individual institutions, which allows for a comparison in terms of their different characteristics, profiles and differentiation. This is important for some key questions in higher education and research policy, like whether it is good to concentrate research into a few leading universities, whether systems where research and education are structurally separated perform better, how are different activities of the higher education system distributed in space.

Some highlights of the analyses presented in this report are the following:

- The distribution of HEI *size* is very uneven. Despite the large number of small and very small HEIs, functions (i.e. students and research) are concentrated in large and very large institutions, the core of European higher education being constituted by less of 1,000 institutions. There are clear differences between countries in this respect.
- Despite almost one-third of the ETER sample being composed by private HEIs, these account for a limited proportion of European Higher Education, with the exception of

Central and Eastern Europe. Private HEIs are smaller, more teaching-oriented and more specialized than public HEIs.

- 60% of the HEIs in ETER are not universities and do not award a doctorate degree. There is a clear-cut distinction in Europe between systems dominated by universities and binary systems, where universities of applied sciences enrol a substantial share of the students, especially at the bachelor level.
- European HEIs are mostly funded through a core allocation from the State, while private funding and student fees are quite limited. Only private HEIs are largely funded through student contributions. Third-party funds (research contracts) are strongly concentrated in research-oriented universities.
- While all institutions covered by ETER offer education, nearly 70% are also research active and about 40% can deliver a PhD. This shows that the research mission extends beyond doctorate-awarding universities, even if the latter account for most of the research volume and output.
- The mobility of students increases with educational level from the bachelor to the master to the PhD; country differences are limited for undergraduate students, much larger for PhD students. There are also large differences in the internationalization of academic staff, driven by international reputation and national investment in R&D.
- A core of generalist institutions, in terms of the subject disciplines covered, dominates European higher education, but there are also a large number of specialized institutions, particularly in arts and humanities, but also in technical sciences.
- Gender equality has been reached in most European HEIs for undergraduate students and PhD students, while the median share of females among academic staff is now 40%. However, the share of female professors in European higher education remains very low (median 20%), even if there are large differences between countries and HEIs in this respect.

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