



HOW MANY APPRENTICES ARE THERE IN THE EU?

Estimates based on Cedefop database on apprenticeship
schemes and reflections on available EU data sources

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The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training, skills and qualifications. We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States.

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Foreword

Increasing apprenticeship participation has been one of the focal points of EU and national policies on vocational education and training (VET) since 2013, following the launch of the European Alliance for Apprenticeships (EAfA). Policy and financial efforts have been made to support countries in setting up new and reforming existing apprenticeship schemes, in the context of combatting youth unemployment, leading, in many cases, to a focus on the use of this policy tool for employment rather than employability.

In the past five years, triggered by European social partners' work ⁽¹⁾ and the subsequent Council recommendation on a European framework for quality and effective apprenticeships (EFQEA) ⁽²⁾, the need to improve the quality dimension has been integrated in the apprenticeship debate. Indeed, it is time to reflect on providing young people and companies with higher-quality opportunities for their lives and businesses, in view of people's employability and empowerment and of companies' sustainable competitiveness. The EFQEA recommendation couples quality with effectiveness, an evaluation of which cannot be done in the absence of a plausible estimate of participation in apprenticeships. While the work on apprenticeship quality, to which Cedefop has recently contributed with an analysis of the EFQEA implementation, has advanced quite well, quantitative comparative studies on apprenticeships are relatively less developed. Without them, reforming or designing policies to increase apprenticeship attractiveness and participation will be difficult. Hence, comparable data offering a solid estimate of activity levels in apprenticeships in Europe is desperately needed.

Some EU-wide data sources provide information that might be relevant for any attempt to estimate the number of apprentices in the EU. Future developments are under discussion and seem to promise substantial advancements in that direction. In parallel, Cedefop has collected national

⁽¹⁾ See Advisory Committee on Vocational Training (2016) and BusinessEurope, CEEP, ETUC, UEAPME (2016).

⁽²⁾ Council of the European Union (2018).

data on apprenticeship participation through its European database on apprenticeship schemes, thanks to the collaboration of its community of apprenticeship experts.

This paper offers a picture of apprenticeship participation collected by Cedefop, based on national sources, and puts forward some reflections on the challenges that make it difficult to estimate apprenticeship participation in EU Member States in a comparable way. It is intended to be a first, small contribution to a discussion that would need to be extensively developed, so as to improve policy-making for quality and effective apprenticeships in the future. Cedefop is committed to contributing to this discussion.

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The members of the Cedefop community of apprenticeship experts ⁽³⁾ provided the data collected in the Cedefop European database on apprenticeship schemes presented in the annex ⁽⁴⁾. Cedefop would like to thank the members of the community for their valuable contribution.

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⁽³⁾ Cedefop community of apprenticeship experts. www.cedefop.europa.eu/en/events-and-projects/networks/cedefop-community-apprenticeship-experts

⁽⁴⁾ Updated information was not available for Denmark, Estonia, France, Germany, Ireland, Norway, and England, Northern Ireland and Wales in the UK.

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CHAPTER 1.

Introduction

The EU and its Member States have made unprecedented efforts in the area of apprenticeship policies over the past decade. However, they have done so in the absence of a solid estimate of the levels of participation in apprenticeships in Europe. When it comes to evaluating publicly funded programmes and to designing new policies to increase the attractiveness of, and participation in, apprenticeship, this is a critical gap.

From a statistical and policy perspective, the number of apprentices should ideally be complemented by data on apprenticeship graduates and on labour market outcomes after successful completion. As a priority for policies on increasing attractiveness and participation, however, information would be needed at the least on the total number of apprentices who are enrolled in apprenticeships in a country in a specific year, and ideally by level of the European qualifications framework (EQF) and age group or the class/cohort of participants.

The data are often not available or, when available, are not suitable for cross-national comparison. The term ‘apprenticeship’ is understood differently across countries and sometimes even within countries in the EU (Cedefop, 2018). Variation is high, ranging from cases where it involves a structured apprenticeship programme, to cases where it is highly unstructured, and works as a complement to the school-VET track (for more details, see Section 3).

Against this landscape, the Cedefop European database on apprenticeship schemes provides national data on apprenticeship participation collected for selected apprenticeship schemes in 2019-20⁽⁵⁾. The aim of this paper is to present Cedefop data and put forward some reflections on the challenges that make it difficult to estimate and compare apprenticeship participation in EU Member States. In support of these reflections, the paper discusses two other EU-wide sources that seem to be the most relevant for any attempt to estimate the number of

⁽⁵⁾ Cedefop European database on apprenticeship schemes. www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes

apprentices: the European labour force survey, 2016 *ad hoc* module (LFS); and the European labour cost survey (LCS) ⁽⁶⁾.

Section 2 presents the data sources and discusses their scope and limitations in providing an accurate picture of apprenticeship participation in the EU, Iceland, Norway and the UK. Section 3 discusses lessons learnt from this exercise and indicates the information needed for future research. The table in the annex presents figures on the number of ‘apprentices’ at different points in time, according to the Cedefop European database on apprenticeship schemes. The paper aims to offer an estimate of how many ‘apprentices’ there are in different European countries at different points in time, without the ambition of providing comparable data per country or across countries.

⁽⁶⁾ The Continuing vocational training survey (CVTS) – an EU-wide enterprise survey on CVET and complementary information on initial vocational training (IVT) – was not considered in the paper due to quality issues in data relevant for apprenticeships: the information on the number of apprentices working in enterprises covered by the survey is no longer collected by Eurostat (even data from old survey rounds are no longer published).

CHAPTER 2.

Cedefop European database on apprenticeship schemes and additional data sources

2.1. Cedefop European database on apprenticeship schemes

The 2019-20 version of the Cedefop European database on apprenticeship schemes ⁽⁷⁾ has information about apprenticeship schemes across several EU Member States, Iceland and UK-Scotland. It is compiled by country experts and members of the Cedefop community of apprenticeship experts ⁽⁸⁾, based on qualitative and quantitative information (e.g. national official statistics), where available ⁽⁹⁾.

2.1.1. Scope of the database

The Cedefop European database on apprenticeship schemes considers apprenticeship schemes as the most appropriate statistical unit to capture the emergence of a new approach to apprenticeship design and provision observed in many EU countries. Thereby, apprenticeship is not underpinned by structured apprenticeship programmes at one EQF level, but it functions as a type of VET delivery (Cedefop, 2018a) that may be applied to more than one EQF level (it may apply to levels from 2 to 8). In some countries, apprenticeship as a type of VET delivery is highly unstructured and, together with the school-VET track, it functions as a communicating vessel, allowing a learner to switch tracks during their learning journey towards a qualification.

For the purposes of the database, an apprenticeship scheme has been defined as a set of rules and regulations about how this type of training

⁽⁷⁾ Cedefop European database on apprenticeship schemes. www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes/country-fiches

⁽⁸⁾ Cedefop community of apprenticeship experts. www.cedefop.europa.eu/en/events-and-projects/networks/cedefop-community-apprenticeship-experts

⁽⁹⁾ See Table A1 in the annex for specifications about those countries where data was not available.

should be designed, delivered, assessed, certified and governed. The apprenticeship scheme is where several criteria or features of apprenticeship meet. It seems to be more appropriate than the apprenticeship programme or the apprenticeship system. The programme ⁽¹⁰⁾ level might be too detailed or specific to answer to criteria linked to design (e.g. formal qualification or not), especially because the programme would usually ‘inherit’ features that are observable at scheme level. The apprenticeship system ⁽¹¹⁾ level might be too vague to answer criteria more linked to the implementation if, for example, wages are paid.

The database considers only a selection of schemes, i.e. those that meet certain minimum requirements:

- (a) they are underpinned by a legal basis;
- (b) they are mainstream (not pilot);
- (c) they are linked to a formal qualification;
- (d) there is a contract between the apprentice and the training company, accompanied by remuneration paid by the company.

As a result, the database does not cover all countries; nor does it cover all apprenticeship schemes considered as such at national level.

2.1.2. Data on participation

Although comprehensive, the data on apprenticeship participation are not homogenous across countries.

First of all, the figures regarding apprenticeship participation in the Cedefop European database do not always refer to the same time period in every country. Data were collected for the latest available data point, which includes years between 2016 and 2020. In some cases, data are provided for the school year (e.g. 2016/17); in other cases, for a given year of reference (e.g. 2019).

⁽¹⁰⁾ An apprenticeship programme is an inventory of training activities, content and/or methods implemented to achieve the objectives of an apprenticeship scheme (acquiring knowledge, skills and/or competences), organised in a logical sequence over a specified period of time. Usually, various apprenticeship programmes are organised under one apprenticeship scheme. This means that apprenticeship programmes can take different forms; for instance, have different durations and forms of alternation.

⁽¹¹⁾ An apprenticeship system in a country may consist of several different apprenticeship schemes. It includes the governance, the actors, the legal framework, etc.

In some countries data are provided for the annual average of apprentices⁽¹²⁾, while in others they are provided for the total number of apprentices in all classes of a scheme at a given point of time in the year⁽¹³⁾. Nevertheless, while this may reduce comparability, striking differences are not to be expected, or they might be interpreted with background knowledge about the data collection period.

Depending on data availability and the scope of the data sources used, information in the Cedefop database is provided for stocks (i.e. total apprentices enrolled in all years of an apprenticeship scheme)⁽¹⁴⁾. Since the Cedefop database reports absolute numbers (not shares), the relative size of apprenticeships cannot be directly compared across countries.

The data do not provide information on the participation of specific age groups, since no breakdown by age is available and because apprenticeship schemes in different countries are open to different age groups (e.g. 15 to 24 or 15 to 29, but also without upper age limits in several cases).

More generally, the Cedefop database reports information from national data sources. These reflect the different approaches that countries have towards ‘apprenticeship’, which cover different objects with different methods. As a result, the national statistics do not capture the precise question of ‘how many apprentices are there, in a year, in a country?’ in an EU-wide comparable manner.

2.2. European Union labour force survey, ad hoc module, 2016

Every year, the EU-LFS launches an ad hoc module on a specific labour market topic. Each ad hoc module consists of a set of questions that are not included in the standard EU-LFS questionnaire. The 2016 ad hoc module investigated the situation of young people in the labour market⁽¹⁵⁾ and addressed individuals aged 15 to 34, putting special emphasis on work-based education.

⁽¹²⁾ For example, the sum of apprenticeships every month divided by 12 in Italy.

⁽¹³⁾ For example, 1 October in Denmark, 31 December in Austria.

⁽¹⁴⁾ Cyprus provides information for flows: an estimate of the stock of apprentices was calculated by using the average duration of the programme.

⁽¹⁵⁾ See Eurostat: https://ec.europa.eu/eurostat/statistics-explained/index.php/Young_people_on_the_labour_market_-_statistics#cite_note-1

This source provides information about whether individuals had any work experience while acquiring their highest level of education attained, and if so, of which type (apprenticeship is one of the possible options). The data do not entirely reflect the statistical concept of interest; that is, the total number of individuals enrolled in apprenticeships in a country in a specific year, ideally by EQF level and age group or the class/cohort of participants. It is likely that these figures include individuals who have already completed their apprenticeships because the question asks about the past, and not current work-experience while studying, so it is not meant to capture current apprentices. It could refer to apprenticeship schemes that are now abolished. Someone who graduated from an apprenticeship and then completed a programme at higher education level (e.g. post-secondary) will not be captured either, because apprenticeship will not be the highest level of education attained. Also, in countries where the work-experience component of apprenticeships lasts less than one year, respondents who were enrolled in apprenticeships during the survey year might have already completed their apprenticeships when they take part in the survey.

2.3. European labour force survey: expected developments

Relevant developments are expected in the EU-LFS. Based on the work of Eurostat working groups for the implementation of the new Integrated European social statistics framework regulation (IESS-FR) ⁽¹⁶⁾, the Commission Implementing Regulation (EU) 2019/2240 ⁽¹⁷⁾ has specified a revised list of variables to be collected in the labour force domain: the EU-LFS. As a consequence, two novelties possibly relevant for statistical information related to apprenticeships are introduced in the EU-LFS, starting from 2021 and with first results available in 2022.

A new variable (HATWORK) is introduced. This will enable identifying whether young people had work experience at a workplace that was part

⁽¹⁶⁾ European Parliament and Council (2019).

⁽¹⁷⁾ European Commission (2019). This implementing regulation specifies the technical items of the dataset, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample labour force survey in accordance with Regulation (EU) 2019/1700 of the European Parliament and of the Council.

of the curriculum of the formal programme that led to the highest level of education successfully completed. Additional information is collected (in the form of variable categories) as to whether this experience was paid or not, and whether it lasted up to six months or longer. In this way, the variable will enable the identification of young people whose educational background has been characterised by work-based learning experiences, and further qualifying those experiences based on duration and remuneration. The information will be collected for people aged 20 to 34 with at least an upper secondary education level (European Commission, 2019).

In this way, the LFS is expected to provide data to quantify the stock of young graduates who had work experience as part of their highest education attained, as well as to characterise their sociodemographic profile and to investigate their labour market outcomes, in combination with other LFS information. In particular, the variable will be used to quantify the share of recent graduates from VET who have benefited from exposure to work-based learning as envisaged in the Council recommendation of 24 November 2020 on vocational education and training ⁽¹⁸⁾.

As compared to the 2016 LFS ad hoc module, a simplification of the approach to work-based learning has been adopted. The concept has been kept broad enough to continue covering apprenticeship. Although direct reference to the term apprenticeships (and a dedicated variable category to isolate them) has been dropped, it will be possible to isolate paid and longer work-based learning (WBL) experiences (i.e. more structured experiences) from other ones. The information will be available on an annual basis. The link with educational attainment is likely to be reinforced even at the level of the questionnaire flow, which is expected to increase data quality.

The second expected novelty concerns the variable TEMPREAS, which traditionally provides information on the main reasons why employees have a contract of temporary nature. The variable has a number of mutually exclusive categories identifying possible main reasons. One of them has traditionally been that the contract is one 'covering a period of training (apprentices, trainees, research assistants, etc)' (Eurostat, 2020). As from 2021, such a category is replaced by two new ones, separating 'apprenticeship' from 'training other than apprenticeship (trainees, internships, research assistants, etc)' (European Commission, 2019). The information will be available on an annual basis.

⁽¹⁸⁾ Council of the European Union (2020).

In this way, it will be possible to quantify the number of employees having a temporary contract of apprenticeship nature. Apprenticeships are defined based on the criteria set in the LFS explanatory notes.

To achieve comparable results, national definitions are disregarded and only apprentices who fulfil internationally agreed criteria are included. These criteria are: being (part of) a formal education programme leading, upon successful completion, to a formal qualification; presence of a contract/agreement between the employer and the apprentice and/or an institution representing the apprentice that defines the main characteristics of the apprenticeship; learning time which combines or alternates periods of education and training at the workplace and in education institutions or training centres on a weekly, monthly or yearly basis; presence of remuneration in cash or kind, and a minimum duration of six months (of the programme).

Assuming that reliability limits will be respected, this novelty will enable quantifying the number of employees who have a temporary contract of apprenticeship nature based on the above-mentioned definition. In this way, this information could be used to estimate the number of apprentices in the EU. The information could be combined with other core variables of the LFS, such as the ISCED level of formal education and other sociodemographic characteristics, to obtain more detailed information. It could provide valuable data insights.

Unfortunately, in this approach, apprenticeships will be captured only as a category of a variable that is not originally, mainly and practically designed to single them out. This raises some concerns about potential data quality issues. Being in an apprenticeship as a main reason for having a temporary contract could compete and conflict with alternative (and mutually exclusive) answer categories of this variable. For example: an individual may be, by definition, an apprentice at the time of the interview but indicate a different main reason for being a temporary employee (for instance, that ‘he/she could not find a permanent job’ or that ‘the job was available only on a temporary basis’) ⁽¹⁹⁾, in which case the individual would not eventually be counted as an apprentice. The issue is further complicated in the case of proxy

⁽¹⁹⁾ The valid categories for the variable are: (a) Could not find a permanent job; (b) Did not want a permanent job; (c) Fixed-term probationary contract; (d) Apprenticeship; (e) Training other than apprenticeship (trainees, internships, research assistants, etc); (f) This job is only available with a temporary contract; (g) Other reasons (European Commission, 2019).

respondents, who will be called on to indicate the main reason on behalf of the targeted individual. Although not of general concern, other very specific country issues may arise ⁽²⁰⁾.

Only a targeted and informed assessment of data quality could provide evidence on the actual impact of these potential issues, and eventually be able to assess the sampling and non-sampling accuracy of these data to estimate the number of apprentices. Raising awareness of the possible use of this variable, and of its apprenticeship category, could improve the quality of data collection by national statistical authorities. In addition, to tackle instances where apprenticeship and other categories constitute applicable reasons for having a temporary contract, a general guideline for coding could be provided; that is, to prioritise apprenticeship as the main reason over other applicable ones. This is a choice, however, that would need careful consideration as it could improve estimates for apprentices at the expense of other categories.

2.4. European Union labour cost survey, 2016

The labour cost survey is conducted every four years in EU Member States. The survey aims at measuring the level and structure of labour costs for employers ⁽²¹⁾. Besides labour costs, the survey asks about the structure of employment within firms.

The survey covers firms operating in sectors of economic activities in sections B to S (excluding O) of NACE Rev. 2, corresponding to Industry, construction and services (except public administration, defence, compulsory social security). National statistical offices are asked to submit information on firms with 10 or more employees, while information on firms with up to 10 employees can be provided by national statistical offices on a voluntary basis.

This EU-wide source provides information on the total number of employees by type of contract; apprenticeships are one of the contract categories included.

⁽²⁰⁾ For instance, in Italy, apprenticeship is qualified as an indefinite contract by law.

⁽²¹⁾ For an overview of the survey, see Eurostat: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Labour_cost_survey_\(LCS\)](https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Labour_cost_survey_(LCS)).

However, this source also presents some strong limitations:

- (a) it registers only apprenticeships that are associated with types of contracts that the company has to register; other types of formal agreements that do not have a contractual form may not be reported;
- (b) it is less likely to cover instances where data on apprenticeship enrolments are registered by authorities other than ministries of employment or public employment services, such as schools or only in chambers;
- (c) it is not possible to extract data for young people only.

CHAPTER 3.

Lessons learned and information needs on apprenticeship participation

The data gaps outlined above and the wide heterogeneity of the information provided by the three sources considered in this document help us reflect on the lessons learned and identify the needs for future data collections on ‘apprenticeship’ that would allow a credible EU-wide quantitative study on the topic. The EU-wide data sources approach ‘apprenticeship’ from different angles, which do not capture the total number of apprentices enrolled in apprenticeships in a country in a specific year, ideally by EQF level and age group or the class/cohort of participants.

Indeed, different approaches to understanding what an ‘apprenticeship’ or an ‘apprentice’ is are applied across countries (Cedefop, 2018a). More importantly, within a country itself the concept is often unclear among different stakeholders and beneficiaries themselves. For instance, the nature of the contractual link between an individual and the company, which seems to be of key importance for the data collection across the three data sources analysed in Section 2, does not always clearly reflect some national approaches to apprenticeship. There are cases where an individual in apprenticeship training signs an ordinary employment contract and has employee status by law. At the other extreme, there are cases where an individual in apprenticeship training signs an agreement with no value in employment law and has (mainly) a student status.

Defining the scope of the data collection becomes more difficult considering that the field of ‘apprenticeship’ policies has been in ferment in recent years, leading to the creation of new pilots in many EU countries. As a result, it is not always clear what should be considered and counted as an apprenticeship scheme in a particular country ⁽²²⁾.

⁽²²⁾ For example, Czechia does not have a stable/mainstream apprenticeship scheme while data on apprenticeship participation are provided in the frame of the European LFS and LCS. They might be counted because they belong to the pilots, past or present.

A notable implication of the above concerns the breakdown (and comparability) of apprenticeship participation data by education level and age range. In some countries, apprenticeship schemes apply to more than one education level; in others they apply to one level only. In some countries, apprenticeship schemes have no upper age limits ⁽²³⁾, while others are open only to young people. Even in the latter case, the maximum age at which it is possible to start apprenticeships largely varies, with cases where ‘young people’ are considered those up to 29 years old.

The issue of the apprentices’ age is relevant since the EU data sources provide absolute numbers or stocks, which are of little validity when it comes to international comparison. For example, the fact that numbers in Ireland are lower than those in Spain is also a result of population size, so offers little analytical value. What would be more useful is to know what share it refers to; for example, the share of all VET students, or the share of (or ratio of) the number of persons in a certain age group.

In terms of data timeliness, while monitoring and evaluation of apprenticeship policies seems to be in place in many countries, this does not always provide timely results and evidence. Exact figures on apprenticeship participation in a certain year may become available quite late, compared to other figures that become available relatively early in the year, thus hampering comparability.

From a technical and reliability viewpoint, countries’ data-collection methods also differ. For example, data collections on participation consider different statistical units (individuals versus firms), or different reference periods. Some countries register flows (intakes, or new enrolments in the first year of an apprenticeship scheme), while some other countries register stocks (i.e. total apprentices enrolled in an apprenticeship scheme on 31 December of a given year). In some cases, data refer to the annual average proportion of the total number of apprentices enrolled in apprenticeships in a country in a specific year – regardless of the scheme in which they participate or the class/cohort they belong to; in other cases, the data refer to the number of people in apprenticeship training at any point in time. Different national data sources also have different country coverage. For example, data for Belgium might be available for the three language communities separately, including or not the corresponding regions or Brussels, resulting in different samples on which the total number of apprentices was estimated.

⁽²³⁾ For more information, see Cedefop (2020).

On this basis, several gaps and needs may be highlighted, both from a strategic and a technical standpoint.

Future research on apprenticeship participation would benefit from addressing challenges related to comparability. Comparing levels of apprenticeship participation in country A and in country B is of little validity if the numbers refer to different things. Comparability would be enhanced if numbers were expressed in terms of shares or ratio; for example, of the number of VET students, a cohort, or related to the population size (of an agreed age group).

It would also be beneficial if data collections took into consideration the problems of using the same statistical unit – asking individuals and not firms – and if they referred to the same time period, regardless of where they are collected. In any case, collecting data on dropouts would help complete the picture of apprenticeship participation. Equally beneficial would be the harmonisation of data collections registering either flows or stocks, expressed as annual average proportion of the total number of apprentices enrolled in apprenticeships in a country in a specific year – i.e. regardless of the scheme in which they participate or the class/cohort they belong to – or as the number of people in apprenticeship training at any given point in time.

Considering the heterogeneity of approaches to apprenticeship design and provision across EU Member States, to achieve comparable results at the EU level would require an internationally agreed definition that goes beyond and abstracts from national ones. However, this would also require a common understanding at the national level among stakeholders of, at least, the nature of the contractual relationship between the learner and the training company and of the status of the learner in apprenticeship training.

Using the political and methodological frame of an international data-production process, which considers the needs of users and involves statisticians, policy-makers and relevant stakeholder institutions, the individual countries would find the best way to obtain and provide compliant data. The policy level at national or EU level may provide the resources to do this.

This could be achieved, for instance, through including specific questions in national labour force surveys which feed into the EU labour force survey (Section 2.2.1); or, alternatively, making use of administrative data collection, such as the UNESCO-OECD-EUROSTAT joint data collection on formal education ⁽²⁴⁾, where the number of students in work-based VET is already

⁽²⁴⁾ See UNESCO OECD Eurostat (UOE).

singled out, and where another subgroup could be created to single out apprenticeships specifically.

Looking at the future and going beyond the scope of this paper on apprenticeship participation data, future research would benefit from more and better comparable data on apprenticeship graduates (those who successfully complete a programme) and data on labour market outcomes. Concerning apprenticeship graduates, examples of questions which could be addressed are: How many apprentices successfully completed the programme? How many did drop out? Were they satisfied with their experience? What characteristics did the programme have? To monitor labour market outcomes after successful completion, relevant questions would be: Are the apprenticeship graduates in work? Are they working for the same enterprises as those in which they had their apprenticeship? How much do they earn? Do they continue studying? ⁽²⁵⁾. This would also respond to the EFQEA criteria on tracking of apprentices ⁽²⁶⁾.

Concerning more theoretical considerations relative to countries' different approaches to 'apprenticeship' (Cedefop, 2018a), it is important to underline that there is not, and should not be, a single model of apprenticeship that can be simply copy-pasted from one country to another. However, there are definitions at EU level (Cedefop, 2019a) that provide minimum features that may be used so that countries share a common approach to the concept. Within a country, it is essential that there be a shared understanding of what an apprenticeship is and what its specific features are compared to other education and training options. Cedefop cooperation with several EU countries, as part of its thematic country reviews on apprenticeships ⁽²⁷⁾, has revealed that the visions of function and purpose of apprenticeships vary among different stakeholders within the same country, leading to users'

⁽²⁵⁾ Additional hints for an ideal picture can be found in Council of the European Union, (2017) and in the European Parliament recommendation on indicators on quality in VET. Some information is available on (sub)national initiatives. As an example, see the work of the European Commission-OECD Experts workshop on 'Evaluating labour market policies through the use of linked administrative data'. Relevant considerations are to be found in UNESCO-NCVER (2020).

⁽²⁶⁾ Criterion 14: 'The tracking of employment and career progression of the apprentices should be pursued, in accordance with national and European legislation on data protection' (Council of the European Union, 2018).

⁽²⁷⁾ For more information on the Cedefop thematic country reviews on apprenticeships, see the [Cedefop 'Apprenticeships in work-based learning' project page](#) and the related nine publications: Cedefop (2015a), Cedefop (2015b), Cedefop (2017a), Cedefop (2017b), Cedefop (2018a), Cedefop (2018b), Cedefop (2019a), Cedefop (2019b) and Cedefop (2019c).

expectations of apprenticeship diverging, and leaving room for competition with other forms of work-based learning or active labour market policies.

If stable long-term monitoring and reporting on apprenticeship quality and, more importantly, effectiveness is desirable, and if the European framework for quality and effective apprenticeship ⁽²⁸⁾ is to be implemented, all these issues need to be addressed ⁽²⁹⁾. Given the need for policy evaluation and evidence-based policy analysis, the benefits of being able to rely on stable and reliable data on apprenticeship participation are obvious. Stronger data are likely to help identify and interpret trends within a country and across countries, and therefore facilitate meaningful benchmarking exercises.

⁽²⁸⁾ Council of the European Union (2018).

⁽²⁹⁾ See Cedefop work on the topic of 'apprenticeship quality': Cedefop (2021a) and Cedefop (2021b).

Acronyms/Abbreviations

CVTS	continuing vocational training survey
EFQEA	European framework for quality and effective apprenticeships
EQF	European qualifications framework
LCS	European Union labour cost surveys
LFS	European Union labour force surveys
IVT	initial vocational training
VET	vocational education and training
WBL	work-based learning

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- Cedefop – Community of apprenticeship experts www.cedefop.europa.eu/en/events-and-projects/networks/cedefop-community-apprenticeship-experts
- Cedefop – European database of apprenticeship schemes www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes
- Cedefop – Referencing to the EFQEA www.cedefop.europa.eu/et/events-and-projects/projects/apprenticeships-work-based-learning/referencing-to-efqea
- Eurostat – Young people on the labour market: statistics https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Young_people_on_the_labour_market_-_statistics#cite_note-1
- UNESCO OECD Eurostat (UOE). Joint data collection: methodology [https://ec.europa.eu/eurostat/statistics-explained/index.php/UNESCO_OECD_Eurostat_\(UOE\)_joint_data_collection_%E2%80%93_methodology](https://ec.europa.eu/eurostat/statistics-explained/index.php/UNESCO_OECD_Eurostat_(UOE)_joint_data_collection_%E2%80%93_methodology)

ANNEX

Data from Cedefop's European database on apprenticeship schemes

Data come from the 2019-20 version of the Cedefop European database on apprenticeship schemes for most of the countries.

Information was not available for Denmark, Estonia, France, Germany, Ireland, Norway, and England, Northern Ireland and Wales in the UK. National sources were consulted for these countries. Sources are indicated in Table 1.

The national expert of Sweden double-checked and updated information for schemes in Sweden, upon Cedefop request; therefore data for this country are different from those reported in the Cedefop European database on apprenticeship schemes.

These cautions should be taken into consideration when reading the final estimates by country in the table below.

For full information about the source, see: www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes

Table A 1. Number of apprentices in the EU-27, IC, NO, the UK, Cedefop European database on apprenticeship schemes (*), various years

Country	Information at country level	Name of the scheme and information at scheme level	Year	Data source
Austria	99 613	Dual apprenticeship	2018	Cedefop database, question 14
Belgium Flemish Community	12 525	8 980 part-time vocational secondary education + 1 978 apprenticeship for SMEs + 1 567 dual learning	2017/18 and 2019/20	Cedefop database, question 14
Belgium French-speaking (**)	11 511	Dual training 6 857 CEFA + 4 100 IFAPME + 554 SFPME	2016/17	Cedefop database, question 14
Belgium German-speaking Community	500	Apprenticeship	2019/20	Cedefop database, question 14
Bulgaria	2 873	Work-based learning (dual system of training)	2018	Cedefop database, question 14
Croatia	10 683	Unified model of education	2019/20	Cedefop database, question 14
Cyprus	1 182	New modern apprenticeship	2019/20	Estimate based on average duration of 3 years. Considering data from Cedefop database, question 14 (197 starts in 2019/20)
Czechia	NA	NA	NA	There is no apprenticeship scheme in the country under the coverage of the Cedefop database, question 14
Denmark	109 208	Apprenticeship	2019	Statistics of the Ministry of Education, figure of the number of learners enrolled in IVET www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?Maintable=UDDAKT34&Planguage=1

Country	Information at country level	Name of the scheme and information at scheme level	Year	Data source
Estonia	1 700	Workplace-based learning	2018/19	Kask, R.; Mikk, K. (2020). <i>International mobility in apprenticeships: focus on long-term mobility: Estonia</i> . Cedefop ReferNet thematic perspectives series. https://cumulus.cedefop.europa.eu/files/vetelib/2018/international_mobility_apprenticeship_Estonia_Cedefop_ReferNet.pdf
Finland	57 354	Apprenticeship training	2018	Cedefop database, question 14
France	66 200	Apprenticeship contract: 419 800 Professionalisation contract: 241 400	2017	Appendix on vocational training of the draft budget bill 2019 www.performance-publique.budget.gouv.fr/sites/performance_publique/files/files/documents/jaunes-2019/jaune2019_formation_professionnelle-W.pdf (Appendix provided in: Centre Inffo (2020). <i>International mobility in apprenticeships: focus on long-term mobility: France</i> . Cedefop ReferNet thematic perspectives series. www.cedefop.europa.eu/en/publications-and-resources/country-reports/international-mobility-apprenticeships-focus-long-term-mobility-france)
Germany	1 983 564	Dual VET	2019	www.bibb.de/de/11566.php
Greece	9 252	EPAS 6 163 EPAL 3 089	2017/18 2017/18	Cedefop database, question 14
Hungary	51 180	Apprenticeship – Dual vocational training based on the apprenticeship training contract	2019	Cedefop database, question 14
Iceland	6 344	Apprenticeship	2017	Cedefop database, question 14

Country	Information at country level	Name of the scheme and information at scheme level	Year	Data source
Ireland	17 823	Apprenticeship	2019	SOLAS. List of apprenticeships at the end of December 2019. Source provided by Irish expert of Cedefop community of apprenticeship experts
Italy	11 519	Apprenticeship for vocational qualification and diploma. Upper secondary education diploma and high technical specialisation certificate [Type 1]: 10 537 Higher education and research apprenticeship [Type 3]: 982	2017	Cedefop database, question 14
Latvia	3 000	Work-based learning	2018	Cedefop database, question 14
Lithuania	3 449	VET in a form of apprenticeship	2018	Cedefop database, question 14
Luxembourg	3 477	Apprenticeship contract	2019/20	Cedefop database, question 14
Malta	1 325	MCAST apprenticeships	2018/19	Cedefop database, question 14
Netherlands	119 131	Dual pathway 24% of total VET students (496 380)	2018/19	Cedefop database, question 14
Norway	44 000	Upper-secondary vocational programmes	2019	The Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (Diku) (2020). <i>International mobility in apprenticeships: focus on long-term mobility: Norway</i> . Cedefop ReferNet thematic perspectives series. https://cumulus.cedefop.europa.eu/files/vetelib/2018/international_mobility_apprenticeship_Norway_Cedefop_ReferNet.pdf

Country	Information at country level	Name of the scheme and information at scheme level	Year	Data source
Poland	98 468	Vocational preparation of juvenile workers Juvenile workers trained both in school and at the company: 96 600 Juvenile workers trained exclusively at the workplace: 1 868	2016/17	Cedefop database, question 14
Portugal	21 869	Apprenticeship programmes	2017/18	Cedefop database, question 14
Romania	16 272	Apprenticeship at the workplace: 3 364 VET in dual system: 12 908	2018 2019/20	Cedefop database, question 14
Slovakia	NA	NA	NA	There is no mainstream apprenticeship scheme in the country under Cedefop database, question 14
Slovenia	NA	NA	NA	There is no mainstream apprenticeship scheme in the country under Cedefop database, question 14
Spain	20 357	Apprenticeships in Dual VET	2017/18	Cedefop database, question 14
Sweden	13 901	Apprenticeship education in upper secondary school (ISCED 3)	2018/19	Swedish community expert
United Kingdom – England	742 400	Apprenticeship	2018/19	Foley, N. (2020). <i>Apprenticeship statistics</i> . Apprenticeship statistics for England, Briefing paper 06113. House of Commons Library. https://commonslibrary.parliament.uk/research-briefings/sn06113/

Country	Information at country level	Name of the scheme and information at scheme level	Year	Data source
United Kingdom – Northern Ireland	8 614	Apprenticeship	2018	Northern Ireland Statistics and Research Agency (2017). <i>Statistical bulleting: Apprenticeships NI 2013/2017 – Quarterly statistics from August 2013 to October 2018</i> . www.economy-ni.gov.uk/sites/default/files/publications/economy/Apprenticeshipsni-statistical-bulletin-2013-2017.pdf
United Kingdom – Wales	55 820	Foundation apprenticeship 20 515 Apprenticeship (Level 3) 24 275 Higher apprenticeship 11 030	2017/18	<i>Further education, work-based learning and community learning in Wales, 2017/18</i> (SFR 12/2019, 21 Feb 2019): Table 4: Work-based learning provision: numbers of learning programmes starts. Leavers and in learning and numbers of learners starting and in learning by programme type, 2017/18. https://gov.wales/sites/default/files/statistics-and-research/2019-02/further-education-work-based-learning-community-learning-2017-18.pdf
United Kingdom – Scotland	42 000	Modern apprenticeship: 36 000 + Foundation apprenticeship: 3 500 + Graduate apprenticeship: 2 500	2018/19	Cedefop database, question 14

(*) Referred to as 'Cedefop database' in the table.

(**) French-speaking Belgium covers Wallonia, the French Community and French-speaking Brussels.



HOW MANY APPRENTICES ARE THERE IN THE EU?

This paper aims at contributing to the discussion about the need for EU-wide comparable statistics that capture precisely how many apprentices there are in a country in a particular year. It presents Cedefop data on apprenticeship participation based on national sources, without the ambition of providing comparable data per country or across countries. It also offers some reflections on the challenges that make it difficult to estimate apprenticeship participation in EU Member States.

In support of these reflections, the paper discusses two other EU-wide sources that seem most relevant in any attempt to estimate the number of apprentices: the European labour force survey, 2016 ad hoc module and the European labour cost survey.

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