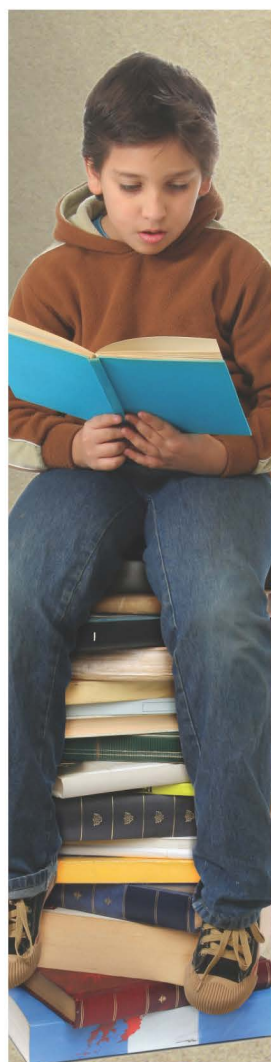


DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT
STRUCTURAL AND COHESION POLICIES **B**



Agriculture and Rural Development

Culture and Education

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Regional Development

Transport and Tourism

**DUAL EDUCATION:
A BRIDGE OVER
TROUBLED WATERS?**

STUDY





DIRECTORATE-GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES

CULTURE AND EDUCATION

DUAL EDUCATION: A BRIDGE OVER TROUBLED WATERS?

STUDY

This document was requested by the European Parliament's Committee on Culture and Education.

AUTHORS

ICF International: Stelina Chatzichristou, Daniela Ulicna, Ilona Murphy, Anette Curth

RESPONSIBLE ADMINISTRATOR

Ana Maria Nogueira / Markus J. Prutsch
Policy Department B: Structural and Cohesion Policies
European Parliament
B-1047 Brussels
E-mail: poldep-cohesion@europarl.europa.eu

EDITORIAL ASSISTANCE

Lyna Pärt / Catherine Morvan

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POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES
CULTURE AND EDUCATION

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STUDY

Abstract

This study examines the strengths and weaknesses of dual education/apprenticeships and explores policy developments in the EU-28 in relation to the introduction and/or improvement of apprenticeship schemes. The study is based on data from a variety of sources, including academic literature and in-depth research in 10 EU countries. It identifies the characteristics of four main forms of VET delivery in relation to the role of work-based learning and suggests ways that countries could promote apprenticeships within the context of their educational, social and economic frameworks. It also provides recommendations to country and European policy makers that may be used to improve the vocational and training offer across Europe.

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LIST OF ABBREVIATIONS

AT	Austria
BE	Belgium
BG	Bulgaria
CEDEFOP	European Centre for the Development of Vocational Training
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
ESF	European Social Fund
EU	European Union
FI	Finland
FR	France
HE	Higher Education
HU	Hungary
IE	Ireland
ILO	International Labour Organisation
ISCED	International Standard Classification of Education
IT	Italy
LT	Lithuania
LU	Luxembourg

LV	Latvia
MT	Malta
NEET	Not in Education, Employment or Training
NL	Netherlands
OECD	Organisation for Economic Cooperation and Development
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
SMEs	Small and Medium Enterprises
UK	United Kingdom

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EXECUTIVE SUMMARY

The economic crisis has had a profound impact on young people who face major difficulties in finding employment. As such, 'Dual education'¹ or apprenticeships more precisely are high on the policy agenda. There are a number of important initiatives that promote learning that combines theory and practice within a company. These initiatives include the European Alliance for Apprenticeships, Youth Guarantee Schemes, the ILO work on the quality of apprenticeships and the OECD Skills Strategy. Countries are attentive and many have developed new schemes (CY, DK, EL, ES, FI, HU, IE, IT, LT, PT, SE, SI); upgraded existing ones (AT, DE, DK, EL, FI, FR, IT, NL, PT, PL, UK (ENG)) or introduced reforms to strengthen work-based learning in vocational education and training (VET) (e.g. by improving the quality of guidance; CZ, DE, FR).

The benefits of high quality apprenticeships for the individual, employers and society are broad and well documented². The benefits combine skills and competence development (including skills harder to develop in the classroom), the development of a professional identity, greater employment opportunities, school-to-work transition, productivity gains and improved recruitment and retention for employers³. Nevertheless, apprenticeships are far from being a core track of VET in most EU countries. Countries where apprenticeships are a popular option with a good reputation amongst young people, their parents and employers are limited to a few (mainly AT, DE and DK). The main aim of this study was thus to understand different forms of 'dual education' and consider why some countries are more likely to develop certain models rather than others.

State of play and factors influencing the development of alternance pathways

There is at least one pathway offering a systematic combination of work-based and school-based learning in the vast majority of EU countries. Many countries have two pathways where each combines the two venues but in a different manner (e.g. FR, FI, NL). There are however important variations in the popularity of these pathways. In a number of countries apprenticeships exist but only represent a small part of the VET system and are often perceived as second choice.

The study shows that alternance schemes may be more or less open in terms of access. In apprenticeships, students must find an employer willing to take them on for a sustained period of time. This implies certain barriers on entry as employers are more likely to take on young people who demonstrate high potential, at the risk of excluding vulnerable young people, particularly in systems where the number of apprenticeship places is insufficient compared to demand.

¹ It should be noted that there is no agreed and broadly used definition of the term dual education. Therefore, the study differentiated between a) apprenticeships, where learners have a clear apprentices or employment status underpinned by a contract but at the same time result in formal vocational qualifications with national recognition; b) alternance schemes that integrate in-company training periods into formal vocational education and training through other means than the apprenticeship; and c) work-based learning as a pedagogical approach promoting learning in the context of a company, based on real working tasks.

² European Training Foundation (ETF) (2013), Work-based learning: Benefits and obstacles a literature review for policy makers and social partners in ETF partner countries.

³ European Commission (2013j).

The main models of VET programmes analysed

This study explored the key types of VET systems that can be found across the EU. These include: the 'fully-fledged apprenticeships'/dual system as the main VET model⁴; apprenticeships that exist as a smaller and parallel pathway to other VET tracks⁵; school-based VET with strong elements of work-based learning⁶; and predominantly school-based VET systems⁷.

Analysis indicates that 'fully-fledged apprenticeships' are based on structural characteristics of the VET system. As such, the success of these systems in providing graduates with qualifications that lead to high employability prospects rely on these structures. More specifically:

- apprenticeships are the main path towards VET qualifications;
- apprenticeships are offered for a greater number and broad range of qualifications⁸ that are highly regarded in the labour market;
- apprenticeships have been shaped in their current form gradually, reflecting economic and sectoral developments in the countries;
- apprenticeships are highly regarded by society, which leads to increased participation rates, especially from high achievers;
- in terms of their quality in both learning venues (school and company), financial and administrative support lies under the responsibility of several actors (National authorities⁹, educational organisations/providers and business associations/Chambers), which closely collaborate through established links and legal regulations;
- key to the success of apprenticeships is the participation of social partners and especially employers together with their close cooperation with relevant authorities and VET schools.

VET reforms across the EU

In the past five years, most EU countries have undertaken reforms to their VET system. Analysis carried out as part of this study shows that despite significant differences in their VET systems, countries share six common reform drivers (see Table 1). However, these drivers are interpreted differently in each country. Common challenges can however allow countries to develop shared views, develop broad frameworks of action, and benefit from peer learning. Nonetheless, country-specific solutions and implementation processes should be developed.

⁴ Denmark, Germany. The dual system is also in place in Austria, but school-based VET plays an equally significant role in that country.

⁵ Greece, Poland, Italy, France, Netherlands and the UK (England).

⁶ Finland, France, the Netherlands, Portugal.

⁷ Czech Republic, Greece (before the 2013 reform) and Poland.

⁸ AT: 206 legally approved qualifications, DE 348 training occupations, DK: 12 foundation courses which are the basis for 109 main programmes comprising different steps and specialisations leading to a total of 309 recognised qualifications.

⁹ AT: Federal Ministry of Economy, Family and Youth; DE: Federal Ministry of Education and Research, DK: Ministry of Children and Education.

Table 1: Six key reform drivers in the 10 selected EU countries

	Key drivers for reforms	Countries
1	Divergence between VET and labour market/ Improvable employer engagement	CZ, FI, IT, PL, PT CZ, DE, UK (ENG)
2	Quality and efficiency challenges in VET/alternance schemes	DE, FI, NL, UK (ENG)
3	High youth unemployment	EL, FR, IT, PT
4	VET/alternance schemes less attractive than other tracks	CZ, FI, NL
5	High rates of early school-leavers and drop-outs	FI, PT
6	Demographic challenge/ageing population	DE, CZ

Source: ICF International research on the selected countries

Regardless of the type of VET/alternance scheme in place, mainly countries face the challenges of:

- finding placements, i.e. engaging employers;
- coping with increased costs due to reforms at a time when state funds are limited;
- ensuring quality of new and existing alternance schemes.

Employers may be reluctant to participate in schemes due to the adverse effects of the economic crisis, but also due to sector-specific developments (for example, retirement of baby-boomers that creates gaps in the availability of experienced in-company trainers). Financial incentives to employers are considered as one way of generating more placements, though in practice more incentives do not necessarily lead to more placements. Incentives are more effective when they target specific sectors where employer engagement is low¹⁰; and when employers are not burdened with high levels of bureaucracy.

The role of employers is also relevant to characteristics of the company, i.e. its size and that economic sector it is active in. The majority of employers in the EU are not only SMEs, but also micro companies¹¹. Micro companies, given their size, have limited placements to offer with a limited infrastructure. Moreover, they may not be able to provide apprentices with the training required to obtain a full qualification. This creates challenges especially in the 'fully-fledged apprenticeships', where apprentices usually obtain the full qualification from one employer.

The type of jobs a sector offers shapes the content of apprenticeships. For instance, high-tech sectors, such as IT, where the field of work many companies operate within can be highly specialised. In this case, apprentices may be trained in a way that

¹⁰ Mühlemann et al. (2005) in Hoeckel K. (2008), Costs and Benefits in Vocational Education and Training.

¹¹ Employ up to 10 people.

potentially limits their capacity and capability to keep up to date with the ongoing developments in their field.

A further issue is the quality of placements and their learning potential. In the absence of a high quality learning experience, the potential of work-based learning cannot be realised (and may actually result in non-learning). To maximise the quality of work-based learning, countries where VET relies strongly on apprenticeships have sophisticated governance and quality assurance mechanisms in place. However, for countries where employers are not already strongly engaged and committed, these quality assurance models are likely to position the bar too high and require too much investment from employers. The quality of the learning experience is a result of many factors that include company culture, company strategic vision as well as the specific conditions of each apprentice (training programme, social interaction, tasks required, etc.).

Supporting the development of apprenticeships on an EU level

The importance attributed to apprenticeships, the provision of peer learning pathways and financial support from the European Commission to Member States facilitate the improvement and introduction of schemes across countries. This augmenting interest in apprenticeships should be coupled with strict quality controls to avoid situations where apprenticeships are used as cheap labour or where companies substitute unskilled employees with apprentices. This adverse behaviour will further reinforce negative perceptions with parents and students, particularly in countries with limited or no experience with apprenticeships, thus hindering the scope for their development and potential success.

At the same time, although financial support from ESF is significant in the development/improvement of apprenticeships/alternance schemes, some schemes may be over-reliant on ESF. Countries should be encouraged to base their schemes on pro-cyclical funding models, and rely on national/regional resources to the extent possible.

Points for consideration

Countries should develop/improve their VET system keeping in mind their policy, labour market, educational and cultural framework. Shifting to a 'fully-fledged apprenticeship system' may not be suitable for all countries. Whilst the German system can be considered successful, it may not be appropriate for implementation in all countries, especially those with different labour market structures and little/no experience in apprenticeships. Research has highlighted that even well-established systems face considerable challenges and that there are areas for improvement. As such, it is legitimate to say that there is in fact no 'one best system', but rather a range of successful structures and practices that can be considered inspirational.

Countries that are currently introducing apprenticeship/alternance schemes should consider apprenticeships as an effective tool for quality training and as a way of increasing the employability prospects of graduates. They should not consider apprenticeships however as a tool to automatically reduce youth unemployment rates or lead to a high-quality VET system. Some key points should be taken into consideration:

- an infrastructure that is equipped with adequate resources that is complemented with a supportive labour market and education structure are essential;
- significant time may be required before the benefits/improvements are obvious or measureable, when developing/improving apprenticeship/alternance schemes;
- new schemes should be selectively implemented in priority sectors¹² rather than across all qualifications and sectors. This gradual implementation can allow countries to take small but firm steps towards the engagement of employers and learners, identifying challenges along the way, and secure appropriate funds and resources;
- introducing apprenticeships will not automatically make VET more attractive or make graduates more employable. The attractiveness of VET is influenced by several factors, mostly related to local culture, economic structure and the education system itself. Country research highlights particular factors (e.g. perceptions, gender and the level of students' awareness of apprenticeships) that can create bottlenecks in popular apprenticeships/qualifications, or on the contrary lead to decreased demand from students. Such issues can be found even in countries where work-based learning is strongly embedded in VET (e.g. FI);
- measures to support SMEs should be broken down further for micro companies, especially if they hold a significant share of employment;
- the key role of social partners, especially employers, as well as their firmly regulated collaboration of national authorities highlights the need to adjust apprenticeships in the country policy, labour market and cultural context. This is particularly relevant to countries that have no or little prior experience in introducing apprenticeships;
- in sectors where professionals require a high degree of specialisation and continuously need to enhance their knowledge and upgrade their skills, apprentices should be trained in several companies and not limited to just one.

¹² Regarding economic targets and sectors that are already involved in other alternance schemes and/or collaborate with VET schools and authorities.

1. INTRODUCTION

SUMMARY

With persistently high youth unemployment rates across Europe, many countries are seeking to improve the transition from education to employment and have turned their attention to the success of dual education systems, evident in countries such as Germany and Austria.

This study explores the strengths and weaknesses of dual education within the context of countries' own educational, social and economic characteristics. It also presents examples of good practices that may be of interest to countries looking to develop their vocational education and training offer.

1.1. Objectives of the study and its context

The main objective of this assignment is to provide the European Parliament Culture Committee (which covers education) with information on:

- the main obstacles hampering the implementation of dual education in some Member States;
- why some Member States decide to implement/not to implement dual education systems;
- established links between excellence in vocational education and training (VET), dual education and economic growth;
- identified trends and changes in dual education; and
- innovative approaches on how to foster and increase the attractiveness of this type of education.

Following an increase in youth unemployment, as one of the consequences of the economic crisis, EU countries are taking measures to improve the relevance and responsiveness of education and training as well as the education to employment transition. Increasing youth employment is one of the priorities of EU policy. The Europe 2020 Strategy and its flagship initiative 'Youth on the Move'¹³ underline the role of education systems supporting young people's employability. One of the strategy's goals is to have 75% of 20-64 year olds in Europe in employment.¹⁴ Facilitating smoother transitions from education and training into employment is at the core of the Youth Employment Package of the European Commission. The 2013 Council Recommendation on establishing a Youth Guarantee¹⁵ to young people under the age of 25 explicitly links improving the transition from school to work, through a good quality offer of apprenticeships and traineeships.

Given this context, considerable attention is being paid to the potential benefits of work-based learning as a means to ensure better preparation of young people for the labour

¹³ European Commission (2010a).

¹⁴ European Commission (2010b).

¹⁵ Council Recommendation of 22 April 2013 on establishing a Youth Guarantee 2013/C 120/01. Internet: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013H0426%2801%29>

market. The European Alliance for Apprenticeships¹⁶ of the European Commission, for instance, highlights the role of apprenticeships in combating youth unemployment rates. Several countries with strong dual education pathways and high participation in VET (e.g. AT, DE) face fewer difficulties with youth unemployment. While this favourable situation cannot be solely attributed to apprenticeships, studies conclude that a strong VET system based on dual education contributes to robust levels of youth employment¹⁷. Subsequently, questions about what can be learnt from dual education systems, how other countries can be inspired by these systems and the extent to which good practices can be transposed, are being asked by policy makers and stakeholders alike.

Building on these questions, the key objective of this study is to identify the reasons behind the success of some VET systems and potential barriers other countries face in implementing/introducing similar systems. This study also aims to identify key messages based on lessons learnt that EU countries may be able to apply in times of high youth unemployment and financial restraints.

1.2. What is dual education? Understanding the definitions used and their differences

SUMMARY

The term dual education is used to refer to apprenticeship-based programmes. The terminology surrounding apprenticeship schemes varies greatly. At the country level the term 'apprenticeship' may be used to describe more or less tightly regulated schemes that integrate work-based learning into VET schemes in varying degrees. This study uses the term 'apprenticeship' to discuss programmes that systematically combine learning in a company with learning in a training centre but which are governed by apprenticeship (or employment) contracts with a clearly shared responsibility between the three parties (learner, school, company).

The term 'alternance training/schemes' is used to discuss the integration of significant periods of work-based learning into VET more generally. The term 'work-based learning' is used to refer to the pedagogic approach of learning in the context of a real job. It does not denominate a system or a type of programme as such.

The term 'dual education' is widely used as an umbrella term, referring to the fact that teaching and learning in VET is characterised by 'duality' in two regards:

- the duality of learning venues (schools/VET-providers and training companies), sharing the responsibility to provide theoretical and practical training; and
- the duality of actors (public and private actors), sharing the responsibility for VET policy and practice.

¹⁶ European Commission (2013a).

¹⁷ For example, Cedefop (2013a); European Commission (2013c); European Commission (2013f); ETUC (Confederation Syndicat European Trade Union) (2014), Towards a European Quality Framework for apprenticeships and work-based learning.

The duality of the learning venues is the basis for the definitions used in the European and international literature. According to UNESCO¹⁸, the 'dual Education System is called "dual" because it combines apprenticeships in a company and vocational education at a vocational school into one course'. In the company, the apprentice receives practical training which is supplemented by theoretical instruction in the vocational school. According to Cedefop (2008a), dual education concerns 'education or training combining periods in an educational institution or training centre and in the workplace'. Cedefop (2008a) refers to dual education also as alternance training, which highlights that the term 'dual education' may be used interchangeably with 'alternance training', 'apprenticeships' or 'work-based learning'. There are, however, some small but significant differences among these terms¹⁹, as they differ with regard to the two aspects mentioned above.

- Apprenticeships, in the strictest sense, are defined as consisting of systematic, long-term training with alternating periods at the workplace and in an educational institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation. The ILO²⁰ definition of apprenticeships also stresses that training is based on a pre-set training plan, takes place at employers' premises, leads to a trade qualification and is governed by a contract. After completing the programme, apprentices obtain a (nationally) recognised professional qualification.
- Alternance training is a broad term that incorporates all forms of education or training, combining periods in an educational institution or training centre and in the workplace. In an alternance scheme the alternation between work-based and school-based training can take place on a weekly, monthly or yearly basis. Depending on the country and applicable status, participants may or may not be contractually linked to the employer and/or receive a remuneration. They may be considered to be students without having a specific apprentice status.
- Work-based learning regards the acquisition of knowledge and skills through carrying out – and reflecting on – tasks in a vocational context, either at the workplace (such as alternance training) or in a VET institution.

Of the three definitions mentioned above, the last one is the broadest. It refers to a form of learning (as a pedagogical approach) rather than to a system or type of programme. While in those countries where they are an inherent part of VET, apprenticeships typically refer to a specific clearly defined form of VET pathways, with a specific regulatory and governance framework. In comparison, the term alternance, as defined by Cedefop (2008), covers a broader range of programmes, some of which are part of the school-based system. The following differences can be identified:

¹⁸ Terminology of Technical and Vocational education; Internet: http://books.google.de/books/about/Terminology_of_Technical_and_Vocational.html?id=BT06nQEACAAJ&redir_esc=y (cited 20/2/14).

¹⁹ Cedefop (2008a).

²⁰ Steedman H. (2014), Overview of apprenticeship systems and issues: ILO contribution to the G20 task force on employment.

- 'apprenticeship' specifically describes a type of training where the trainee is contractually linked to an employer and usually holds employee or specific apprentice status. The apprenticeship contract defines all elements of the relation between the learner and the employer (such as remuneration, duration, tasks);
- on the other hand, work-based learning is the broader term, since it may incorporate practical, hands-on training that may, however, not take place in an actual working environment, but rather in working place simulations in the premises of VET institutions/providers etc.;
- Cedefop's 'alternance training' leans towards the concept of apprenticeships, but it is not that strict of a definition: it describes training that incorporates the duality of training places (provider and employer/work-based), but the contract that lies at the core of apprenticeships may not be signed (the trainee usually holds a student rather than an employee status and remuneration is optional). Additionally, the duration and intensity of training in the work-based learning environment can vary significantly from those of an apprenticeship.

The variety of definitions poses a challenge for any comparative analysis of the state of play in EU countries. Additionally, the relevant terminology is not used consistently across countries. Schemes that bear more characteristics of an alternance scheme are sometimes called 'apprenticeships' in the language of the country concerned. This creates confusion when making comparisons to the apprenticeship schemes in other countries. Given the great variations among such types of training between countries, some comparative studies at EU level²¹ use the term 'apprenticeship-type' programmes.

The terminology used in this study is based on its scope and goals. Therefore, although the terms of reference of this assignment use the term 'dual education', the analysis uses this term to describe mainly the fully-fledged apprenticeship systems such as those in Germany and Austria. To make clear the distinction between those systems and other schemes that are pertinent to other countries, the term 'alternance training/schemes' is used when discussing the topic in general, based on the Cedefop vocabulary. This allows for the analysis of a broad range of VET systems, including those that are not representative of a form of fully-fledged apprenticeships.

Navigating the study

This study is structured as follows:

- Section 2: presents the methodology used for this study;
- Section 3: provides an overview of the alternance systems in the EU and their characteristics;
- Section 4: presents and discusses the recent reforms in alternance schemes in the EU countries;
- Section 5: discusses factors that impact the way alternance schemes are developed;

²¹ European Commission- DG Employment (2012c) and European Commission (2013d).

- Section 6: discusses the costs and benefits of alternance schemes and presents how these are funded across EU countries;
- Section 7: assess the benefits and areas of concern in three key types of alternance schemes and school-based systems;
- Section 8: summarises the conclusions of the study and provides recommendations for future developments in each type of alternance scheme.

The study is supported with the following annexes:

- Annex 1 Analytical framework;
- Annex 2 Tables from Section 2;
- Annex 3 Tables and country examples from Section 3;
- Annex 4 Tables and country examples from Section 4;
- Annex 5 Tables and country examples from Section 5;
- Annex 6 Tables and country examples from Section 6.

2. METHODOLOGY

SUMMARY

The methodology followed a set of questions defined by the European Parliament. These were fine-tuned into an analytical framework that identified the information to be collected.

- The research conducted for the study combined desk research and interviews. For 28 countries basic information on alternance schemes and apprenticeships as well as the broader context was collected based on existing international sources. For 10 selected countries [CZ, DE, EL, FI, FR, IT, NL, PT, PL, UK(England)] the research team reviewed national research as well as policy documents and carried out 60 interviews in total.
- A combination of situations regarding the integration of work-based learning and the existence of alternance schemes is covered in the 10 selected countries. The integration of work-based learning in VET varies greatly across the EU. It cannot be realistically expected that countries with largely school-based VET will transform to fully-fledged apprenticeship systems in a short period of time. One of the key issues of this research is to identify possible evolutions for a variety of VET systems including different types of alternance or apprenticeship schemes. This was taken into consideration when selecting the sample of countries.

2.1. Presentation of the methodological approach²²

This study was conducted from October 2013 to May 2014. During this period the research team:

- mapped available information on VET systems/alternance schemes in the EU-28;
- identified trends and developments regarding alternance schemes in the EU-28;
- carried out a literature review of what is known in terms of academic research on apprenticeships and alternance schemes;
- conducted in-depth research on the alternance schemes in 10 selected countries, based on national sources and interviews with experts and authorities;
- carried out analysis of the characteristics of VET systems/alternance schemes in these countries to identify their success factors and challenges;
- developed recommendations for each type of VET system/alternance scheme that could inspire EU countries that seek to change or improve their systems.

²² The analysis was driven by an analytical framework as presented in Annex 1.

Mapping the key features of VET pathways (28 countries)

In terms of the scope of the study, the main focus was on initial VET (IVET) at ISCED level 3 (upper-secondary education). VET at higher levels was included only where relevant, for example, in countries like Greece and Ireland, where a significant part of IVET covers ISCED level 4.

To obtain an overview of the key features of VET systems and alternance pathways across Europe, the research team systematically mapped the information presented in Table 1 for each EU Member State.

Table 1 : Key features mapped for each Member State

Nature of VET tracks in the country	Completion rates of VET programmes
Existence of apprenticeships	Exit assessment
Existence of other alternance schemes	Outcomes
Pathways into alternance programmes	Reforms
Participation in VET	Perceptions
Participation in alternance programmes	Economic context
Guidance	Funding

Source: ICF International

This information was gathered from existing national and international studies and country reports.

In-depth analysis of 10 selected countries

10 EU countries were selected for a more in-depth review. The countries were selected in order to:

- cover a wide range of different VET systems;
- include countries with a strong tradition in apprenticeships, as well as countries with almost exclusively school-based VET systems;
- cover countries with youth unemployment rates both above and below the EU average;
- represent varied geographical areas within Europe; and
- offer insights into countries that joined the EU relatively more recently (2004).

Table A2.1 in Annex 2 presents the 10 selected countries with regard to the above criteria.

The in-depth country reviews resulted in the production of 10 country reports that contained the information presented in Table 2.

Table 2: Type of information contained in the 10 country reports

Description of alternance pathways	Factors influencing participation in alternance schemes
Socio-economic context	Quality assurance
Outcomes of alternance pathways	Funding and non-financial incentives
Main challenges and trends for alternance pathways in the country	Equal opportunities
Reforms and measures	

Source: ICF International

The country reports were completed based on desk-research (national sources) and interviews. Overall, 60 semi-structured interviews were carried out (between 5 and 8 interviews per country). Table A2.2 gives a break down per type of organisation interviewed and number of interviewees. Table A2.3 offers an overview of the organisations interviewed per country. Both tables are available in Annex 2.

Interviewees were selected based on their role in ministries/governmental organisations regarding VET/alternance schemes; as representatives of employers' organisations and employees' associations (such as trade unions); representatives of VET providers, teachers or students, where available; as well as their expertise on the field. Country researchers selected those interviewees which would best reflect the key authorities and stakeholders active in the national VET system/alternance schemes and/or latest policy reforms. Once completed, the detailed reports were reviewed and quality assured by the project coordinator.

Discussing the methodology: availability and comparability of data

This study primarily relies on secondary information from national and international sources. This approach was deemed appropriate because of the research questions. The information collected for the 10 in-depth country reports emphasised putting alternance schemes into the socio-economic as well as structural context of VET. The countries were selected to represent a variety of VET systems and approaches to integrating work-based learning into VET. The objective was to analyse the key features of a variety of work-based learning and alternance pathways in their context. This situates the main challenges and trends for alternance schemes in their context, providing insights into the background and rationale for current reforms and thus, possibilities for policy transfer. In doing so, this study also builds on existing comparative studies analysing the strengths and the challenges of the different types of alternance and work-based learning integration.

Several recent studies²³ faced the difficulty of comparing alternance schemes and apprenticeships across the EU. The variety of VET pathways poses the following challenges:

- differentiating between apprenticeships and other forms of work-based learning integration is not straight forward;

²³ For example, European Commission- DG Employment (2012c); European Commission (2013d).

- data on the share of in-company or work-based learning in VET programmes is not systematically collected (or it includes practice training that can be completed in a school workshop);
- data on enrolment in alternance programmes is frequently not comparable given the variety of pathways.

To overcome these issues, a team of country researchers was selected with specific knowledge in relation to vocational education and training and linguistic skills that enabled them to access data from national data sets/studies. The researchers were provided with a common template to complete and use to report the information. This was accompanied by a guidance note explaining the type of data sets to consider together with clear guidance on the definitions associated with apprenticeships, alternance and work-based learning as presented above.

3. STATE OF PLAY OF THE DEVELOPMENT OF ALTERNANCE SYSTEMS ACROSS EUROPE

KEY FINDINGS

- There is no single model of apprenticeships and alternance programmes in the EU. There is a continuum of types of programmes that integrate work-based learning to varying degrees. The number of apprenticeship programmes on offer within countries also varies, but where these pathways exist, they are almost always part of formal IVET with some exceptions.
- There is lack of comparable data on the share of young people who participate in programmes that integrate work-based learning – be it alternance or apprenticeship schemes, due to the different definitions of work-based learning that are used by international sources (e.g. OECD).
- There seems to be no clear cut relationship between participation in VET and either:
 - The existence and level of development of apprenticeship schemes, or
 - Whether the country utilises early tracking or not.
- In some countries certain qualifications can only be achieved through the apprenticeship pathway (e.g. AT, DE). Hence, apprenticeships are almost an unavoidable step in entering a particular profession. In other countries (e.g. FR, NL) the same qualifications can be achieved through different pathways. This means that theoretically there should be no distinction between the competences certified through the award of a qualification, regardless of the chosen pathway.
- Apprentices often have a status that is different to that of students. They have an apprenticeship or an employment contract. They receive some form of remuneration or allowance and they can also benefit from certain welfare mechanisms otherwise not accessible to students. That is why in countries with strong apprenticeship traditions, these pathways are deeply embedded, not just in the education system, but also in the labour market structures. In alternance schemes other than apprenticeships, there is often a simple agreement between the student, the employer and potentially the school.
- Apprenticeship and alternance schemes have multi-stakeholder governance arrangements in place. Given the shared responsibility over the delivery of training and consequently a young person's learning process, the responsibilities for the design of standards (qualification or training) and assessment involve labour market as well as education stakeholders.
- In many apprenticeship schemes finding a placement with an employer is a condition for enrolment. This creates a certain barrier at entry because not all young people have the career management competences to secure a placement on their own and may need support or additional preparation.

- Employment rates are higher for ISCED 3-4 VET graduates compared to general education graduates regardless of the VET system in place. What does make a difference to VET employment rates is the type of programme chosen within the system: VET programmes with high shares of work-based learning lead to better employment results in comparison to the school-based track.
- However, employment results are better for general education than for VET graduates, in tertiary education.
- Alternance schemes/apprenticeships are used in some countries as a way to embrace early school leavers from VET or general education. Schemes are also available for other disadvantaged groups (e.g. disabled students, migrants), but to a lesser extent.
- Whilst alternance schemes and apprenticeships in particular are seen by many as the key to reducing youth unemployment by offering opportunities, they may also reproduce the inequalities existing in the labour market. In some countries, they can be seen as being the reserve for those who 'fail' in the more traditional pathways and as such, are seen as second-tier.

3.1. Description of whether and how work-based learning is integrated into VET

Vocational education and training usually combines theoretical and practical learning. The latter can be offered in several forms: in a school or VET-institution, embedded in classes, projects or workshops or in a work-based context in a real company. When work-based learning takes place in a company, this can also be offered in several forms, from a short internship to a fully-fledged apprenticeship based on a formal contract between a trainee and employer.

The definitions provided earlier (Section 1.2) imply that the manner and extent to which work-based learning is integrated into VET programmes differ across countries. The following three types of VET pathways can be distinguished.

- School-based VET: programmes are classified as school-based when the vast majority of training takes place in the school. Usually, in school-based VET programmes, practical training plays an important role as well; however, the practical training instead takes place in school-based workshops. Training in a real-company context is not a requirement, though some programmes' training institutions may provide such opportunities.
- Mixed VET: these programmes are mostly school-based, but have a compulsory work-based element (in a company) which, however, is not equivalent to an apprenticeship (e.g. there is no contract between employer and trainee).
- Work-based VET: these are programmes where a significant share of the learning takes place in the workplace, though parts of the training are also delivered in a school-based context (these programmes are also characterised as apprenticeships or as 'dual system').

In many countries, several of these VET pathways are offered in parallel. Table A3.1 in Annex 3 offers an overview of the different pathways that can be found in some European countries.

Based on the overview provided in the Annex, the following observations can be made.

- Forms of 'school-based' VET are present in almost all countries, while the same cannot be said of alternance/apprenticeships. Depending on the VET system, 'school-based' tracks can bear different characteristics. In some school-based programmes work-place learning in an employer's premises is rare (e.g. CZ, EL²⁴), while in other countries, periods of work-based training in companies are obligatory and embedded in all qualifications of 'school-based' VET (e.g. FI, where 'school-based' is actually a mixed system and parts of German VET, such as VET schools for nurses and midwives²⁵). At the same time, although school-based VET may be the most attended VET track in some countries (e.g. EL, FI), it is only targeted to specific student groups in other countries (e.g. DE, where purely school-based VET is rather an exception and school-based programmes are mainly a solution for those who do not find a placement in the apprenticeship system, with the exception of some specific professions that are not trained through apprenticeships as mentioned above).
- For the mixed programmes, the share of work-based learning varies between countries, for example: in Finland, at least one semester of the three-year-long 'school-based' programmes consists of on-the-job training; in Portugal, 'apprenticeship-type courses'²⁶ offer a share of 40 % work-based learning; and in the Netherlands, the proportion of work-based learning is between 20 % and 60 %, depending on the pathway.
- Work-based VET/apprenticeships, as defined earlier, are not in place in the Czech Republic and Portugal.

Table 3 : Enrolment of students in VET in European countries

	Mostly work-based	Mostly mixed	Mostly school-based
High participation in VET*	AT	FI, LU, NL	BE, CZ, SK, SI
Medium participation in VET*	DK, DE	FR, PT, MT, SE	IT, PL, ES, UK, BG, RO
Low participation in VET*		IE	EE, EL, HU, LT, LV

Source: ICF International

*OECD (2012a), Table C1.3. Upper secondary and post-secondary non-tertiary enrolment patterns (2010 data). High= >60% of students enrolled in VET; Medium = 40-60% of students enrolled in VET, Low = <40% enrolled in VET.

No available data for the UK.

²⁴ Before the 2013 reform. The reformed schemes include strong shares of work-based learning. The new apprenticeships/alternance schemes are expected to be launched in the 2014-15 or 2015-16 school year.

²⁵ 2012 Refernet country reports.

²⁶ Which fit the definition of alternance schemes rather than apprenticeships, based on the definitions of this study.

Existence of apprenticeships

According to the literature,²⁷ apprenticeship programmes, which match the definition provided in Section 1.2, are available in all EU-28 countries, except the Czech Republic, Portugal and Slovakia (Table A3.2 in Annex 3). The absence of apprenticeships however, does not mean that these countries do not offer any work-based learning. In Portugal, there are a number of VET tracks that require students to carry out work-place training, but these bear more resemblances to alternance schemes than apprenticeships. In the Czech Republic and Slovakia, the practical training that is required can take place in a company or a school-workshop. It is up to the school to decide if they will offer the practical training in a company rather than in a workshop.

The overview of the apprenticeship schemes across the EU-28 shows that some countries offer only one form of apprenticeship pathway, while in others, several types of pathways are available.

Apprenticeships are usually part of IVET system, though in a few cases (BG, LV, IT)²⁸, they fall outside the formal educational system. This means mainly that they do not lead to a qualification that is equivalent to that of the formal education and training system. They are mostly offered to students as a form of upper secondary education (ISCED level 3), leading to a vocational qualification that has labour market relevance, but does not imply the same rights as qualifications from the formal system.²⁹ Italy is a quite unique case where apprenticeships are a form of an employment contract rather than a specific training pathway.³⁰ These examples do not correspond to the more restrictive definition of apprenticeships presented earlier.

Several countries also offer alternance programmes or apprenticeships at post-secondary non-tertiary vocational programmes (ISCED 4: EE, EL, FI, HU, IE, LT, NL), or at the tertiary level (ISCED 5: FR, DE, IE, UK).³¹

Overall, despite a few terminological inconsistencies, apprenticeship programmes across Europe share the characteristics stated in Section 1.2. However, apprenticeships span a wide range of professions, depending on the country. For example, in France, Germany and the UK (England), they are not only developed in traditional trades and professions, but are also expanded to include new, 'emerging' professions in the service sector (for example in business).³² Differences regarding the way apprenticeships are implemented are also noted, e.g. with regard to contracts, employment status and duration. These differences are further discussed in the sub-sections following.

²⁷ European Commission (2013e). IMPORTANT NOTE: The source categorised available schemes per country in 'apprenticeship-type schemes' and 'traineeships'. ICF International selected those schemes that fall under the definitions agreed and the scope (education levels) of this study.

²⁸ ReferNet report Latvia 2012, and European Commission (2012c); for Italy: Art.1 D.Lgs n. 167/2011.

²⁹ According to European Commission (2012c).

³⁰ The Italian apprenticeship is not an integral part of the vocational system, classified in the national legislation as a 'permanent work contract aiming at the training and occupation of young people' (According to Art.1 D.Lgs n. 167/2011). As such, they are used as a way to combat unemployment (see Section 4).

³¹ European Commission (2012c).

³² In UK (England), according to World Bank (2013), Towards a Model Apprenticeship Framework: A Comparative Analysis of National Apprenticeship Systems.

3.1.1.1. Contracts and employment status of apprentices and students in alternance schemes

Contracts in apprenticeships

As stated in Section 1.2, formal training contracts with a training company are an important feature of apprenticeships, as they: i) distinguish apprenticeships from other less regulated alternance schemes; ii) 'regulate' the characteristics of the training that impact the cost/benefits for employers; and iii) the willingness of apprentices to join such schemes.³³ The contract recognises that apprentices are not just learners, but they also make a contribution to the company's production. In line with this, it specifies the remuneration, insurance or pension rights, but also potentially other working conditions (such as entitlement to leave).³⁴ The contract is usually drawn up between the training company and the apprentice for the duration of the apprenticeship. It stipulates the basic elements of the apprenticeship, such as the training programme that will be followed, the tasks the trainee will complete, the apprentices' rights and obligations, the name of the trainer/master responsible, etc. Students in other alternance schemes may hold a contract or agreement as well, but with different characteristics.

This contract provides apprentices with a specific status that can be comparable to that of an employee in certain respects. It typically means that apprentices receive remuneration, have health and safety insurance and may also receive pension rights for the duration of their training.³⁵ Table A3.3 in Annex 3 gives an overview of the different categories of contracts and the status of apprentices that were identified in the eight selected countries that have apprenticeships in place³⁶ (i.e. excluding CZ and PT).

As shown in Table A3.3 in Annex 3 and in Table 4 below, three main types of contracts were identified:

- specific apprenticeship contracts
- employment contracts and
- learning or training contracts (or Learning Agreements).

Table 4 : Type of contracts in apprenticeships and other alternance schemes in the selected countries

Type of contract	Apprenticeships	Other alternance schemes
Specific apprenticeship contract	FR, DE	
Employment contract	FI, EL, IT, NL, PL, UK (ENG)	
Training or Learning Agreement	NL	CZ, EL, FI, NL, PL, PT

Source: ICF International research in the selected countries

³³ See Section 6 for more details.

³⁴ European Commission- DG Employment (2012c).

³⁵ European Commission- DG Employment (2012c).

³⁶ As underlined earlier, there are no apprenticeships, based on the definition of Section 1.2, in the Czech Republic and Portugal.

Apprenticeship contracts stipulate the specific rights for apprentices that may be different from those of regular employees. Typically the minimum remuneration is lower than that of regular employees. These contracts also specify other entitlements in comparison to those of employees. Compared to regular employment contracts, employers typically benefit from paying lower (or no) social contributions in addition to the wage of the apprentice. One of the differences identified between these contracts and those held by regular employees is the protection that apprenticeship contracts offer against dismissal. In some cases (e.g. DE and EL), should apprentices find themselves dismissed due to company bankruptcy, the competent institutions³⁷ are responsible for placing these apprentices in a new company.

Since many apprentices are under-aged, contracts need to be in line with national rules and regulations of youth protection. This may concern, for example, the working time of apprentices (no work during late hours) and the nature of tasks to carry out (e.g. selling tobacco and alcohol, which can for instance be an issue in the hotel, gastronomy and tourism sector).

The employment contracts may be similar to apprenticeship contracts in many regards, but they do not create a specific apprentice status. Instead, they are a form of employment contract which enables employers to pay fewer contributions, to pay lower wages or have more flexibility regarding certain other protections. These contracts are typically only open to certain target groups. An example of this is the 'professionalisation contract' which is open to young people between 16 and 25, but also to job-seekers older than 26.

Learning Agreements may co-exist with apprenticeship contracts, to segregate obligations and rights regarding the learning of the student from the apprenticeship contract content (e.g. in NL³⁸).

Both employment contracts for apprentices and apprenticeship contracts are generally regulated by national laws or sectoral collective agreements. They are usually signed by apprentices (or their legal guardians) and the training company. There can however, also be a trilateral agreement, involving the VET school/provider (e.g. LT³⁹), or a second company, which provides those parts of the practical training that cannot be offered by the main training company (e.g. AT, DE). In a trilateral agreement, the third party may also include parents/student guardians (e.g. SE) or an organisation that plays a key role in the implementation of apprenticeships (e.g. MT).⁴⁰

Contracts in other alternance schemes

In mixed schemes where work-based learning takes place in a company, a Learning Contract or Learning Agreement may be signed between the school and the employer (e.g. in the 'vocational placements' of students in school-based VET in Poland⁴¹) or the student and the school (e.g. in the apprenticeship-type courses offered in Portugal.⁴²

The agreements in mixed schemes differ from apprenticeship contracts. Students typically maintain their student status, even if labour regulations define elements of the

³⁷ That is, chambers in Germany or the VET school in the case of apprenticeships offered by the Greek PES (OAED).

³⁸ BPV protocol Special (2010), Vertrouwen op elkaars professionaliteit.

³⁹ Refernet country reports (2012).

⁴⁰ Refernet country reports (2012).

⁴¹ ICF research in the selected countries.

⁴² As highlighted earlier, the so-called 'apprenticeship-type courses' in Portugal have the characteristics of an alternance scheme, despite their title.

work-place learning (e.g. CZ). Students are often not paid, though they can receive some form of allowance, if employers choose to do so (e.g. EL and FI). Table A3.4 in Annex 3 offers an overview of the types of contracts identified in alternance schemes in the selected countries.

3.1.1.2. Duration of apprenticeships

Duration is an important element of apprenticeships, as it is linked to the development of apprentices' efficiency/productivity, which increases over time. In turn, this can influence the decision of employers to offer apprenticeship placements.⁴³

Apprenticeships in those countries analysed in this study usually last between two to three years. While in some countries, the duration of apprenticeships is fixed, in others it depends on the aspired qualification or type of diploma (more complex qualifications or higher level diplomas require a longer phase of practical learning). Moreover, VET pathways may be organised in a modular way with the option to accumulate learning outcomes – this influences the duration of the apprenticeship as well. A third model allows the employer to decide the duration (within a given time range, so that the minimum requirements can be achieved), based on the individual's prior learning/work experience.

Table 5: Duration of apprenticeships in the eight selected countries where apprenticeships are in place

Duration fixed for all apprenticeships	Duration fixed, but depending on the qualification or type of diploma	Flexible duration
Greece	France, Germany, Italy, Poland, the Netherlands	UK(England), Finland

Source: ICF International research on the selected countries and 2012 Refernet country reports. NB: In the UK (England), since August 2012, apprenticeships for those aged 16 – 18 must last at least 12 months. As set out in the NAS statement on apprenticeship quality⁴⁴, for those aged 19 or over the apprenticeship should last at least 12 months, unless relevant prior learning is recorded. Where this is the case the Apprenticeship will not be less than 6 months. However, it is noted that as part of the current apprenticeship reforms underway, the 2013 Apprenticeship Implementation Plan⁴⁵ states that all apprenticeships will be required to last a minimum of 12 months, with no flexibility regardless of the age or prior experience of an apprentice.

Governance of alternance schemes in VET

Governing alternance schemes as part of the VET system comprises several tasks. First and foremost, VET provision needs to be planned, as qualifications obtained through alternance schemes need to meet labour market demands and be transparent to employers.

Governmental actors are usually responsible for:

- (legal) regulating the alternance schemes (incl. setting of policy priorities, funding and financing);
- establishing clear roles and responsibilities for all stakeholders;

⁴³ See Section 6 for more details.

⁴⁴ HM Government (2013a).

⁴⁵ National Apprenticeship Service (NAS) (2012), Statement on Apprenticeship Quality.

- defining and standardising the qualifications obtained through alternance schemes (through accreditation, occupational standards and profiles or training regulations);
- monitoring the two learning venues (VET provider/school and the training company):
 - schools and VET-providers (e.g. through public inspectorates, etc.);
 - training companies (e.g. through involving stakeholders - chambers or VET providers – who ensure the training companies provide suitable working and learning conditions for students);
 - establishing requirements for the training of school teachers and company trainers (usually controlled through the respective monitoring system).
- collecting data and information for evaluation and review.

Just as is the case for general education, the responsibilities described above fall under the remit of different organisations, depending on the degree of decentralisation within a country.⁴⁶ Alternance systems differ from general education in that because these schemes (especially apprenticeships) include two learning venues, the VET school/provider and the workplace. Therefore, mechanisms to govern work-based learning within private companies are necessary and alternance schemes are typically governed jointly by public authorities (those in charge of education⁴⁷) and representatives of the labour market. This shared governance can take the forms of consultations, participation in tripartite boards, or formalised agreements with a high level of responsibility for actors from the business sector. In countries with strong apprenticeship based systems, such as in Germany and Austria, representatives of employers (chambers) have an important role in defining training standards, the quality assurance of in-company training and apprentices' assessment. Given the role of employers as providers of education and training in these systems, such shared governance is necessary.

In a minority of countries (BG and LV), alternance schemes exist somewhat separately from the formal education sector. Here, they tend to be entirely the responsibility of trade organisations and the business sector.

Table A3.5 in Annex 3 presents the actors involved in the governance of alternance schemes in the 10 selected countries.

In those countries where several types of VET pathways and alternance schemes co-exist, they are governed by different ministries and/or levels of governance. Inter-governmental agreements exist which regulate the coordination between different players and the levels of governance (e.g. FR), including stakeholders (e.g. when it comes to the design of qualifications, apprenticeship contracts and the research of market needs). For example, in France, the Ministry of National Education concludes

⁴⁶ Many countries have a high degree of decentralisation in education and training to the regional level (e.g. BE, DE, IT, UK). In Sweden, municipalities take over the administration of pre-, compulsory and upper secondary schools. In other countries – e.g. Denmark, France and the Netherlands– organisation is instead taken over by national governmental players, but involves a large number of stakeholders.

⁴⁷ However, in Italy, where apprenticeships are viewed as an employment contract rather as a training pathway, the Ministry of Education is responsible for general education and the Ministry of Labour and Social Policies is responsible for establishing minimum performance levels for vocational education and training.

agreements with sectors and large companies to develop vocational training and apprenticeship training; and in Italy, the permanent Conference State-Regions is the main negotiation 'table' between different levels of governance, while at the regional level, social parties have a central role in shaping the vocational education and training offer.

3.1.1.3. Standardisation of qualifications

In alternance schemes, and in particular in apprenticeships, an important part of the training is provided in companies which have very different systems (material, personnel, processes) from one another. However, in those schemes that are part of mainstream VET, the State guarantees to all learners that, independent of where they complete their apprenticeship, they will have a qualification that can be recognised across the country. It is therefore necessary to ensure that all learners achieve comparable learning outcomes through central regulation of qualification standards. This is less the case for apprenticeships that lie outside of the formal education system and do not lead to nationally recognised qualifications.

In some countries where apprenticeship systems are a core component of the VET system, the type of qualification achieved is different to the qualifications achieved through other pathways. In Germany, for example, the qualifications for certain professions can only be acquired after completing an apprenticeship. There are no alternative routes to these professions.

In a few countries (e.g. FR, NL), there is no distinction about the type of qualification achieved, depending on the pathway the learner follows. So, the same qualifications can be achieved through alternance schemes (school-based VET with substantial periods of work-based learning) and apprenticeships. The diploma received upon completion is the same and has the equivalent validity across the country. The same standards are the basis for developing training programmes in apprenticeship schemes as well as for the remaining types of paths.

In the Netherlands⁴⁸, all qualifications in VET are regulated at the national level. The content of qualifications is decided by sectoral committees in which both education and the labour market are represented. The committees are managed by the 17 centres of expertise that are operating under the Foundation for Cooperation between Vocational Education, Training and the Labour Market (SBB). The qualifications describe what a student should know and be able to do after completion of education and give VET institutions a large degree of freedom in designing educational programmes.

In France⁴⁹, vocational qualifications issued by the State and other stakeholders lead to 'professional certifications', which involve the assessment of a learner's professional skills against a pre-determined set of criteria. Professional consultative committees (CPC) have been developed in several ministries to offer consultation on the certification processes. The Ministry of National Education and its decentralised structures ensure that the training delivered both at the training centres for apprentices (CFAs) and within enterprises, is aligned to the training standards (referentiel de formation) and they organise final exams for apprentices.

⁴⁸ ICF International research on the selected countries.

⁴⁹ ICF International research on the selected countries.

3.1.1.4. Quality assurance of alternance schemes

Monitoring VET school/providers

Schools and VET providers are usually public institutions, so their quality control falls under the remit of the same authorities as general education schools. Private VET schools are also required to meet specific criteria and be controlled/inspected by the relevant public authorities.

In France⁵⁰, all public and private VET providers are subject to control by public authorities concerning their pedagogic and financial performance. They must submit an annual report to indicate the number and type of learners, hours of training delivered, the type of training qualifications prepared, etc. By law, each VET provider must also have a council for improvement ('conseil de perfectionnement') consisting of stakeholders.

In Finland⁵¹, local autonomy in all forms of education and training is extensive. Quality assurance is mainly the responsibility of the education providers and it is based to a large extent on self-assessment. However ultimately, the Finnish National Board of Education is responsible for the monitoring of VET providers, and requirements are stipulated in the law.

Monitoring training venues

In alternance schemes, companies are considered to be learning sites, but the learning environment is different from that of a school's. Not all workplaces constitute good quality learning venues.⁵² Quality assurance (and/or control) measures concerning the work-based learning component of alternance schemes vary among European countries. In general, the larger the share of work-based learning in the programme, the greater the need for clear quality assurance. The countries where apprenticeships are the main form of VET (e.g. DE, DK) tend to have clear systems for monitoring the quality of in-company learning. In Austria or Germany the labour market representatives have this responsibility. Such measures are also in place in some VET systems where apprenticeships exist as a parallel track to other VET schemes (e.g. FR, NL).

The quality assurance of work-based learning is often a sensitive issue in those countries that are in the early stages of development of apprenticeships. Companies' primary roles involve the production of certain goods or the delivery of services and they are organised in order to fit this purpose.⁵³ However, if they become training organisations, this may require some adjustments, such as the creation of mentors' roles for apprentices, rotation of apprentices across different parts of the company, use of a training plan to guide apprentices' learning, etc. The acceptance of these constraints by the companies depends very much on how they are explained and the right balance between control and quality development.

⁵⁰ ICF International research on the selected countries.

⁵¹ ICF International research on the selected countries.

⁵² See an overview of the discussion on workplaces as learning venues in Nijhof, W.J. and Nieuwenhuis L.F.M. (2008), The learning potential of the workplace or in Poortman C. L. (2007), Workplace learning processes in senior secondary vocational education.

⁵³ Nijhof, W.J. and Nieuwenhuis L.F.M. (2008), The learning potential of the workplace.

Country examples of the quality assurance of work-based learning⁵⁴

In France, the quality of training delivered within companies is controlled by inspectorates from the Ministry of National Education (SAIA). In addition, VET providers carry out regular visits to the hosting company to check that on-the-job training is taking place in optimal conditions.

In Finland, VET providers have the ultimate responsibility for the training and organisation of on-the-job learning periods. They are required to identify the possible organisations suitable for providing on-the-job training for students.

In Portugal, the VET provider/school selects the company where the work-based learning element is carried out and assesses the suitability in terms of technical, human and material resources.

In Germany, the chambers, as representatives of business self-organisations, take over the quality assurance role and organise, monitor and follow-up the in-company training elements as competent institutions. This is also the case in countries where apprenticeships are less developed, but where they fall under the responsibility of chambers (e.g. HR, PL, SI).

As part of governing the in-company training, many countries (e.g. DE, FI, FR, NL, PL) have set out requirements for the qualification of in-company trainers as part of their overall training regulations. These specify for example, that in-company trainers need to have a certain amount of practical professional experience, or are required to prove through an examination that they have the necessary pedagogical skills. The training of in-company trainers has been strengthened in Finland by a reforming law (see Section 4 on reforms).

3.2. Participation in VET and alternance schemes

Participation in VET in general

The participation in VET at upper-secondary level in Europe varies from less than 30 % in Hungary to more than 70 % in Slovakia, Belgium, the Czech Republic and Austria.

Table 6: Enrolments in VET upper secondary programmes (% of total enrolments in upper secondary education) in public and private institutions; various European countries, 2008. (sorted by largest participation rate in vocational education)

<40%	40% -60%	>60%
HU, PT, EL, UK, IE,	ES, FR, PL, DK, SE, DE, IT,	LU, NL, FI, SK, BE, CZ, AT

Source: ICF International, based on Cedefop (2014b)

⁵⁴ ICF International research on the selected countries.

It appears that these differences cannot be explained by the type of VET tracks available. The data in Table 6 does not identify a clear pattern between the level of participation in VET and the existence of dual VET programmes and alternance schemes.

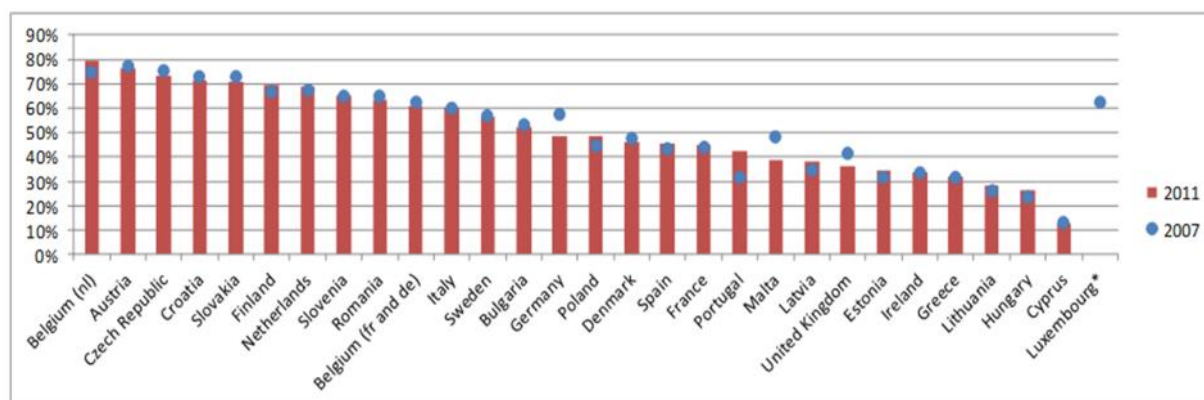
- A high percentage of students opt for VET in countries with mostly school-based VET systems, like the Czech Republic, Belgium and Slovakia, while;
- A country like Denmark, which has a strong apprenticeship-based system, has rather average participation in VET.

Additional data from the selected countries also underline the discrepancies among countries with participation rates and the fact that participation rates in VET cannot be solely interpreted by the type of VET tracks available.

For example, in Germany where dual education has a high status, about 65 % of graduates from all levels of general education (from Hauptschule to Abitur) opted for VET in 2012.⁵⁵ The same year in the Netherlands, over half of students (53 %) enrolled in the pre-vocational track, while the two thirds of students in Finland chose upper secondary 'school-based VET', rather than academic studies, in 2010.⁵⁶ At the other end, in 2012-13 in Greece, one fourth of lower secondary graduates opted for upper secondary VET and 6 % of them chose apprenticeships.⁵⁷

Looking at the trends in participation in VET before and after the 2008 economic crisis leads to similar outcomes: the extent to which a country was affected by the crisis does not seem to be correlated to a decrease or increase in the uptake of VET by students (Figure 1).

Figure 1: Enrolment rates in vocational and pre-vocational upper secondary education, 2011 and 2007



Source: Eurostat [educ_enr1at]; *2011 data on Luxembourg is not available

For example, Germany is a country where the crisis had only a mild influence on the rate of employment and production, but the participation in VET rate fell by eight percentage points. According to national sources and experts, this could be attributed to an increase

⁵⁵ Bundesministerium für Bildung und Forschung (2013), Berufsbildungsbericht 2013.

⁵⁶ Kumpulainen T. (2011), Koulutuksen tilastollinen vuosikirja 2011.

⁵⁷ Apprenticeships offered by the national Public Employment Service; Statistics provided by the Ministry of Education to ICF International.

in attainment rates in higher education⁵⁸, but there are also demographic trends that certainly explain this development. Malta also experienced a noteworthy decrease (nine percentage points), although its economy and VET system diverge from Germany. At the same time, participation grew by 10 percentage points in Portugal, while countries that were also severely hit by the crisis (e.g. EL, ES, IT) did not follow the same trend.

Participation in alternance schemes/apprenticeships

Participation in alternance schemes varies greatly among EU countries. Germany and Denmark are the countries with the highest participation in programmes that combine work-based and school-based learning (apprenticeships in both cases). Other countries such as Belgium and Finland have high enrolment in VET, but the proportion of students in programmes that have a strong share of work-based learning is relatively low. For example in Finland, where VET overall is very popular, apprenticeships attract far less young people than other tracks: 70 % of IVET students choose the track that is an example of a mixed system (where in-company training is compulsory, but it is not an apprenticeship), almost one fifth the competence-based system and only about 12 % go for apprenticeships.⁵⁹



However, when analysing the existing figures on the proportion of students enrolled in work-based learning programmes, one has to take certain precautions. The variations in the way alternance schemes are developed and implemented across Europe and the different characteristics of work-based learning in VET create obstacles for data collection regarding the participation of students in the various schemes. For example, the Organisation for Economic Cooperation and Development (OECD) uses an indicator to measure work-based learning that captures the share of students enrolled in programmes where less than 75 % of the curriculum takes place in a school environment. However, practical training that takes place in school workshops is also considered.

It is interesting to examine the trends developed during the period 2006-2010, because identifying trends in participation during this period can allow drawing conclusions on any possible effects the economic crisis might have. This holds for participation rates in IVET overall respective rates in work-based schemes in particular.

⁵⁸ As explained during interviews carried out for this study by ICF International, and Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013.

⁵⁹ Eurypedia (2013), Finland: Upper Secondary and Post-Secondary Non-Tertiary Education.

Table 7: Change 2006-10 in IVET students as a percentage of upper secondary students; and in IVET students in work-based schemes as a percentage of upper secondary IVET students; EU-28

% change 2006-2010	IVET students as % of all upper secondary students	IVET work-based students as % of upper secondary IVET ⁶⁰
Increase 	BE, EE, ES, FI, FR, HU, IE, LT, LV, MT, PL, PT, SE	AT, DE, FI, FR, HU, IE, LU, NL
Decrease 	AT, BG, CZ, CY, DE, DK, EL, HR, IT, LU, NL, RO, SI, SK, UK	BG, BE, DK, ES, PL, SK
EU average	-1.8	0.2

Source: ICF International, based on data from Cedefop (2014a)

Data shows (Table 7) that participation rates in IVET overall cannot be explained by the type of tracks available, as highlighted earlier. The same seems to also be true for the participation in work-based VET tracks. Moreover, for the countries where data is available, there seems to be no correlation between the trends in participation in IVET and the participation in work-based tracks. In Germany, for example, although the share of IVET students dropped by 7.9 %, the share of students in work-place training increased by 14 %, the highest increase among EU countries.

3.3. Pathways into alternance schemes

In the majority of European countries, students attend comprehensive school until the age of 15 or 16⁶¹ before entering VET. Initial vocational training is usually offered as upper secondary education (ISCED 3); hence the majority of VET students are between 15 and 18 years old.

Pathways into VET and alternance schemes

Early tracking

In some countries, such as Austria, Germany or the Netherlands, students are guided towards specific educational tracks quite early in their learning pathways.

There is a growing body of literature reporting the negative impact and consequences of early tracking on the level and distribution of learner performance in compulsory education.⁶² In countries with early tracking, lower secondary education is differentiated into several tracks. Students from the less academically oriented tracks are usually entering upper secondary VET upon completion of lower secondary. However, situations where pupils and their parents are required to make premature obligatory choices between different educational tracks at an early age make education systems highly

⁶⁰ Where data is available.

⁶¹ OECD (2010a).

⁶² See for example Hanushek E.A. and Wößmann L. (2005), Does Educational Tracking Affect Performance and Inequality? Differences-in-Differences Evidence across Countries.

selective and may result in demotivating those who have been incorrectly oriented. Nonetheless, early tracking is a feature of some education systems (e.g. AT, DE, NL) where VET and apprenticeships in particular are popular, attract high achievers⁶³ and youth unemployment rates are relatively low.

It should be noted that once again, there is not a clear relationship between the existence of tracking⁶⁴ in lower-secondary education and the participation in VET or apprenticeships.⁶⁵ For example:

- While Austria and Germany both have early tracking of students and strong apprenticeship systems, Denmark, which also has high participation in apprenticeships, has a comprehensive general education system with no tracking.
- Lithuania, for example, also has early tracking at lower secondary level and it has a low participation in VET overall and a very small share of students in apprenticeships.

Entrance requirements

The requirements to enter an alternance scheme directly affect the profile of the students that get accepted, and thus of the graduates. The most common requirement to enter a VET track in EU countries is the completion of lower secondary education. Some VET programmes are open to persons with only primary education completion (e.g. BG). However, entering an apprenticeship scheme does not always require a minimum education level. For example, in Germany, students must secure a training place in a company in order to start their apprenticeship, rather than previously complete a specific education level. But, in practice most students have completed lower secondary education.

VET providers or training companies also play a key role in selecting students. They are usually free to select students based on their capabilities and potential. However, they may use entrance and aptitude tests or interviews, and may take previous grades and work experience into consideration. In some countries (e.g. EL, FI), VET providers take social criteria into consideration; hence, students with a less favourable social background are prioritised.

Entrance into an apprenticeship/alternance scheme may also depend on the specific profile of the applicant, regarding his/her knowledge and previous work experience. In regards to this, there are countries (e.g. EL⁶⁶ and FI) where the recognition of non-formal and informal learning is embedded in the selection process of apprentices/students. Table A3.6 in Annex 3 summarises the entrance requirements and the way selection takes place in alternance schemes in the 10 selected countries. The data from the table highlight the key role of VET providers/employers in selecting students, which can lead to marginalisation of challenged students, especially in apprenticeships, as is analysed below.

One characteristic that also explains the role of apprenticeship pathways within a country is the type of population it attracts; here major differences exist. While in Germany or

⁶³ In Germany, 23.1 % of new VET students in 2012 held a university entry qualification. Source: Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013.

⁶⁴ See Eurydice (2013), The structure of the European education systems 2013/14: schematic diagrams.

⁶⁵ Refernet country reports (2012).

⁶⁶ In Greece, the 2013 reform introduces a mandatory apprenticeship or traineeship for Institutions of Vocational Education (IEKs) and a one-year apprenticeship for the Vocational Training Schools (SEKs). Students with proven minimum work experience can be exempted from the mandatory in-company training.

Austria, apprenticeships are often students' first choice and they are a positive choice, in other countries (Italy, Belgium fr and nl, the Netherlands or France), apprenticeship programmes also attract many young people who have dropped out of other programmes. This is significant as it illustrates the social perception of apprenticeships in these countries as a second chance pathway. The development of apprenticeships in these countries needs to overcome these stereotypes and stimulate a more positive image of apprenticeships.

Finding a training place for an apprenticeship and other alternance schemes

Securing a placement with an employer is one of the challenges that aspiring apprentices face. Not all young persons have the competences that enable them to secure a placement (such as punctuality, relationships with colleagues, respect for rules in the workplace, etc.). To support them, in many countries the school or the leading national organisation that connects with employers have the responsibility for guiding future apprentices towards companies.

Table 8: Finding an apprenticeship placement: Who is involved?

Individual	VET provider	Intermediate organisation
Germany, Italy, Poland, UK(ENG)	Finland, UK(ENG), Denmark	France, Greece, the Netherlands

Source: ICF International research on selected countries

When students have to find an apprenticeship placement on their own, the following risk may be present: since finding a placement is the prerequisite for starting the apprenticeship, students who do not find a company willing to take them on cannot start their apprenticeship. This may lead him/her to drop out of the apprenticeship (for example, this is one of the challenges faced by the Norwegian VET system⁶⁷), drop out from VET overall (e.g. DK, where lack of placement has been identified as one of the factors leading to early school leaving)⁶⁸ or leave the individual out of employment (IT), which has severe adverse effects for the student. In Germany, those students who fail to find an apprenticeship are enrolled in a preparatory, 'bridging' programme⁶⁹, called the 'transition system'.⁷⁰

Apprenticeship placements: trends in supply and demand

In some countries a mismatch between the supply of apprenticeship opportunities and the demand for apprenticeship placements exists. This was exacerbated by the economic crisis in some countries.⁷¹ For example, in Ireland and Greece the shrinkage of the construction sector, which traditionally hosted large numbers of apprentices, led to a decrease in the number of apprenticeship placements. The balance between supply and

⁶⁷ Bäckman O. et al. (2011), Dropping out in Scandinavia- Social Exclusion and Labour Market Attachment among Upper Secondary School Dropouts in Denmark, Finland, Norway and Sweden.

⁶⁸ Koudahl P. (2005), Drop-out of VET – causes and explanations.

⁶⁹ See for example Dietrich H. (2012), Integrating young people into the labour market: apprenticeship training and pre-training courses.

⁷⁰ Information on the 'transition system' in Germany can be found in Annex 3.

⁷¹ Brunello G. (2009), The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence.

demand of apprenticeship placements is further hindered by the fact that apprenticeships leading to specific qualifications may be more sought-after by some students than others. This leads to bottlenecks in some apprenticeship schemes and increased costs for those where numbers of apprentices are low.

The mismatch between apprenticeship placements offered and future apprentices is recognised as a priority in Germany⁷², raising debates over the design of the selection process, the need to further engage employers and the importance of improving vocational guidance for all apprenticeship schemes.

In the UK (England), the demand for apprenticeships from young people far outstrips supply. According to the National Apprenticeship Service, more than 1.4 million applicants competed for 129 000 vacancies posted online in 2012, up 32 % from the previous year. This represents an average of 11 applicants per apprenticeship. In some job areas young people were competing with over 30 applicants for every place. The process for a young person seeking to get onto one of the nation's top apprenticeship schemes is far more competitive than for those applying to Britain's top universities. The Husbands Review of Vocational education and Training (2013) notes that in 2012 a young person seeking a place at Oxford University had to compete with an average of 5 applicants, but in the same year Rolls Royce reported 4 000 applicants for just 200 places, or 20 applicants per place.⁷³

3.4. Equal opportunities

Alternance schemes are on one hand, seen as a pathway offering equal opportunities and on the other hand, they may reproduce the inequalities existing in the labour market.

- Work-based learning provides real-life work experience to students, eventually enhancing their employability. Hence, alternance training in VET is seen as an opportunity to support at-risk groups.
- Practical training is regarded as an opportunity for those who are not successful in the more academic tracks of education, including socially disadvantaged groups and students with learning disabilities.
- Apprenticeships tend to reproduce gender and other forms of discrimination patterns. The persistent tendency of students to choose gender-typical professions may compromise their own employability as well as countries' general skills match (some professions may be attractive to some groups – for example, some professions in the personal services sector – such as hairdressing – but there may be an oversupply of graduates from these programmes).⁷⁴

Alternance schemes and disadvantaged youth/youth at risk

Young people issued from disadvantaged background (socio-economic family background, migration or ethnic minority background) are more represented VET programmes⁷⁵ than in general education. For example in France, young people from

⁷² Euler D. (2013), Germany's dual vocational training system: a model for other countries?

⁷³ Labour's Policy Review (2013), A revolution in apprenticeships: a something-for-something deal with employers.

⁷⁴ ICF International research on the selected countries.

⁷⁵ Especially in the lower level tracks. For example, in Austria, children from migrant origin are slightly overrepresented in the lower track of lower secondary education, whereas they are underrepresented in

immigration background are more likely to be oriented towards VET programmes than those from families where both parents have French origins.⁷⁶ This trend can also be found in other countries such as Austria⁷⁷, Belgium, and the Netherlands.⁷⁸ In Denmark⁷⁹, students from ethnic minorities are overrepresented in full time school-based VET, as they encounter difficulties in securing a training contract for an apprenticeship.

At the same time, cultural perceptions and the way alternance schemes are structured, may actually hinder disadvantaged youth from participating. In a number of countries (e.g. EL, PL⁸⁰) general education is considered the best option for students with good grades while alternance schemes are recommended to students who are deemed as less likely to succeed in academic paths (See Section 5). Even where different VET paths co-exist, the apprenticeship one may be seen as the one for less gifted students (e.g. BE).

In other countries the perception of alternance schemes is different. VET and dual education in particular cover a broad range of qualifications and offer training in highly respected professions with interesting career opportunities on several levels of education. Interestingly, under these circumstances, students with lower secondary degrees and students with social problems rather face the risk of exclusion from dual education (e.g. DE⁸¹). This risk is due to the fact that prior to enrolling into an apprenticeship, young people have to find an employer willing to sign an apprenticeship contract with them in the first instance. The requirements for this are very similar to those of real job recruitment (in terms of one's own presentation, practice of social codes, etc.) and young people from disadvantaged backgrounds face similar barriers to enter apprenticeships as they do in entering employment.⁸²

Young people from disadvantaged backgrounds are also among the groups that are more at risk of dropping out from vocational education and training without achieving a qualification (e.g. in AT⁸³). This is often related to their previous educational experience. They tend to accumulate disadvantage that is coupled with previous educational failure (low level of grades, repetition of a year, dropping out of an earlier programme).⁸⁴

However there are some specific reasons why these young people drop out from work-based programmes⁸⁵:

the higher track. A student is selected to tracks based on his/her school performance. (see OECD (2012b)).

⁷⁶ Internet: http://www.cairn.info/zen.php?ID_ARTICLE=FORM_118_0061, accessed 9/6/14.

⁷⁷ OECD (2012b).

⁷⁸ For both BE and NL: Tjaden J.D. (2013), Migrants and Vocational Education in the European Union: A review of evidence on access and dropout.

⁷⁹ Jørgensen CH. H. (2010), Leonardo Project Hybrid qualifications-Increasing the value of Vocational Education and Training in the context of Lifelong Learning Country report Denmark.

⁸⁰ ICF International research in the selected countries.

⁸¹ Within the last years the chances of graduates from the lower tier of lower secondary school (Hauptschule) to enter the dual system decreased dramatically - employers tend to look for apprentices with upper secondary degrees.

⁸² Anderson K. et al. (2010), Opening the door to apprenticeships: Reaching young people who are disadvantaged and disengaged from apprenticeships and OECD (2014), G20-OECD-EC Conference on Quality Apprenticeships or Giving Youth a Better Start in the Labour Market, OECD Conference Centre, Paris, 9 April 2014, Internet: http://www.oecd.org/els/emp/G20-OECD-EC%20Apprenticeship%20Conference_Issues%20Paper.pdf.

⁸³ First or second generation immigrants have a higher risk of ESL than pupils with parents born in Austria, according to Steiner M. (2009), Early School Leaving and School Failure.

⁸⁴ For example, in Austria (see Steiner M. (2009), Early School Leaving and School Failure; in Cyprus (Korelli Y. (2013), Cyprus- Early leaving from vocational education and training); in France (see Alet El. and Bonnal L. (2013), L'apprentissage: un impact positif sur la réussite scolaire des niveaux V); in Spain (see Enguita M.F. et al. (2010), School Failure and Dropouts in Spain).

⁸⁵ Cedefop (forthcoming), Early leaving from vocational education and training (working title).

- Conflict with employers – that is also linked to acquisition of skills and competences necessary to function in a work-place (social skills and appropriate behaviours);
- Attraction of the labour market – they drop out because they need to find means for their own subsistence or
- The opportunity or rather the social expectation to work in parents' small business (this is frequently the case in some migrant communities).

Therefore, indeed young people with disadvantaged background are more likely to drop out from apprenticeships but that also holds true for other forms of education and training.

These programmes also have an important role to play in providing opportunities to those who dropped out from other programmes. As already noted before, young people at disadvantage tend to accumulate failure, disengage progressively from training and often work-based learning programmes are their last resort (e.g. NL⁸⁶). It is also an opportunity to reengage them in education and training. In this sense, work-based learning offers a number of advantages⁸⁷:

- The engagement in a productive process is motivating and meaningful for the young persons (if it corresponds to some minimum quality requirements).
- Work-based learning is radically different from school-based environment – which is what they fled in the first place and
- The positive relationships on the workplace can support positive image of oneself that has often been damaged through years of education failure and which is crucial for continuing one's education and training pathway.

Research in the selected countries highlights that all countries identify the need to support disadvantaged youth or minority groups through specific programmes/alternance schemes (Table A3.7 in Annex 3). It seems that the focus lies on using alternance schemes to draw early school leavers (from general education) back in education/training or prevent early school leaving and make apprenticeships more inclusive.⁸⁸ Some countries, such as Germany and the UK, have introduced specific measures to target young people from migrant backgrounds. These groups tend to be under-represented in apprenticeships and alternance schemes⁸⁹. Such schemes can provide young people from migrant backgrounds with a good basis for transition from education to labour market (which they may otherwise struggle with).

Alternance schemes and gender balance

In terms of gender balance, participation rates of male students in VET in Europe are generally higher than those of female students. The gender gap is also found to be

⁸⁶ Traaga, T. and van der Velden, R. (2011), Early school-leaving in the Netherlands: the role of family resources, school composition and background characteristics in early school-leaving in lower secondary education.

⁸⁷ Cedefop (forthcoming), Early leaving from vocational education and training (working title).

⁸⁸ For example, the 'Integrative Berufsausbildung' programme in Austria, targeting students with special pedagogical needs and supporting them in completing an apprenticeship. Source: Refernet report (2012).

⁸⁹ For Germany: Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013. For the UK (England): As demonstrated in the results of the evaluation report, undertaken by the Institute for Employment Studies (IES), found in Newton B. et al. (2012), Good practice evaluation of the diversity in Apprenticeship pilots.

widening: While in 2006, the rate of female students was at 46.3%, in 2011 it fell by 2.1% to 44.2%⁹⁰.

Research in the 10 selected countries highlights that participation rates of male and female students seem to be strongly related to gender-specific choices of learning pathways and the type of qualifications offered through alternance schemes. A large number of students in alternance schemes related to technical and mechanical subjects are male, while a majority of female apprentices are typically found in the service sector or in typically 'female' trades such as hairdressing, other qualifications in the beauty sector and qualifications from the range of education and health care professions⁹¹.

Research in the selected countries underlined that this tendency of students across Europe to focus on popular gender-specific qualifications bears risks – for the individual student as well as for long-term skills match:

- If students' focus is too narrow, they run the risk of exclusion. This is for instance the case in the field of car mechanics, where demand for apprenticeships is much higher than supply across many countries (e.g. DE, UK(England)).
- Training companies who offer training places in less popular trades and sectors have difficulties finding apprentices; although the qualifications offered are highly market-relevant and offer interesting career opportunities (e.g. DE)⁹².

3.5. Dropping out from apprenticeships and alternance schemes

There is a lack of comparable data on completion rates in apprenticeships and alternance schemes. Many countries with established apprenticeship systems measure the rate of contract termination and the examinations success rate. However a contract termination does not necessarily mean that the person drops out from the apprenticeship programme – s/he may start another apprenticeship contract with a new employer. There are only a few countries that have comparable data on drop-out rates from both types of schemes (AT and NL). Considering the benefits of apprenticeship schemes it would be interesting to see whether they perform better than school-based VET in leading young people towards a full qualification.

There are no clear trends in this regard:

- drop-out rates from apprenticeships or alternance schemes differ from 16% in Austria to up to 60% in Flanders (this concerns apprenticeships specifically);
- the contract termination rates are quite high – around 25% in Germany as well as France;
- there are major differences between drop-out rates from VET according to sector and according to regions⁹³;
- it is not clear whether work-based programmes are more or less successful in retaining young people. Such comparisons would need to take into account the previous pathways of students and differentiate between the retention of those who enter a programme as a first choice and those who enter it as a result of dropping out from another programme (who are more likely to drop out again).

⁹⁰ Cedefop (2014a), indicator 1070 'Female IVET students as % of all female upper secondary students'.

⁹¹ E.g. cf. the research of Frieze M. (2013), *Berufs und Studienorientierung*.

⁹² Bundesministerium fuer Bildung und Forschung-BMBF (2013), *Berufsbildungsbericht 2013*, Internet: http://www.bmbf.de/pub/bbb_2013.pdf.

⁹³ Cedefop (forthcoming), *Early leaving from vocational education and training* (working title).

For example in Austria, supra-company apprenticeships have higher rates of dropping out, in comparison to the fully fledged apprenticeship pathway⁹⁴, though it is noted that the first type mainly hosts target groups that are at a greater disadvantage.

Table 9 presents examples of drop-out rates from VET and more specifically apprenticeships. More information can also be found in Annex 3 (Table A3.9).

Table 9: Examples of drop-out rates from apprenticeships (contract termination) and other VET schemes

Country (year)	Contract termination (apprenticeship) or real drop-out rates from apprenticeships	Drop-out rate (other VET programmes)
AT (2011)	16.6%	13% VET schools and 6.7% VET colleges
BE nl (2009)	Between 55% and 60%	
DE (2012 and 2011)	Contract termination rate – 24.4% Drop-outs (survey based) – 12%	
DK (2012)	All VET programmes (the vast majority are apprenticeships) - 48%	
FR (2009)	Contract termination rate – 25%	
NL (2011-2012)	Level 1 – assistant training – 47% Level 2 – basic VET – 13%	Level 1 – assistant training – 34% Level 2 – basic VET – 12%

Source: AT: Statistik Austria (2013), Bildung in Zahlen 2011/12; BEnl: SYNTRA (2009), Onderzoek naar Uitval in Leertijd; DE: BIBB (2013a); DK: Ministry of Education website (<http://statweb.uni-c.dk/Databanken/uvmdatabank/fullClient/Default.aspx?report=EAK-tilgang-erhudd&res=1440x717>); FR: Chambres de Commerce et d'Industrie (Internet: <http://www.localtis.info/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1250166687062&blobheader=application%2Fpdf&blobnocache=true>); NL: Meng Chr. (2014), Measuring early leaving from VET: Critical insights-The Netherlands

What drives students to drop out from alternance schemes?

The following reasons can explain dropping out from apprenticeships:

- lack of apprenticeship placements: (in DK⁹⁵ students first enrol in a training centre and only then, once they have passed the basic training course in a school-setting they look towards finding an employer. Many drop out at this stage).
- low quality of the programme/apprenticeship: this may concern lack of support during the apprenticeship (e.g. SE⁹⁶);
- prior learning achievements: in some countries, VET attracts more low achievers than general education (e.g. EL, FR, PL). Therefore, these students may face

⁹⁴ Dornmayr H. and Nowak S. (2013), Overview of Apprenticeship training 2013.

⁹⁵ Koudahl P. (2005), Drop-out of VET – causes and explanations.

⁹⁶ Ahnborg M.-H. and Hedwall K. (2011), Apprenticeship in praxis – a quality assessment of VET.

significant difficulties in progressing in a VET programme/apprenticeship, where demands, especially from employers, may be challenging;

- content and duration of the VET programme: offering more academic courses in VET programmes and expanding the duration of the programme can increase dropout rates (e.g. in SE)⁹⁷;
- company-related factors: negative relationships between apprentices and their superiors (e.g. FR⁹⁸); overall issues with the company (e.g. DE⁹⁹);
- leaving one employer to join another (e.g. UK¹⁰⁰);
- lack of abilities to complete the training: students may think that the training is difficult to complete.¹⁰¹ Some of these personal reasons may be grouped under 'apprenticeship-readiness', as it is called in Germany.

The issue of 'apprenticeship readiness' is a key factor for dropping out but also one of the main reasons why young people do not secure apprenticeship places in the first instance. Many young people are not ready at the age of 15-16 to take-up a position in a working and productive environment. This may result in conflict with employers and mentors and subsequent contract termination (see also Annex 3).

Besides personal factors and 'apprenticeship-readiness', research in the selected countries stressed that dropout rates can be affected by the sector and size of the hosting company.

In Germany, dropout rates vary according to sectors: They are traditionally high in the hospitality industry (up to 50 % for cooks and restaurant managers), relocation services (e.g. for movers it is up to 50 %) and security services (up to 45 %). On the other hand, the rates are quite low for most professions in public services (ca. 4 %) and in IT (ca. 5 %).¹⁰²

In France, the risk of early interruption of the contract (by the apprentice, the employer or both) is higher in some sectors and in smaller enterprises. The perceived lower quality of the training, especially in SMEs, is also considered as an important factor: insufficient quality in the working/learning environment is the cause of 40 % of contracts broken by the apprentices).¹⁰³ Sectors where interruptions in apprenticeship contracts are most frequent and are considered to be a key challenge are those where working conditions are more difficult (e.g. long working hours, strenuous work conditions, etc.). This includes the hotels and restaurant sector (between 25 % and 40 % of contracts are interrupted as many young people change their mind after experiencing the reality of working in the sector), the hairdressing sector and the construction sector.

⁹⁷ Hall C. (2009), Does making upper secondary school more comprehensive affect dropout rates, educational attainment and earnings? Evidence from a Swedish pilot scheme.

⁹⁸ Alet El., Bonnal L. (2013), L'apprentissage : un impact positif sur la réussite scolaire des niveaux V.

⁹⁹ Federal Ministry of Education and Research (2009), Ausbildungsabbrüche vermeiden – neue Ansätze und Lösungsstrategien, Band 6 der Reihe Berufsbildungsforschung, Internet: http://www.bmbf.de/pub/band_sechs_berufsbildungsforschung.pdf

¹⁰⁰ Hogarth T. et al. (2009), Maximising apprenticeship; Completion rates.

¹⁰¹ ICF International research in the selected countries.

¹⁰² Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013, pp 35-37.

¹⁰³ CERQ (2010), Contrat d'apprentissage, les raisons de la rupture.

3.6. Outcomes of alternance schemes and VET more generally

As highlighted in Section 1, the relatively low unemployment rates of countries with long traditions in dual education (AT, DE, NL) have triggered interest in this type of training amidst the economic crisis.

Overall, the effectiveness of any education track can be assessed by the career opportunities of its graduates, whether they decide to enter the labour market or continue their studies.

Alternance schemes and employability

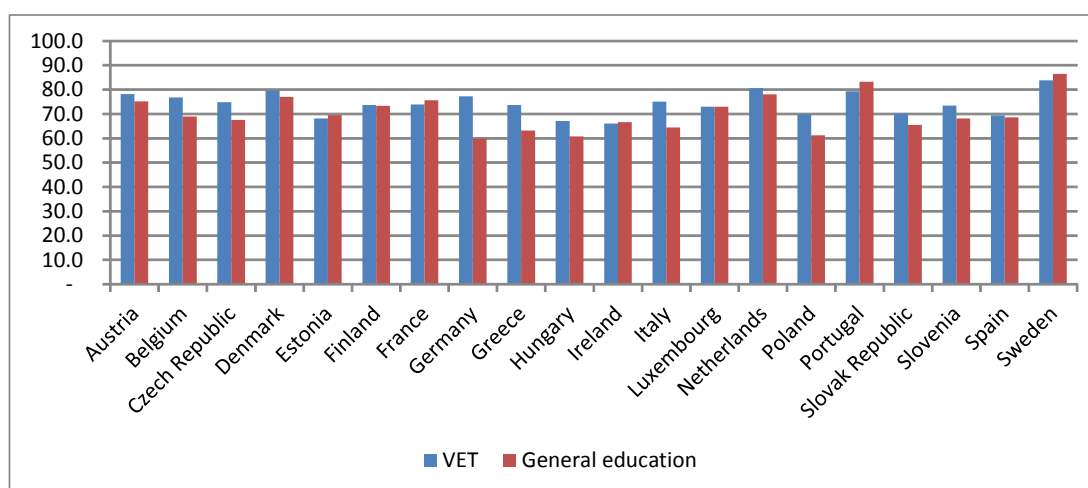
The employability/employment rate of graduates is one of the key factors measuring the effectiveness and quality of an education programme, especially in the current context of the economic crisis and high youth unemployment rates.

The employability of VET graduates can be assessed in comparison to that of general education graduates by: i) looking at whether VET or general education graduates take longer to get their first job and ii) how well that job matches their respective qualifications.

Does VET or general education increase employability?

As stressed by OECD (2013)¹⁰⁴ data, VET graduates enjoy higher employment rates than general education graduates who do not pursue higher level studies in most EU countries. This is observed in both: countries with apprenticeship systems (DE) as well as those with school-based VET (CZ).

Figure 2: Employment rate¹⁰⁵, of ISCED 3/4 graduates; 2010 data



Source: OECD (2013), Education at a Glance; No available data for the UK

When comparing employment outcomes of graduates from general education with those from all forms of VET (ISCED 3-4)¹⁰⁶:

¹⁰⁴ OECD (2013), Education at a Glance.

¹⁰⁵ Labour status of 25-64 year-olds whose highest level of education is upper secondary and post-secondary non-tertiary education (ISCED 3/4).

¹⁰⁶ Cedefop (2013a).

- VET graduates are more likely to find employment after graduation, in the majority of the EU countries. The difference between the employability of the two groups is greater in countries with a long tradition of VET (CZ, DE, NL, SI).

Some countries experience reverse trends. For example in Portugal the general education graduates find jobs earlier than those from VET; however their employment tends to be more precarious.¹⁰⁷

- Enjoy a significantly faster transition from education to employment.¹⁰⁸ This holds both for males and females and across age groups.¹⁰⁹ The reverse trend (general graduates finding a job more quickly) holds in Cyprus, Ireland, and the UK. It should be highlighted though, that most general education graduates continue their studies and therefore enter the labour market later. As they acquire higher qualifications, general education graduates improve their status in the labour market in the long run. Cedefop (2013) findings stress that the advantage of VET graduates in entering the labour market compared to general education graduates decreases with age.

The above results, favourable to VET, have been found to hold only for medium-level (ISCED 3-4) qualifications: when comparing tertiary general education with tertiary VET, it is academic graduates that enjoy a significantly faster transition from education to their first job.¹¹⁰

- It is significantly more probable for medium-level VET graduates than general education graduates to have a (current¹¹¹) job with permanent and full-time contracts. This is connected to higher job stability. This could be linked specifically to apprenticeships, where the apprenticeship contracts can lead to permanent employment contracts after completion of the programme. For example, in Germany in 2010, 61 % of all VET-graduates were offered employment by the company that provided their training.¹¹²

Employability and type of VET programme

The type of VET scheme also plays a significant role in future employment¹¹³, strengthening the arguments in favour of dual education:

- Work-based learning elements in VET are positively correlated with a rapid transition into employment.¹¹⁴ Graduates of work-based programmes enter the labour market for the first time 14 % faster than school-based VET programmes.¹¹⁵ At the other end, VET graduates experience more difficulties in the labour market in countries where work-based learning is less developed. The transition into employment is also facilitated by the fact that apprenticeships are found to offer more general skills¹¹⁶ that are transferrable to other

¹⁰⁷ Figueiredo et al. (2013), National Strategic Reference Framework observatory.

¹⁰⁸ The difference between VET and general education graduates is not statistically significant in BG, DK, FR, LU, MT, NL, PL, SE, SK.

¹⁰⁹ Cedefop (2013a) examined the statistical difference in results for three age groups: 20-24, 25-29, 30-34.

¹¹⁰ Cedefop (2013a) did not examine trends in specific fields of study/diplomas.

¹¹¹ Not the first job after graduation.

¹¹² National statistical data according to Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013.

¹¹³ Cedefop (2013a).

¹¹⁴ Table A3.10 in Annex 3 offers an overview of employment outcomes of apprenticeship graduates in the selected countries, where data is available.

¹¹⁵ Cedefop (2013a).

¹¹⁶ Acemoglu D. and Pishke J.S. (1998), Why do firms train? Theory and Evidence.

employers/working environments than company/industry-specific skills. For example, in Germany, only about 12 % of skills offered in apprenticeships have been found to be firm-specific.¹¹⁷

In Italy, employment outcomes of VET graduates are considered positive. The IF paths (mixed scheme that integrates work-based learning) showed better employment outcomes than the fully IS (school-based scheme): respectively 85% and 78% of graduates were employed after two years of graduation.

In France, the employment rates of apprentices with a CAP/BEP or Bac Pro after seven months from graduation were 21.7 and 23.7 percentage points higher than for those who obtained the same type of qualifications via school-based VET.¹¹⁸

In Portugal, graduates of Professional Courses find full-time jobs with indefinite contracts more frequently than general upper secondary education graduates who do not take up any further studies.¹¹⁹

Employment rates of VET graduates may be different between sectors and/or regions in the same country. Sectoral differences in apprentices' employment rates can be attributed to economic and labour market conditions: graduates can find employment more quickly in sectors where growth and employment demand is strong (e.g. tourism in Greece). Particularly in the years following the 2008 economic crisis, it is those sectors that are less vulnerable to fluctuations in the general economic climate where apprenticeship graduates can find employment more easily (e.g. in DE¹²⁰). A more rapid transition into employment in some sectors may be due to the historical development of apprenticeships as a training and recruitment pathway in these sectors (e.g. the construction and public work sector in France¹²¹).

Differences in the employability of VET graduates can also be found between regions in EU countries with a high degree of government decentralisation (DE, IT). It can be supported that these differences relate to the regional variations in economic development and structure, provision of VET pathways, etc. (See Section 5).

Progression and permeability to other education tracks and levels

Giving VET graduates (including those from alternance schemes) the possibility to progress towards qualifications at higher levels is a way of indicating that this qualification not only has a labour market value but it can also be a path towards future learning. As described by Cedefop¹²², in the vast majority of EU countries vocational training is a stream that is parallel to the academic provision. Opportunities to move between the two streams exist in theory but, in practice, can be harder to put in place. Transition from one education track to another at the same level (for example from school-based VET to apprenticeships or from a VET track to an academic track) is being emphasised to support the orientation of learners as well as their evolution. In many countries VET graduates can move into academic tertiary education after completing a conversion course or having achieved the upper-secondary leaving qualification that enables access to higher education.¹²³

¹¹⁷ Pfeiffer H. et al. (2011), How large is the firm-specific component of German apprenticeship training?

¹¹⁸ DEPP (2013b).

¹¹⁹ Figueiredo et al. (2013), National Strategic Reference Framework observatory.

¹²⁰ Autorengruppe Bildungsbericht (2013), Bildung in Deutschland 2012.

¹²¹ ICF International country research.

¹²² Cedefop (2008b).

¹²³ Cedefop (2008b).

3.6.1.1. Transition between vocational and academic tracks

Countries like Germany and Austria offer a transition between the tracks on the principle of achieved degrees and qualifications. Once a student has achieved a degree or a qualification, s/he can proceed to the next level of education (e.g. from a lower tier of secondary school to a higher tier). Additionally – their grades allowing – students can have the opportunity to move onto another track of upper secondary school programmes. In Germany for example, students can move from Gymnasium (general education) to dual education or school-based VET, while VET students can pursue the Abitur, if their grades allow it. There have also been policy developments to allow movement between tracks more easily, such as the ‘new secondary school’ (Neue Mittelschule, NMS) model in Austria. NMS allows access to academic upper secondary schools (AMS) and VET colleges and schools.¹²⁴

After completing an apprenticeship, graduates seek employment or further training. A transition to other tracks (e.g. school-based VET) can take place, if the individual seeks to obtain another qualification, only available in that track, but this rarely takes place. There are however, not many options for transition, while training is still ongoing. Similarly, students can enrol in apprenticeships from other tracks of VET but in most cases they are required to commence the apprenticeship programme from the start. The possibilities to recognise the learning outcomes developed in other tracks in view of shortening apprenticeships exist in Germany or France for example. However, it is unclear to what extent these options (as provided by the national legislation) are used in practice.

In Germany, the key role of apprenticeships in the VET system seems to have eliminated ‘communication’ with other tracks: although the part-time VET schools that apprentices attend and the full-time VET schools (of the school-based system) are very often under the same roof; the two tracks they represent are disconnected. It is quite common that those young people who do not manage to secure an apprenticeship placement enrol in school-based VET in Germany. However they continue seeking apprenticeships and a certain proportion succeeds in finding an employer willing to take them. It is legally possible for employers to shorten the duration of apprentices training if they have the necessary learning outcomes but the tools to do so are missing. There are several experimentations tackling this issue currently ongoing in Germany.¹²⁵ One of the arguments against this approach is that qualifications in fully-fledged apprenticeship systems are based on the ‘holistic’ view of the ‘Beruf’ that allows little room for modularisation.¹²⁶

Austria, on the other hand, facilitated the modularisation of apprenticeships since 2006. This makes the training more flexible and more responsive to changing labour market needs.¹²⁷

Other systems, such as Denmark, the Netherlands and Finland are more flexible and offer more options for transition between tracks; e.g. between VET and general

¹²⁴ bm:uk (2011), Austrian EQF Referencing Report.

¹²⁵ Federal Ministry for Education and Research (2010), The DECVET pilot initiative, Crediting competences – improving permeability.

¹²⁶ Deissinger Th. (2012), Reforming the VET System via National Qualification Frameworks ? A Comparison of Germany and Austria.

¹²⁷ Federal Ministry of Economy, Family and Youth/ibw - Institute for Research on Qualifications and Training of the Austrian Economy (2012), Apprenticeship Dual Vocational Education and Training in Austria Modern Training With a Future.

education. Moreover, they also provide options to finalise training with a partial, but still market-relevant qualification.

In order to bridge general education with VET, hybrid qualifications are being developed in some countries. Hybrid qualifications combine elements from both education tracks and offer access to higher education, while they are recognised by the labour market for specific occupations, offering employability to graduates.¹²⁸ It can be expected that such qualifications will further link VET with general education, as well as with higher education.

3.6.1.2. Access to higher education

VET and apprenticeships are available at tertiary VET education in some of the selected countries (e.g. DE, FI, FR, IT, UK [England]). However, access to higher general education is not available for all VET/alternance schemes in all countries.

The permeability between VET and higher education should be facilitated, as it can attract more students and especially high achievers to VET; in turn, this could result in upgrading social perceptions over VET. Employment prospects of graduates also stress the need to provide and facilitate access to higher education for VET graduates: general higher education graduates have better employment outcomes than higher VET graduates (see Section 3.6.1), so ensuring access to higher education for VET graduates is especially important. Additionally, in the context of the demographic challenge that Europe faces, low birth rates mean a projected lack of skilled workers in the future. Improving the permeability between VET and higher education can be used as a way to tackle this challenge, facilitating the numerical growth of highly skilled workers. This was the incentive of the 2009 regulation in Germany that addressed the transition between VET and higher education.¹²⁹

Graduates of alternance schemes/apprenticeships do not have direct access to higher education in some of the 10 selected countries (Table A3.11 in Annex 3) (EL, IT¹³⁰, PL). They can only enrol in higher education if they have achieved another qualification that entitles them to this move. When access is available, graduates may be required to take examinations (PT) or fulfil specific requirements. Differences are noticeable between the types of higher education targeted, as in the case of the Netherlands: admission to academically-oriented bachelor and master's degrees demands additional learning but graduates are directly eligible for vocational bachelor degrees. The right to access may also differ between different types of qualifications aimed at (FR). It is interesting to note that even in countries with a strong tradition in VET/apprenticeships (e.g. DE), not all tracks are directly linked to higher education. In Finland and Portugal though, higher education is equally accessible to VET as well as general education graduates.

On the other hand in some countries these possibilities exist and are exercised in practice. In France students who achieve the high school professional diploma (BAC Pro) through apprenticeships have the same rights in terms of progression to higher education as any other holders of that degree (who would have achieved it through the school-based track). In 2012, 13.2 % of students who enrolled in the post-secondary tertiary qualification (BTS) had completed apprenticeships.¹³¹

¹²⁸ Leonardo Project 'Hybrid qualifications-Increasing the value of Vocational Education and Training in the context of Lifelong Learning'. Country Report of the Austrian project partner. 'Illustration, analysis and reflection of the structure of the vocational education on secondary level II'.

¹²⁹ Internet: http://ankom.his.de/pdf_archiv/2009_03_06-Hochschulzugang-erful-qualifizierte-Bewerber.pdf

¹³⁰ As apprenticeship is an employment contract rather than a learning pathway.

¹³¹ DEPP (2013), Repères et références statistiques 2013.

Another issue is the extent to which young people who have achieved their apprenticeships have a good chance to succeed in higher education if they choose to pursue this path. In the Dutch-speaking Community of Belgium, VET graduates can access higher education. However, their graduation rates are significantly lower than general education graduates (only about 20 % of BSO¹³² graduates complete their studies in tertiary general education).¹³³ The difficulty for apprentices to succeed in an academic path can be considered from two angles.

- The (academic) institutions are likely to underline that apprentices do not have sufficient theoretical foundations to adapt to the requirements and the type of learning environment provided by the academic programmes.
- Those in favour of apprenticeship systems will on the other hand underline the fact that it is the academic programmes that should be more inclusive and adapt to learners with different learning styles.

¹³² ISCED 3 Vocational education with strong practical focus.

¹³³ OECD (2010b).

4. REFORMS RELATED TO ALTERNANCE SCHEMES

KEY FINDINGS

- Most EU countries have recently introduced reforms to their overall VET system or apprenticeship/alternance schemes. The most common tactic was to introduce new apprenticeship/alternance schemes (12 EU countries), whereas 11 countries have taken measures to improve the schemes already in place. Five countries both introduced new schemes and reformed existing ones.
- In the 10 selected countries, research highlighted a range of drivers behind the reforms:
 - Divergence between VET and the labour market;
 - Quality and efficiency challenges in VET/alternance schemes;
 - High youth unemployment;
 - VET/alternance schemes are less attractive than other tracks;
 - High rates of early school-leavers and dropouts;
 - Demographic challenge/ageing population.
- Although the reforms across countries may be triggered by the same driver, each country defines the issue in question and the measures to be taken through a country-specific lens. So, even with the same driver, the country approaches to reform may differ significantly.
- The identified need to improve the provision of guidance to students regarding VET/alternance schemes triggered reforms that aimed at more and better guidance.
- Whilst these drivers were identified, the main concerns that led to reforms could be summarised as a mismatch on the labour market: some job vacancies remain unfilled even during a time of alarmingly high youth unemployment. Offering high quality and labour market relevant VET to more students can improve this imbalance. Reform often targets these issues alongside improving the attractiveness and quality of VET/alternance schemes.
- Overall across countries, the reforms are in general well-received. Challenges for implementation match country specificities and mostly regard the need to engage further employers in providing apprenticeships/alternance schemes placements. The challenge is greater due to constraints in financial and other resources, posed by the economic crisis.

The overview of VET systems and alternance schemes provided in Section 3 shows the diversity of alternance and apprenticeship pathways. They are embedded in a broader socio-economic context that also differs from one country to another. Given the challenges, such as young people's unemployment, economic restructuring and rapid changes in the demand for skills, many VET systems in the EU are undergoing reforms.

This section analyses the extent to which alternance schemes and apprenticeships are being reformed and what is driving these reforms.

4.1. Drivers behind the reforms

The analysis highlights that VET reforms across Europe mainly concern:

- reforms regarding elements of the VET system, such as change in curricula; change in structure/governance; strengthening the role of employers/social partners; bringing together VET and general education;
- improving/strengthening existing apprenticeship/alternance schemes;
- the introduction of new apprenticeship/alternance schemes.

Looking at the 10 countries selected for analysis, it is clear that more than 1 key driver behind VET reforms can be identified per country and that these drivers are common to many contexts in addition to country specific factors. The key drivers behind the reforms are presented in Table 10 and discussed in detail below.

Table 10: Six key reform drivers in the 10 selected EU countries

	Key drivers for reforms	Countries
1	Divergence between VET and the labour market/ Improvable employer engagement	CZ, FI, IT, PL, PT CZ, DE, UK(ENG)
2	Quality and efficiency challenges in VET/alternance schemes	DE, FI, NL, UK (ENG)
3	High youth unemployment	EL, FR, IT, PT
4	VET/alternance schemes are less attractive than other tracks	CZ, FI, NL
5	High rates of early school-leavers and dropouts	FI, PT
6	Demographic challenge/ageing population	DE, CZ

Source: ICF International research in the selected countries

Although countries share common reform drivers, they may implement different measures to respond to them, though this will also depend on their initial situation. Here it is important to stress that the reform measures must always be understood in the context of a given country. As discussed earlier, this is by no means convergent when it comes to VET and more specifically apprenticeships and alternance across the EU. In addition to these common drivers, the decision to launch a reform has also been supported by country-specific characteristics (e.g. legislation) (See Section 4.1.8). The following subsections will examine the key reforming drivers.

Divergence between VET and the labour market

In terms of the labour market, Europe faces a challenging problem: high unemployment coexists with skills mismatches. Employers report difficulties in filling positions, even in countries where unemployment rates climb beyond the EU average.¹³⁴ Therefore, the necessity to forge better links between VET and the needs of the labour market has triggered reforms. The expectation is that stronger links between the learning and training on offer in VET and the needs of the labour market will increase the future employability of graduates and bridge skills gaps and mismatches. Under this driver, two focus areas have been identified among the countries.

- Improve the response to labour market needs: the reform of the curricular structure and the hours for each subject of the 'apprenticeship-type courses' in Portugal can be attributed to this driver. The new legislation on the 'apprenticeship-type courses' underlines that the courses aim at improving employability.¹³⁵

In Poland, the 2012 reform addressed the need to improve the effectiveness and relevance of the school-based VET system and adjust it so that it better meets the current needs of employers and the labour market. The main changes involved:

- modifying the classification of vocational education occupations;
- new core curriculum for occupations;
- restructuring the external examinations system that leads to qualifications.

- Improve collaboration between VET schools and employers: strengthening the link to the labour market is recognised as a factor of upgrading the VET system in the Czech Republic. The national VET system is almost exclusively school-based; collaboration between schools and employers takes place on an ad hoc basis and depends on the initiative and good will of these two stakeholders. Based on the Long-Term Plan for Education and the Development of the Educational System (2011-15)¹³⁶, several measures are to be implemented in the next two years to improve this.

In Finland, stronger and more systematic ties with the world of work were the driver for the 1998 reforms¹³⁷ that shaped the current VET tracks. On-the-job training was integrated into all IVET programmes during the period 1999-2001.¹³⁸ A 2006 measure replaced the paper-based exams mainly with vocational skills demonstrations that were better received by employers.

¹³⁴ World Economic Forum (2014), Matching Skills and Labour Market Needs; and Manpower Group (2013), Talent Shortage Survey.

¹³⁵ Internet: <http://www.iefp.pt/formacao/ModalidadesFormacao/CursosAprendizagem/Paginas/CursosAprendizagem.aspx> and http://www.iefp.pt/formacao/ModalidadesFormacao/CursosAprendizagem/Documents/Cursos_Aprendizagem_Regulamento_Especifico/2013-10-02_Regulamento_Espec%C3%ADfico_Cursos_Aprendizagem_2013.pdf

¹³⁶ Internet: <http://www.msmt.cz/file/27137/>.

¹³⁷ The Act (630/1998) and Decree (811/1998) on Vocational Education.

¹³⁸ Koramo, M. (2011), Työssäoppiminen ja ammattiosaamisen näytöt ammatillisessa peruskoulutuksessa. Opetushallitus.

The new apprenticeship system¹³⁹ in Italy came into force in 2012. It introduced three new types of apprenticeship contracts.¹⁴⁰ The main drivers behind the reform concern the need to strengthen the relations with the labour market, and reinforce the role of social partners through inter-confederation agreements.¹⁴¹

Even when collaboration between VET schools and employers is not recognised as one of the key drivers for reforms, the need to further develop and upgrade the collaboration between VET and employers is addressed by involving social partners (employers' associations included) in national VET action plans and reforms (EL) and in the development and implementation of VET curricula and planning (EE, EL, LT).

The engagement of employers has triggered reforms in countries with significantly different VET systems (e.g. CZ and UK (ENG)): but even in countries where employers have a strong and well-established role in VET/alternance schemes (e.g. DE). This can be attributed to the fact that the provision of training placements is one of the possible challenges such schemes face, especially in times of economic crisis.¹⁴²

Reforms in the Czech Republic aim at upgrading the existing school-based system mainly by reforming the currently weak collaboration between schools and the labour market. Due to the lack of robust legislation that will determine the terms of collaboration, the new reform boosts the development of such partnerships.

Despite the high level of employer engagement and the key role of chambers in the German dual system, the prime driver for the launch of the 2004 'Education Pact' was to find more training placements. Under the strategic objective of the Pact 'Bring youth and companies closer together', chambers encourage training companies to provide chances to slow learners, promoting funding instruments for students with special needs. Another objective of the Pact ('Gain new training places and training companies') is in regards to the national programme JOBSTARTER. The programme supports regional projects that are developed to acquire additional training places with companies. Moreover, companies were invited to offer (funded) places for an 'entry qualification',¹⁴³ that targets young people in the 'transition system', i.e. those that did not succeed in finding a placement in a company.

With only 13 % of all employers engaged in apprenticeships, strengthening the role of employers is the key driver of the on-going reform in apprenticeships in the UK (England). The new apprenticeships will be employer-led, as they¹⁴⁴:

- Will be obliged to meet the skill requirements of small businesses;
- Will be based on standards developed by employers and based on sectoral needs;
- Meet professional registration requirements, where suitable; and
- Will include a new exit assessment where employers will have a key role.

¹³⁹ The TUA (D.Lgs n. 167/2011) was subsequently modified by Law n. 92/2012, by D.Lgs n. 76/2013 and implemented in each Region according to the Regional legislative framework.

¹⁴⁰ 2012 Refernet country report- Italy.

¹⁴¹ Isfol (2012a).

¹⁴² Brunello G. (2009), The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence.

¹⁴³ Internet: <http://www.arbeitsagentur.de/zentraler-Content/Veroeffentlichungen/Vermittlung/EQ-Arbeitgeber.pdf>. Also see discussion on 'Address the demographic challenge' below.

¹⁴⁴ Internet: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223919/bis-13-1071-funding-reform-for-apprenticeships-in-england.pdf.

Most importantly, a funding reform is planned; under the new system, funding will be directed to employers through a model that is currently under development. The reform will also support the increase in employers' direct investment in apprenticeships, to further engage them in providing qualitative training.

Quality and efficiency challenges in VET/alternance schemes

The quality assurance mechanisms of VET/apprenticeships creates expectations for better employability of graduates, as quality training leads to better skilled professionals¹⁴⁵. This quality assurance involves the processes, outcomes and stakeholders involved. Quality is identified as a common concern among the selected EU countries and as such, has triggered several reforming actions in various VET systems. It is important to highlight however, that the need to improve quality and efficiency is perceived differently across countries. More specifically, some of the examined countries (DE, IT, NL) have introduced reforms that touch upon the improvement of VET quality overall. On the other hand, the quality assurance of VET/alternance schemes has been the focus of others: in Finland (training of in-company trainers), the Netherlands (VET Inspection Framework) and the UK (England) (inclusion of new standards that apprenticeships will meet). Annex 4 includes more information on the country reforms.

High youth unemployment and increasing the employability of youth

The adverse effects of the economic crisis, especially high youth unemployment, are driving reforms across Europe. Alternance schemes and alternance/apprenticeships in particular, are viewed by the European Commission as a tool to upgrade young people's skills, and promote their employability¹⁴⁶. This however means that in some countries, apprenticeships are mainly considered as an employment-related measure. Their potential to support innovation and inclusiveness is not always apparent on the policy agenda.

It comes as no surprise that dealing with high youth unemployment triggered major reforms in VET mainly in countries more severely hit by the crisis (EL, IT, PT).

Table 11: Top-5 youth unemployment rates (15-24 years old) in 2012, compared to 2007

Countries	2007	2012	% change
EL	22.9	55.3	141%
ES	18.2	53.2	192%
HR	24.0	43.0	79%
PT	20.4	37.7	85%
IT	20.3	35.3	74%

Source: Eurostat. In bold the countries that were selected for detailed research

¹⁴⁵ European Network for Quality Assurance in VET (2009), Study on quality assurance systems in work-based learning and assessment in European VET.

The reforms designed to address high youth unemployment sought to improve the participation rates amongst young people in alternance/apprenticeship schemes, given that these schemes are believed to boost graduates' employment. Reforms also aimed at improving the quality of the schemes. Countries that did not have apprenticeship/alternance schemes brought them into effect (e.g. EL¹⁴⁷) or created more such schemes (e.g. the 'vocational courses' in Portugal¹⁴⁸), and where they were in existence, the reforms concentrated on improving the schemes. To increase participation, governments tried to make the schemes more attractive to employers (e.g. in France, by offering financial incentives and cutting the red tape) and to young people (e.g. in France, loosening the age limit to enter apprenticeships; offering benefits to apprentices, etc.). Improvements to schemes also concerned their quality and labour market relevance; for example, they included an increase in the share of work-based learning ('apprenticeship courses' in Portugal) and the development of a robust legal framework (in the pre-existing schemes in Greece).

However, countries that aim to address youth unemployment by introducing apprenticeships/alternance schemes, should consider that besides VET, several other factors impact youth unemployment, such as labour legislation, minimum wages, demographic trends, social insurance policies and of course, economic cycles/macroeconomic environment. So, introducing or improving existing schemes will not necessarily shrink youth unemployment, although its positive impact is well-accepted. At the same time, countries that are struggling should take into consideration that long-term approaches are needed to reach a sustainable low unemployment rate and offer solutions to youth that match their desires and the labour market. Finally, if countries only tackle the employability aspect of apprenticeships there is a certain risk that the full potential of apprenticeships¹⁴⁹ will not be realised.

VET/alternance schemes are less attractive than other educational tracks

In order to achieve their educational and employment targets, VET and alternance/apprenticeships in particular need to become more attractive. In many countries, VET is considered a 'second-best choice' and is not a preferred option amongst high achievers. Experts in several countries underline that VET is regarded as being of low quality or potential, and is thus mostly chosen by individuals from specific socio-economic backgrounds and low achievers in compulsory education (See Section 5). VET reforms across the EU have been triggered by the identified need to make VET/alternance schemes more popular, so that more students prefer it, including high achievers. This driver is usually coupled with measures to improve quality and/or the relevance of training to labour market needs, which highlights the relationship between improving quality and raising the attractiveness of VET.

¹⁴⁶ For example, European Commission 'Youth Guarantee' and European Alliance for Apprenticeships.

¹⁴⁷ According to the Ministry of Education, the strategic goal is to increase apprentices from 6 % in 2013 to about 30 % in the school year 2019-2020 (data provided to ICF International in an interview the Ministry of Education in January 2014).

¹⁴⁸ The 'Vocational Courses' aim at satisfying the need to have more people with technical qualifications to support the development of the regional and national economies.

¹⁴⁹ See the discussion on benefits of apprenticeships in European Training Foundation (ETF) (2013), Work-based learning: Benefits and obstacles a literature review for policy makers and social partners in ETF partner countries.

One of the main goals of the 'Long-term Plan for Education and Development of the Educational System of the Czech Republic 2011-2015' is to improve its image.¹⁵⁰ The need to bring more students into VET is underlined by the fact that despite the negative demographic trend, the total number of students at universities increased during the past six years¹⁵¹. This rise explains why secondary general education, as the preferred way to tertiary education, is becoming more popular at the expense of secondary vocational education. To make VET more attractive, several measures have been implemented to ensure systematic and quality information and guidance. Financial motives are also given to students that choose VET specialisations where skill shortages are foreseen (such as engineering and technical fields).

It is interesting to underline that in the Netherlands, the quality and popularity of VET are not seen as two different drivers, each with its own policy measures/reforming actions. The idea is that if the quality is improved, VET will become more popular. This stems from issues with VET quality underlined in 2006 and 2007: at this time, large VET institutes were formed (merges of smaller institutes) and students were dissatisfied with the resulting structures. Although students' assessment of their VET studies has improved since then¹⁵², the reforming measures underway, as analysed above, are also driven by the need to make VET more attractive.

High rates of early school-leavers and drop outs

Young people leaving education/training is one of the major problems that many EU countries face (Section 3.6). Research in the selected countries underlines that VET/alternance schemes and relevant reforms can be used, in this context, to achieve two goals:

- Bring 'back on track' early school-leavers from the whole education system (PT). This highlights that having in place a good VET system can help tackle the adverse effects of early school-leaving.
- Minimise the share of dropouts from apprenticeships (FI).

VET tracks in Portugal place a significant focus on early-school leavers, highlighting that this is a key challenge for the country. Indeed, Portugal faces the highest rate of early school leavers in the EU-28¹⁵³. According to a recent study published by the National Strategic Reference Framework observatory¹⁵⁴, VET courses have an impact on the reduction of early school leaving and the completion of upper secondary education. Therefore, both the 'education and training courses' and the newly implemented (pilot) 'vocational courses' target youth at risk of early school leaving.

The funding system of alternance schemes in Finland is under reform. The expected future reform will aim at reducing the rate of dropping out and making the studying time necessary to obtain a VET qualification more efficient. The new funding system is expected to place greater emphasis on completion rates and the prevention of school dropouts, as the funding will be based on the number of newly completed qualifications.¹⁵⁵

¹⁵⁰ Based on: Internet: <http://www.msmt.cz/vzdelavani/skolstvi-v-cr/dlouhodoby-zamer-vzdelavani-a-rozvoje-vzdelavaci-soustavy-1>.

¹⁵¹ Based on data from the Czech Statistical Office. Internet: http://vdb.czso.cz/vdbvo/tabparamzdr.jsp?cislotab=VZD0030CU&&kapitola_id=17&voa=graf.

¹⁵² Turkenburg M. (2014), Kansen voor vakmanschap in MBO. Internet: http://www.scp.nl/Publicaties/Alle_publicaties/Publicaties_2014/Kansen_voor_vakmanschap_in_het_mbo.

¹⁵³ Eurostat data for 2012; Early school leavers are defined by Eurostat as '% of the population aged 18-24 with at most lower secondary education and not in further education or training'.

¹⁵⁴ In Portuguese, Observatório do Quadro de Referência Estratégica Nacional (QREN).

¹⁵⁵ ICF International research on Finland.

The demographic challenge/ageing population

The demographic trends in a country have a significant influence on all aspects of socio-economic development (see Section 5.3). The demographic composition of most European countries indicates that youth cohorts are shrinking¹⁵⁶, which will create discrepancies between the supply and demand of education/training and later on, employment. Concerning VET/alternance schemes, the demographic challenge means that there will be less young people to enter education and therefore, to choose VET. To tackle this, reforms aim to make VET and alternance schemes accessible to a larger number of young people and better match the VET tracks/apprenticeships offered to address the labour market needs. This will mean that future graduates (who will be numerically fewer) will have better employment prospects and be skilled to satisfy the (future) skills needs of employers.

The demographic challenge has already been identified as prominent issue in Germany, which is the most ageing country in the EU. Tackling the demographic challenge was therefore the key driver of the 'Education pact', especially the 2010 measures. The objectives of the pact aim at improving the dual system overall, but most importantly, offer solutions to current and future problems surrounding the availability of apprentices. This underlines the need to facilitate the participation of more youth in apprenticeships and ensure their fast transition from school into a placement with an employer.

The Long-term Plan for the Education and Development of the Educational System 2011-2015 in the Czech Republic appreciates that the current negative demographic trend requires an optimisation of the network of secondary vocational education. Two rules have been established for such optimisation at the level of regions:

- Only support or create schools with educational programmes that fit the expected needs of the labour market, at the expense of less fitting programmes;
- Discontinue only those educational programmes that face high unemployment rates.

4.2. Introduction of new alternance schemes

As underlined earlier, the countries that face very high youth unemployment rates (EL, ES, IT, PT) introduced new apprenticeships or other alternance schemes, as these schemes were considered as a way of improving possibilities for employability. New schemes have also been introduced in countries where the overall rate is not among the highest in Europe, but the increase between pre- and post-crisis is significant (e.g. DK).¹⁵⁷ An overview of the new schemes introduced in 12 countries across Europe (CY, DK, EL, ES, FI, HU, IE, IT, LT, PT, SE, SI) can be found in Table A4.1 in Annex 4.

Strengths and weaknesses of the new schemes

According to research in the selected countries, overall the introduction of new alternance schemes is perceived positively, given the link of such schemes with better

¹⁵⁶ United Nations, Department of Economic and Social Affairs, Population Division (2013), World Population Ageing 2013. ST/ESA/SER.A/348.

¹⁵⁷ Youth unemployment rate in Denmark climbed almost 100 %, from 7.3 % in 2007 to 14.0 % in 2012. Source: Eurostat. Internet: <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do?sessionId=9ea7d07e30e474931a734a764c019260fc4f21a5efe4.e340aN8Pc3mMc40Lc3aMaNyTb3qRe0> . Accessed on 16.2.14.

employment outcomes for graduates. Common strengths can be identified among the reforms in different countries.¹⁵⁸

- Strengthening of the available alternance schemes in the country: This is especially the case in Greece, where VET was mainly school-based and until the reform, apprenticeships were chosen only by a small fraction of students. In Portugal, the new (pilot) vocational courses also widen the possibilities for prospective VET students.
- Providing training solutions to youth at risk: The new (pilot) vocational courses in Portugal specifically target youth at the risk of early school-leaving. The courses provide the opportunity to this group of students to attain a double certification¹⁵⁹ in two years with a higher share of work-based learning than the other available courses. Thus, they allow quicker entrance onto the labour market, which offers a significant participation motive to students.
- Engaging social partners: The reforming law in Greece underlines that all major social partners will participate in the decision making process of VET, and in the selection of specialisations offered in each prefecture through the Prefectural Vocational Education and Training Committees. This will ensure that VET supply matches national and local business needs, which in turn can increase the availability of apprenticeship placements.
- Further engaging employers: The new 2+1 alternance model introduced in Finland was welcomed warmly by employers. It works well for them as the students join as apprentices in their third year of studies which means they require less supervision and training.

Although reforms introducing new alternance schemes are well-received, weaknesses can be identified regarding their design, integration with existing VET tracks and other country-specific elements. More specifically, and according to national sources and interviews, the reforms above may bear criticism on:

- not being bold enough: In Greece, the apprenticeship-cycle introduced in upper secondary VET will be optional. So, there will still be VET graduates without any work-placement experience;
- creating possible conflicts with existing schemes: Graduates of the 'vocational courses' in upper secondary education in Portugal will achieve qualifications only after two years, where students in the 'professional courses', also offered under the Ministry of Education, after three years. This is why 'vocational courses' have been characterised as a 'low-cost track'¹⁶⁰, as their implementation demands fewer resources than other tracks. Therefore, these new courses raise concerns that they may negatively influence participation in the 'professional courses'.
- new tracks or early tracking? The 'vocational courses' in Portugal may also pose the danger of functioning as early tracking. 'Vocational courses' started being piloted in ISCED 1 and 2 for those that had not completed primary or lower

¹⁵⁸ Research on information on the strengths, weaknesses and implementation challenges was possible for the 10 selected countries and is based on national sources and interviews.

¹⁵⁹ All VET tracks in Portugal lead to a double certification: the school-leaving ('academic') certification and the certification for the relevant profession (e.g. carpentry).

¹⁶⁰ Internet: <http://www.anespo.pt/anespo-noticias-desc.php?id=163>; accessed on 18/2/2014.

secondary education. The 'new' 'vocational courses'¹⁶¹ (ISCED 3) were implemented to allow graduates from lower relevant courses to continue within the same type of courses.¹⁶² Graduates of ISCED 1 and 2 'vocational courses' are not obliged to continue to ISCED 3 in the same type of courses; but one could presume that most of the graduates will prefer to do so, rather than choosing another track with more advanced learning demands.

Challenges for implementation

Significant challenges can be identified in regards to the full implementation of these reforms.

- Engaging employers to offer placements: As underlined earlier, offering more alternance schemes/apprenticeships automatically increases the demand for placements in companies. Engaging SMEs presents a greater challenge; due to their small size, these companies need additional support to initially accept apprentices and deliver quality training. In those countries where there is no or little tradition of apprenticeships, employers' expectations from apprenticeship schemes may be erroneous. They may also be reluctant to engage in the administrative procedures and requirements related to quality assurance. Finally, employers may simply ignore the existence of these new schemes and the potential benefits they offer to them.
- Tackling increased costs and the low availability of funds: The implementation of the reforms demand the allocation of resources, both of financial and human resources. Additionally, having more alternance schemes means more students in VET schools which also augments the state funding, investment in infrastructure, material and of course teachers that are needed.
- Ensuring quality: When the implementation of reforms has begun only recently, and the demands for additional placements need to be satisfied soon, ensuring the quality of training offered in companies can be challenging.

Countries that introduce new schemes, especially apprenticeships, should consider the possibility of substitution effects. The importance attributed to apprenticeships, the provision of countries/peer learning pathways and financial support from the European Commission facilitate the improvement of such schemes and their introduction across countries. This augmenting interest in apprenticeships should be coupled with strict quality controls: apprenticeships can be misused by some employers as cheap labour, especially in countries with little experience with apprenticeships and high youth unemployment. These companies may substitute unskilled employees with apprenticeships. This will enforce negative perceptions, especially in countries with little experience with apprenticeships, from parents/students and hinder their establishment. Interestingly enough, substitution has been found to take place even in Germany (estimated to concern 18.5 % of employers).¹⁶³

¹⁶¹ First piloted in 2013/2014.

¹⁶² According to interviews conducted during the ICF International research on Portugal.

¹⁶³ Mohrenweiser J. and Backes-Gellner U. (2008), Apprenticeship Training – What for? Investment in Human Capital or Substitution of Cheap Labour?

4.3. Upgrading of existing schemes

Reforms have been launched in 11 countries (AT, DE, DK, EL, FI, FR, IT, NL, PT, PL, UK (ENG)) that have changed the structure, teaching and training elements, governance, etc., of their already existing apprenticeships/alternance schemes. The reforms touch upon a wide range of elements and challenges of the national alternance schemes, such as students who did not initially find a placement (AT), the legal framework (EL, IT) and the collaboration between authorities (FR), the funding scheme (FI, UK [England]), the share of work-based learning (PT), etc. Table A4.2 in Annex 4 offers an overview of the reforms on existing alternance schemes.

Strengths and weaknesses of the reformed schemes¹⁶⁴

National experts and/or authorities stress that the reforms are expected to bring about significant benefits, and identify key strengths.

- A more structured legal framework: In Greece, the new reform sets out a legal framework of the existing traineeship in Institutes of Vocational Training (IEKs).¹⁶⁵ According to experts, the lack of a robust framework was one of the reasons that participation in the (optional) traineeship was low.
- Connecting VET to the labour market gets a new impetus: Offering training that is relevant to the skills and competences of the labour market is perhaps the main goal of VET schemes. Reforming measures can make the importance of this link clearer and position the relevant debate higher on the policy agenda. For example, in the Netherlands, the reform that is under-development touches upon several elements of the VET system and it is believed that the link to the labour market in terms of the efficiency of VET in the long-term, has been taken up as a topic.

The reform underway in the UK (England) also strengthens the link of apprenticeships to the labour market, as employers will have a more central role in the decision making, standards and funding.

- Increasing the quality of the training provided: In the Netherlands, strengthening general skills such as math, Dutch and English, is viewed as strong point of the reform, as it will allow students to develop general, transferable skills along with the vocational ones and facilitate the uptake of lifelong learning.
- Better inform the labour market on VET results: The introduction of national exams for the general courses of VET tracks (math, English and Dutch) in the Netherlands is expected to provide better information to the labour market on students' level of proficiency.

However, concerns have been raised about some elements of these reforms.

- More efficient but more restrictive? In the case of the Netherlands, the funding system will be changed (See Section 6), to discourage students from switching to a different course/profession or taking longer training pathways due to internal progression within VET tracks. Experts underline that bbl¹⁶⁶ students usually started from lower qualifications and then could choose to continue to higher ones.

¹⁶⁴ Information on strengths, weaknesses and challenges in the implementation of the reformed schemes is available for the 10 selected countries.

¹⁶⁵ ISCED 4, upper-secondary non-formal IVET.

¹⁶⁶ Alternance pathway.

After the reform is in place, schools will allocate students to higher qualifications that may be more difficult for students to attend. Therefore, the new 'cascade funding model'¹⁶⁷ may lock bbl students into lower levels of qualifications.

Relevant only to apprentices with employers that do not belong to the Polish Craft Association, the changes introduced by the reform are argued to limit the scope of occupations in which learning can be carried out.

- Employer-set apprenticeship standards: According to the new UK (England) reform, employers will set the standards that all apprenticeship training should meet. Although this can bring about advantages, it raises concerns about whether the new standards will arrive at the lowest common denominator that the least ambitious employers can accept. Such concerns are supported by the fact that the previous, government-set standards¹⁶⁸ on apprentices were considered too demanding and inflexible by some employers.¹⁶⁹

Challenges for implementation

- Finding more placements: The increased number of placements that new/improved alternance schemes will demand (e.g. in EL, PT) is considered the most significant challenge¹⁷⁰, especially where there are financial constraints and there is no or weak culture/tradition in employers' engagement.
- Limited resources (financial, human resources): This is mostly highlighted in the UK (England): at present, the bulk of apprenticeships are run by training providers. The reform puts the funding, design and standard-setting in the hands of employers. In order to shift the management of apprenticeships to a great extent to employers, experts argue that the National Apprenticeship Service and the government will need additional resources to intensively manage the training process and the capacity of both organisations is considered questionable. The extent to which either organisation has the capacity to do this is questioned by experts.¹⁷¹

4.4. Development of guidance

Availability of guidance in the selected countries

The choice of VET pathways is influenced by many factors – socio-economic background, previous academic achievement, personal aspirations, etc.¹⁷² The availability of quality and timely information, advice and guidance is an important factor influencing the choice pathways learners make and their participation in apprenticeships/alternance programmes. The Eurobarometer study (2011) reported that a majority of EU respondents (52 %) think that young people receive enough advice concerning their learning and career opportunities from schools and employment services. This is disputed though, in some countries (FR, LT, LU, and RO).

In terms of guidance, however, enrolling in a VET programme is not always a positive choice. Many young people are guided towards certain programmes by default rather

¹⁶⁷ More information on the reform of the funding model in Annex 4.

¹⁶⁸ Specification of Apprenticeship Standards for England (SASE).

¹⁶⁹ Keep E. (2013), The Richard Review and refreshed thinking – promoting excellence?

¹⁷⁰ According to experts in Greece and Portugal.

¹⁷¹ Keep E. (2013), The Richard Review and refreshed thinking – promoting excellence?

¹⁷² See Section 5.

than by choice despite the fact that studies have shown the negative effect of such deficit-driven orientation¹⁷³ (e.g. demotivation, early school leaving). On the contrary, positive choice, as well as guidance during the transition to VET, is associated with better completion rates.¹⁷⁴

All of the selected countries have designated the organisations that have the responsibility to provide guidance to students. These mostly consist of general education schools or VET providers, but in some cases, also public employment services/offices (e.g. DE, EL, IT) or chambers (e.g. DE, EL). Interesting examples of guidance provision from the selected countries can be found in Annex 4.

While formal arrangements exist, it is important that guidance includes sufficient and updated information on VET/alternance schemes. In this context, national experts in the selected countries highlight that the provision of guidance could be improved. The offer may lack coordination or it is not tailored to the individual needs of a young person, especially regarding the systematic information for students on all possible career choices available to them. Hence, students may not have a clear understanding of what a certain profession entails and are influenced to a large extent by their peers. Moreover, guidance services to promote VET/alternance schemes may need improvement regarding their coordination or the sufficient number of counsellors. In other countries (e.g. EL, IT, PT), information and career guidance services for young people and their families on VET/alternance schemes are reportedly not very widely available. This gap is recognised and improving efforts are taken through relevant reforms.

Reforms targeting the provision and quality of guidance

Providing qualitative guidance and vocational counselling to students can make VET tracks more attractive to students and parents and reverse negative images and misconceptions about VET.¹⁷⁵ As noted in Section 3.4, gaps and areas of improvement in guidance have been identified in most selected countries; so it comes as no surprise that it is recognised as a priority of reform in some countries. Research in the selected countries highlighted that guidance is a key objective across different types of VET/dual education, as relevant reforms have been implemented in Germany (full-fledged apprenticeships); France (mixed VET system) and the Czech Republic (almost exclusively school-based system).

¹⁷³ See for example, Alet El. and Bonnal L. (2013), *L'apprentissage : un impact positif sur la réussite scolaire des niveaux V*.

¹⁷⁴ Alet El. and Bonnal L. (2013), *L'apprentissage : un impact positif sur la réussite scolaire des niveaux V*. See also Bourdon J. (2012), *Sécuriser les parcours des apprentis*.

¹⁷⁵ BUSINESSEUROPE (2012), *How to improve the quality and image of apprenticeships*.

One of the strategic objectives of the 2010 'Education Pact' in Germany is to ensure the 'apprenticeship readiness' of young students. Through a new initiative called 'Educational Chains' ('Bildungsketten bis zum Ausbildungsabschluss'¹⁷⁶), a holistic initiative to support transition from school to VET was implemented. The initiative comprises of an analysis of a pupil's potential; professional orientation measures; and individual guidance and help. To analyse their potential, students in the 7th or 8th year of secondary school undergo a skills analysis identifying their strengths and weaknesses. The measure is implemented mainly in the 'Hauptschule' (lowest tier of secondary school in Germany) and some branches of special needs schools. The Laender are free to choose the type of test they would like to use and can design the concrete implementation according to their needs. Students at risk of dropping out are individually counselled and supported by 'career entry counsellors'. Over the past three years, more than 200 000 pupils took part in the testing; and about 1 000 career entry counsellors were appointed.

In the Czech Republic, one of the areas that the reform measures target is in regards to motivating students to choose fields of vocational education that reflect the needs of the labour market. To achieve this, a number of actions are foreseen, concerning career guidance and counselling, such as¹⁷⁷:

- finalising the methodology of career consultancy by 2016;
- consistently implementing the thematic area 'Individual and the world of labour' in primary education. This measure has been underway since 2013 and is ongoing.
- promoting and ensuring separate career guidance from educators and psychologists and extending its reach. This is an on-going measure, involving all authorities that run schools, such as regions, municipalities and others.

¹⁷⁶ Available on the Internet (<http://www.bmbf.de/de/14737.php>).

¹⁷⁷ Internet: <http://www.msmt.cz/file/27137/>.

5. FACTORS INFLUENCING THE DEVELOPMENT OF ALTERNANCE SCHEMES

KEY FINDINGS

- Apprenticeships or alternance schemes are shaped by the socio-economic environment as well as the structural context in which they are situated.
- The perception that students, parents, teachers and employers have of apprenticeships shape participation trends in these schemes. While in some countries perceptions are positive, in others, apprenticeships are still seen as a second chance pathway for those who fail more academic routes. Furthermore, young people's family background (parents qualification achievement), gender and also geographical location, influence their chances of choosing to enrol in an apprenticeship.
- If VET, and in particular apprenticeships, are considered as a destination for low achievers, employers may be reluctant to become involved in alternance schemes and instead, offer high-quality jobs to its graduates.
- Furthermore, in the context of declining demographic trends, apprenticeships and alternance programmes compete for students from general education, school-based VET but also from higher education. As not all apprenticeship schemes provide access to higher education, those young people who wish to pursue longer studies may be reluctant to embark on apprenticeship schemes.
- Companies' willingness and readiness to engage apprentices or trainees from alternance schemes is a key factor for their further development. In Germany, it is estimated that over half of all companies host apprentices. Though such data is not available in most other countries, the share is likely to be significantly lower in those countries where apprenticeships are not the mainstream VET track.
- The fact that apprenticeships are strongly associated with some sectors may be detrimental to their further development. In some countries the perception is that apprenticeships and alternance schemes are mainly suitable for industrial and craft professions which are not the main growth sectors in current economies. While these sectors indeed have strong traditions of apprenticeship training, there are very successful examples of countries that offer apprenticeships in the service sector (including fields such as trade or business). Apprenticeships and alternance schemes are also successfully developed at higher levels in several countries. This means that they reach out to a different population of people and also different types of employers.
- SMEs are a key pillar of economies in the EU. They represent a significant share of employment places. They are also key pillars in the provision of apprenticeship and alternance placements. Many crafts enterprises hosting apprentices are micro-enterprises. While these very small companies are important providers of placements, each of them can only host a very small number of apprentices (in many cases just one person). This means that outreach activities to develop a networking training companies to absorb significant numbers of young people in countries with little tradition of apprenticeships should be considered.

- The quality of the learning environment offered by companies hosting apprentices and trainees is also an important issue. Not all companies can offer conditions that will result in the effective learning and development of a range of knowledge, skills and competence. Those in charge of developing apprenticeships and alternance schemes should try to reach the 'champions' in each professional sector to set the bar high for these schemes.
- Despite their differences, countries can learn from each other regarding the improvement of VET systems and the introduction of alternance schemes. However, 'successful examples' from countries like Germany should be used as a blueprint and not be imported into other countries with different economic and labour structures; education systems and cultural values.

The education system of a country/region is influenced by intertwined economic and social factors, as well as historical developments. VET in Europe was first developed as an outcome of the Industrial Revolution that radically reshaped the economic and labour market structure. Additionally, education systems (and so, VET as well), employment relations and occupations are shaped by 'a society's values, norms, attitudes, convictions and ideals'¹⁷⁸. This section discusses some of these key factors and how they are shaping apprenticeships and alternance schemes today, emphasising the role of social/individual perceptions, the influence of the school and education system structure, as well as the economic and social characteristics of each country on the state of play of VET. The analysis provides some explanations on what hinders the development of alternance schemes in a country and why alternance schemes and apprenticeships in particular are well developed in other countries. In the context of recent actions at the EU level that promote country collaboration in the field of apprenticeships, understanding the importance of these influencing factors can also highlight the ways that countries can learn from each other, and to what extent 'foreign' VET systems can be introduced in a country.

5.1. Individual learner factors and the influence of family and peers

The reasons behind a learner's decision to follow VET and alternance schemes more particularly (such as his/her profile, perceptions and beliefs and career goals) can provide useful insights to policy makers as to which groups of students need to be targeted/attracted to VET. The key reasons addressed here are: the profile and gender of the student; the future employability of a scheme's graduates; and family influences. The attractiveness of schemes also plays an important role in selecting an education programme. The analysis highlights that attractiveness is a cross-factorial element, i.e., it is relevant and can be impacted by all the above mentioned factors.

Research on the selected countries identified some patterns regarding the profile of the average VET student, i.e. who chooses alternance schemes and why. Although in some countries (e.g. DE, NL) apprenticeships are attractive to high achievers, in others (e.g. EL¹⁷⁹, FR¹⁸⁰, PL, UK¹⁸¹) VET/alternance schemes students are usually low achievers

¹⁷⁸ Greinert W. D. in Cedefop (2002), European vocational training systems: the theoretical context of historical development.

¹⁷⁹ Ioannidou A. and Stavrou St. (2013), Prospects for reform of vocational education in Greece (in EL).

¹⁸⁰ Alet E. and Bonnal L. (2013), L'apprentissage: un impact positif sur la réussite scolaire des niveaux V. In France, VET and apprenticeships have been found to be a less prestigious option for young people and

and/or come from challenged socio-economic backgrounds. In these countries, VET is considered a 'second-choice' and is less attractive to students than general education.

Theoretically a (vicious or virtuous) circle can be developed: if VET/alternance schemes are considered a 'second choice' track, they will not be selected by high achievers; this can affect the level of learning outcomes that the learners will achieve on completion and thus the quality of its graduates. If employers hold a negative image of the quality and level of graduates from these schemes, they will be reluctant to offer graduates high-prospect and earnings jobs. Subsequently, graduates from other tracks will probably have better employability results; which again, will drive students (mostly high-achievers) and parents away from VET/alternance schemes.

This highlights the importance of improving the quality and image of apprenticeships to make them a more attractive option for young people, especially in countries with negative perceptions.¹⁸² Addressing the need to improve the image of VET, several countries have undertaken measures, such as introducing skills competitions and advertising campaigns to help raise the profile of apprenticeships/alternance schemes (e.g. in FI, PT, UK [England]¹⁸³).

Gender is also an influential factor. Male students are in the majority in alternance schemes, while gender preferences in specific apprenticeships are observed in most selected countries¹⁸⁴: male students being more favourable to 'more traditional' and technical apprenticeships, such as in manufacturing and engineering, while more female students opt for apprenticeships in the services sector, for example in hair-dressing.

Research in the UK found that for some young people, motivation for choosing an apprenticeship can include the desire to achieve future career aspirations and increase employability; to gain qualifications to develop skills, experience and knowledge; for enjoyment and interest; and, to meet employer requirements.¹⁸⁵ Therefore, individuals in some countries have been found to aim for qualifications (and so, tracks that lead to these) that will impress employers and facilitate entry into an occupational sector.¹⁸⁶ Supporting this, Cedefop (2014) found that the employment prospects of schemes are statistically significantly correlated with the overall level of attractiveness and the relative esteem indicator (i.e. how IVET is compared to general education).¹⁸⁷

their parents (see Lauer C. (2002), Family Background, Cohort and Education A French-German Comparison).

¹⁸¹ Unwin et al. (2004), What Determines The Impact Of Vocational Qualifications? A Literature Review.

¹⁸² Business Europe (2012).

¹⁸³ For Finland see on the Internet: <http://www.skillsfinland.fi>; For Portugal, as mentioned by interviewees; For the UK (England) see on the Internet: <http://www.apprenticeships.org.uk/ambassadorsnetwork.aspx> and as an example, the London Apprenticeship Campaign, Internet: <https://www.london.gov.uk/priorities/business-economy/for-business/recruitment/apprenticeships> and <http://www.london.gov.uk/moderngov/documents/s28571/London%20Apprenticeships%20Campaign.pdf>.

¹⁸⁴ In France (Alet E. and Bonnal L. (2013), L'apprentissage: un impact positif sur la réussite scolaire des niveaux V); in Greece (according to expert interviews); in Portugal (see Direção-Geral de Estatísticas da Educação e Ciência, Estatísticas da educação 2011/2012. Table 2.0.1.); in the Czech Republic (see data from the Czech Statistical Office, Internet: http://www.czso.cz/csu/2011edicniplan.nsf/kapitola/1413-11-r_2011-13); in Germany there is a slight imbalance towards male apprentices (see Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013); in Italy (see Isfol (2012a)); in the UK (England) (see Newton et al. (2012), Good practice evaluation of the diversity in Apprenticeship pilots).

¹⁸⁵ Gambin L. (2013), Review of Apprenticeship research – final report, an updated review.

¹⁸⁶ Millar L. et al. (2001), Factors influencing the choice of Initial Qualifications and Continuing Development in Australia and Britain for individuals in Britain and Australia.

¹⁸⁷ Cedefop (2014c). Cedefop discusses and examines factors influencing the attractiveness of IVET overall and constructs an esteem indicator.

It is interesting to note that the Eurobarometer study¹⁸⁸ shows that while up to three quarters of people believe that VET is a route to a well-paid job in some Member States, in others only a third takes this view. In general, however, the majority of EU respondents (55 %) believed that vocational training leads to jobs which are well-paid.¹⁸⁹ Interestingly, the lower the level of respondents' education attainment and the highest respondents place themselves on the social scale, the stronger the agreement with this statement; so, it is those individuals that left education at 15 years old or younger and those that place themselves high in the social scale that demonstrate the most positive views on the profitability of VET jobs.

In addition, students' choices can be influenced by:

Parents/family: Studies in several countries have shown that there is a persistent trend that the higher the education achievement of parents the higher the achievement of young people.¹⁹⁰ In France parents' education level was found to negatively influence the likelihood of enrolling in an apprenticeship.¹⁹¹ The effect from other people, such as family members, friends and teachers has been proved to be significant on students' perceptions and decisions.¹⁹² Furthermore, findings from the Eurobarometer survey (2011) show that the most common sources of advice are parents or another family member. Interestingly, the findings show parental/family preference in advising individuals to choose vocational education or training¹⁹³ (22 %), compared to 19 % of parents advising individuals to choose general secondary or higher education.¹⁹⁴ Cedefop (2014)¹⁹⁵ also stresses the importance of people from the world of work and internet/social media as sources of information for students, shaping their perceptions and influencing educational decisions.

Perceptions of VET/alternance schemes: Not surprisingly, in countries where the perceptions about the quality of VET are positive, the image of VET is also positive. The Member States where VET tracks are a less popular choice amongst students typically concern those countries where VET programmes are not held in high regard by the general public, including young people and their parents.¹⁹⁶

5.2. School-level and education system factors

VET/alternance schemes are part of the wider education system of a country/region and therefore, their development is influenced by this. Also, elements such as the decision of students to follow such schemes and the perceived quality of the training offered can be highly impacted by the school/provider.

The role of teachers, career counsellors and schools/providers

Regarding the schools/providers, influential factors can include the reputation of VET schools, the perceived quality of the training offered there, as well as the quality of the teachers: depending on the alternance scheme type, students spend at least a small

¹⁸⁸ European Commission (2011), Eurobarometer Special Report 369 Attitudes towards vocational education and training.

¹⁸⁹ France (34 %) and Slovakia (36 %) demonstrate the lowest rate of positive replies.

¹⁹⁰ Lauer C. (2002), Family Background, Cohort and Education A French-German Comparison.

¹⁹¹ Alet E. and Bonnal L. (2013), L'apprentissage: un impact positif sur la réussite scolaire des niveaux V.

¹⁹² Cedefop (2014c).

¹⁹³ The question was formulated as 'QA5.1 Did any of the following people advise you to choose a specific educational path? Your parents or someone from your family'.

¹⁹⁴ Figures are for EU-27.

¹⁹⁵ Cedefop (2014c).

¹⁹⁶ European Commission- DG Employment (2012c).

amount of learning time in the schools, trained by VET teachers. The quality of an alternance scheme and its perceived quality can be impacted by: the knowledge and teaching capabilities of teachers; how well-informed they are; their capability to assist challenged students; their active role in supporting students with any issues arising in their work-place learning, etc.

As mentioned earlier, teachers have a significant influence on students' decisions. Therefore, school teachers in lower education levels, as well as school career counsellors also play a key role regarding students' choice of alternance schemes. As highlighted by the OECD (2011)¹⁹⁷ and in the country research, many guidance providers – be they teachers or counsellors- have limited knowledge of the 'world of work' and of alternance paths, including apprenticeships, which affects their ability to provide appropriate and impartial guidance. This is recognised, for example, in Poland, where a key challenge is to ensure that teachers/counsellors have greater exposure to the 'world of work', so they can provide impartial advice and dispel perceptions of VET as a less ambitious option for young people. Also, in the UK¹⁹⁸, just 15 % of working parents¹⁹⁹ indicated that teachers provided them or their children with information about alternatives to university education. Many more (43 %) indicated that such information had not been provided by teachers.²⁰⁰ The lack of information offered by teachers about the alternatives to academic studies might contribute to uncertainty about the value of apprenticeships/alternance programmes. Even in countries where work-based learning is strongly embedded in VET, such as Finland, it is reported²⁰¹ that apprenticeships may not be equally promoted by guidance counsellors in schools of lower secondary education, as they may not be as familiar with this type of training as with other forms, thereby also contributing to the low take-up of apprenticeships among young people.

The quality of teachers is also relevant to the attractiveness of VET as a career goal for teachers: do high-achieving student-teachers select VET or general education? and how are they trained? The most qualified VET teachers may prefer to find employment in the trade/industry relevant to their field and in the social sector rather than in education, due to better employment conditions and higher pay. It is therefore important, to recruit the best teachers in VET, by making the profession more attractive.²⁰² The attractiveness of VET teaching can be influenced by the perceptions of VET teachers' status as a profession; level of pay; working conditions; possible discrepancies in wages/benefits, status of VET and general education of graduates, etc.

The role of the overall education system

The education system can influence the development of alternance schemes in two ways: in relation to the structure of alternance schemes and how VET overall and alternance schemes in particular are placed in comparison to general education or other VET tracks.

In some countries, the development of VET has been rather neglected, receiving limited attention compared to other parts of the education system and therefore often seen as having lower status.²⁰³ This might result in a deterioration of the quality of programmes

¹⁹⁷ OECD (2011b).

¹⁹⁸ Research carried out by CIPD (2013), Employee outlook: Focus on Apprenticeships cited in Gambin L. (2013), Review of Apprenticeship Research.

¹⁹⁹ With children aged 18 years and under.

²⁰⁰ Gambin L. (2013), Review of Apprenticeship Research.

²⁰¹ According to interviewees, during ICF International research on Finland.

²⁰² ETUCE (2012), Policy Paper on Vocational Education and Training in Europe.

²⁰³ OECD (2011b).

offered, directing young people into low-level jobs with little prospect of progression or further study, damaging at the same time, the status of VET in the general public's perception. In countries where apprenticeships are a strong feature of the education system, the image and employability prospects are much stronger (e.g. AT, DE, CH). The importance that VET/alternance schemes have within the education system could be assessed by the state budget invested in the various education pathways, which inevitably influences the quality of the school-based part of alternance schemes and significantly impacts the attractiveness of IVET overall.²⁰⁴

Also, accessing higher education may influence the attractiveness of the schemes: students that plan to continue their studies may not opt for schemes that do not offer access to higher education.

To support this, it is reported that in Portugal, the fact that VET alternance schemes provide progression opportunities to higher education as general education, is identified as a positive factor in terms of the perception of VET.²⁰⁵ In fact, the new 'vocational courses' are being developed in cooperation with the polytechnic system (higher education focused on vocational training and advanced technical training) to facilitate the smooth transition of students to higher education.

Developments in other education tracks/general education can also have an impact: for example, the increase in university tuition fees in the UK, may have affected the preferences of parents, who in turn would favour their child undertaking an apprenticeship rather than going to university.²⁰⁶

Education policies and targets (national or regional) can be expected to shape the way VET/alternance schemes are developed. For example:

- Targets that promote participation in higher education: If increasing the participation in higher education is one of the national educational goals, VET schemes that do not lead to higher education will probably be negatively affected (e.g. EL).
- Policies to promote participation, especially of disadvantaged groups: An important consideration in this context is the policies and practices that allow Member States to address inherent inequalities associated with certain characteristics of the education system. A further consideration is the extent to which Member States implement approaches that support young people in the form of grants, loans or allowances to cover travel and subsistence expenses or as incentives to participate in VET and alternance schemes in particular. Particularly in countries where VET mainly draws students from lower socio-economic backgrounds, the attractiveness of schemes can be supported by system and school-based measures aimed at closing possible gaps in students' achievement; e.g. parent-centred policies to support them and engage them in their children's learning.²⁰⁷
- Education policies that facilitate the involvement of employers in alternance schemes enhance their quality and hence, their attractiveness. Such policies may influence the collaboration between school/providers and the labour market; or the duration of apprenticeships, based on employers' demands.

²⁰⁴ Cedefop (2014c).

²⁰⁵ Mentioned in interviews during ICF International research on Portugal.

²⁰⁶ Gambin L. (2013), Review of Apprenticeship research – final report, an updated review.

²⁰⁷ Goodman A. and Gregg P. (2010), Poorer children's educational attainment: how important are attitudes and behaviour.

In France, according to a survey carried out among 1 500 employers of apprentices in June 2011²⁰⁸, 25 % of employers have expressed their reluctance to hire apprentices for more than three years. Therefore, the reform of upper secondary vocational diplomas led to the introduction of a three-year Bac pro qualification (Level V).

The structure and characteristics of apprenticeships/alternance schemes can also be influential: for example, students and parents may be reluctant about apprenticeships if they are the ones that must find a placement in an employer and this is considered challenging. As mentioned earlier, not securing a placement increases the rate of dropping out and students' disengagement.

The range of professions and career opportunities offered through apprenticeships/alternance schemes is also important. In countries (such as DE, CH, NL, FR for example), where apprenticeships are also offered in sectors other than those traditionally covered by apprenticeships (crafts or industrial professions), it can be expected that a broader group of young people will be targeted. For instance, the provision of apprenticeships at higher levels of education and training has the potential to positively influence the perception of these types of programmes. It can also attract other profiles of young people, in particular those with a more solid academic background.

The provision of information, advice and guidance (IAG)

Quality career guidance based on labour market information is reportedly not available to all VET students.²⁰⁹ When career guidance services are not available, students rely on informal sources such as family and friends, who may not be reliable, and reinforce social disadvantage.²¹⁰ Appropriate IAG should provide young people with the awareness of the range of different options available to them together with the potential returns offered by different options, including apprenticeships. For example, in France, in one region, a survey of 434 heads of lower secondary schools showed that only 51 % of respondents provided advice to students on apprenticeships. In the vast majority of cases it was because the students asked for it or because the teacher identified the need for a specific student to be directed him/her towards apprenticeship. In the same survey, teachers noted that they did not have a good understanding of the world of work and vocational tracks.²¹¹ This implies that adequate resources should be in place, ensuring that teachers/counsellors are informed about apprenticeships/alternance schemes and informative websites are available for students and campaigns. Due to its importance, initiatives are in place in several countries (CZ²¹², EL²¹³, NL²¹⁴, UK (England)²¹⁵) to promote IAG in schools.

²⁰⁸ Association of French chambers of commerce and industry (ACFI). Survey supported by the Ministry of economy, finances and industry. Internet: http://www.cci.fr/c/document_library/get_file?uuid=06da117d-5cdf-4f4c-853e-504fcffd18fb&groupId=10958.

²⁰⁹ OECD (2011b).

²¹⁰ Musset P. and Field S. (2013), A Skills beyond School Review of England, OECD Reviews of Vocational Education and Training; and OECD (2010a).

²¹¹ Benhaim-Grosse J. (2008), Les pratiques d'éducation à l'orientation des professeurs de troisième in Ministère de l'Éducation nationale (2008), Éducation & formations n° 77, L'orientation. (http://cache.media.education.gouv.fr/file/revue_77/07/2/E&F77_Orientation_43072.pdf).

²¹² Project VIP Kariera II, Internet: <http://www.nuv.cz/projekty/karierove-poradenstvi/o-projektu>.

²¹³ Mainly driven by National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP). Internet: <http://www.eoppep.gr>.

²¹⁴ Under the programme 'Aanval op de Uitval', Internet: <http://www.aanvalopschooluitval.nl/>.

²¹⁵ As described in the HM Government's Inspiration Vision Statement (2013). Internet: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/238841/bis-13-1176-inspiration-vision-statement-R2.pdf.

5.3. Broader socio-economic factors influencing VET/alternance schemes' development

The economy influences the development of education systems overall in multiple ways:

- Major economic developments change the priority of sectors or lead to new sectors surfacing.²¹⁶
- Shifts in the focus of the economy also affect the type of education/training offered and demanded: for example in Greece, the shift in the focus of the national economy from agriculture to services significantly impacted the attractiveness of VET. The shift led to increased interest in services and intellectual work and a simultaneous decrease in skilled farmers and technicians. The education authorities supported this trend with the establishment of numerous universities.
- The main economic sectors in terms of employment, and/or greater shares of GDP attract more attention from policy makers and learners: so, both demand and supply of education and training share the goal of filling the employment needs of these sectors.

Main economic sectors regarding employment

The economic sectors that drive a national economy are usually the ones that contribute more both to employment and value added.²¹⁷ As such, these sectors can be expected to offer more training placements and/or apprenticeship opportunities in order to train their future employees. As such, schemes are typically developed in these sectors. Experts across the selected countries highlight that the structure of the economy regarding key sectors has a strong influence on the training/education offer and the popularity of schemes selected by young people. Thus, a virtuous cycle can be developed. Those sectors that need young people to train are most likely to be interested in the development of apprenticeships/alternance schemes. In such case students can choose occupations relevant to the sectors, aiming at quick employment after graduation. However, this requires the perception of apprenticeships in these sectors to be sufficiently favourable. In particular if the growth companies are in the service area, but apprenticeships are considered mostly to be a way of learning suitable for crafts and industries, there is a need to convince employers that apprenticeships are relevant also for their needs.

Sectors that offer the most employment in the selected 10 countries are mainly the ones that offer the highest number of apprenticeships in the majority of countries (See Table A5.1 in Annex 5 for the key sectors regarding employment and the sectors offering the most apprenticeship/alternance placements in the 10 selected countries). From a policy perspective, this can impact decisions on sectors to be targeted for financial incentives and sectors that are overall a priority for the development of alternance schemes. Wholesale and retail trade, manufacturing and construction are the leading sectors in

²¹⁶ 'European vocational training systems: the theoretical context of historical development' by Wolf-Dietrich Greinert in Cedefop (2002), Towards a history of vocational education and training (VET) in Europe in a comparative perspective.

²¹⁷ As defined by Eurostat.
Internet: (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Value_added;
Accessed on 3/6/14).

employment in the majority of countries, accordingly contributing the largest share of placements.

The link between the key economic sectors and apprenticeship placements also implies possible challenges: when economies shift focus and/or when unforeseen, abrupt economic and political events take place (such as the 2008 crisis), the economic structure is affected and subsequent changes can be expected in the offer of alternance schemes placements. For example, Biavaschi C. et al. (2012)²¹⁸ underline that, employers in Germany offer less apprenticeship placements, since the shift of the economy to services meant shrinkage in manufacturing, the key provider of apprenticeship placements. At the same time, the service sector faces some constraints to implement the dual system in the same way manufacturing has.

One can observe though, that there are discrepancies in the selected countries between the share of employment and apprenticeship/alternance placements offered by sectors. Depending on the country and sector, these discrepancies can be attributed to the structure of the sector (e.g. agriculture in EL and PL is dominated by small, family farms), the size of its companies (manufacturing in FR) and the existing traditions about apprenticeships/alternance schemes.

The provision of apprenticeship/alternance schemes placements can be affected by sector-specific developments and challenges, irrelevant of any economic figures.

In Finland, in the 'social and health' sector, the availability of in-company training places has (temporary) declined due to the proportional increase in new staff in the sector (due to the growing number of baby-boomers retiring), so the remaining staff are under pressure to train them rather than students. In the 'natural sciences' sector, tougher new qualification requirements and fast-paced IT developments have made it more challenging to find workplaces which meet the qualification requirements. In the Helsinki region, the specific challenge is the rapid increase in the number of foreign workers who are unable to take on the role of an in-company trainer due to their lack of sufficient language skills.²¹⁹

In France²²⁰ the five sectors that receive most apprentices are: trade and business (19.6 %), processing (16.4 %), public works, construction and wood (16.3 %), mechanics, electricity and electronics (16.2 %) and personal services (16.1 %). However there are great differences according to the level of the qualification. The sector that receives most apprentices at the lowest qualification level (equivalent to EQF level 3) is processing and public works, construction and wood (around 26 % each) while these sectors host less than 10 % of apprentices at what corresponds to the EQF level 6. At higher levels, trade and business is by far the sector that receives most apprentices (55.6 % at what corresponds to the EQF level 6).

²¹⁸ Biavaschi C. et al. (2012), Youth Unemployment and Vocational Training.

²¹⁹ Salonen S. (2012), Työssäoppimisen tilannekatsaus 2011. Opetushallitus. Unpublished presentation of the author.

²²⁰ DEPP (2012), Repères et références statistiques - édition 2012, Les apprentis.

Size of companies: the role of SMEs

The implementation of alternance schemes and apprenticeships in particular, heavily depends on employers. Therefore, characteristics of the companies, such as size, are closely linked with the development, the implementation and the quality of these schemes. The close link of SMEs with VET and alternance training is underlined by the positive relationship that has been found between 'the growth in the share of the labour force with a secondary and upper secondary qualification in vocational and advanced technical knowledge and employment growth in the SME sector'.²²¹

Across Europe, the vast majority of companies (92.2 %) are SMEs²²², i.e. they employ no more than 250 employees. Therefore, the role of SMEs in the European economy is crucial. In all sectors identified as significant in the selected countries (Table A5.1 in Annex 5), SMEs prevail in terms of the number of enterprises and/or level of employment. However, the adverse effects of the crisis have been significant: especially in regards to micro enterprises, who were severely hit, as they shrunk at least by 20 % in 2011.²²³

Given the high share of SMEs across Europe, these types of companies are the main providers of alternance/apprenticeship placements. Looking further at the breakdown of types of SMEs, one observes that the vast majority of SMEs are micro companies, i.e. employ a maximum of nine people. Given their small size, micro companies are expected to have limited placements to offer, and limited infrastructure. Moreover, they may not be able to provide apprentices with the full training that is needed to obtain a full qualification.

In fact micro-enterprises are important providers of placements for apprentices or students in alternance schemes.²²⁴ In particular, this is the case in the personal services sector (e.g. hairdressing), hospitality (restaurants), car maintenance or construction. In Germany, in 2011, 19.5 % of apprentices were hosted in micro-enterprises, according to a representative survey of companies on the provision of training and apprenticeships.²²⁵ However, this represents a decrease since 1999. The share of apprentices hosted in small, medium-sized and large companies is very similar (between 26.1 % and 27.2 %). This shows that micro-enterprises are a crucial component of apprenticeship and alternance schemes. However they can host only a small number of young people (very often just one person). In order to create a significant number of apprenticeship placements, it is therefore necessary to practice considerable active outreach in those countries where apprenticeships are not so common.

Company size versus culture

The engagement of SMEs in alternance schemes is of great importance, given their high share in the overall number of companies and employment in the overall labour market. Beyond their structural characteristics, the participation of SMEs in alternance schemes

²²¹ 'The variable: share of the labour force with a secondary and upper secondary qualification in vocational and advanced technical knowledge' is defined as 'percentage of employees with education attainment isced97_3_4' (change 2009–2011). The ISCED97 classification considers the stage 3 and 4 of education attainments as secondary and post-secondary but not tertiary (i.e. not at a university – undergraduate level or above). The stage 3 corresponds to secondary vocational and technical training while stage 4 corresponds to vocational and advanced technical training' (as in source: European Commission (2013b)).

²²² European Commission (2012a).

²²³ European Commission (2013b).

²²⁴ Frigul N. (2005), Etude sur les conditions favorables à l'apprentissage en hôtellerie-restauration.

²²⁵ BIBB(2013b).

also depends on the mentality/culture in a country regarding the role of employers in VET, as well as on employers' engagement in VET.

Germany provides an inspiring example, as the domestic VET system heavily depends on the participation of employers and their collaboration with all the stakeholders involved. The recognition of employers' importance is underlined by the fact that the German dual system was specifically developed to ensure that employers have a certain amount of influence on the content of the training, to ensure that the demands of the labour market are met. However, the dual system is also based on a high level of (voluntary) engagement of companies. This was provided traditionally by SMEs, which often are family-owned businesses (roughly 95 % of all German firms are family-owned and of these, about 85 % are managed by their owner). German SMEs tend to take a particularly long-term approach to business, based on stable client relations, a continuous human resources policy, and strong ties to the region. This might also explain their solid engagement in education and training: In 2011, German SMEs employed 83.2 % of all apprentices.²²⁶

Quality of the environment in companies

A key issue for the development of apprenticeships is the quality of the learning environment that the companies in the country can offer. This concerns both:

- material equipment and
- human resource management and company culture.

Not all companies can offer the material conditions to prepare a learner for the full qualification. For example, some companies may be specific to a particular market segment and therefore only work with some of the competences required (for example only working with certain materials such as plastic windows and not wooden windows etc.). In some countries such as Austria, the Netherlands or the UK for instance, schemes where several companies share an apprentice who then rotates between the employers are being developed to address such issues.

Belgium (Wallonia) has invested in the development of state of the art workshops in schools (in terms of equipment) which are then shared between several training centres together with companies (including training companies).

Good quality work-based learning requires that certain conditions are in place. Nijhof and Nieuwenhuis (2008)²²⁷ studied the learning conditions in the workplaces to conclude that in order for learning in this context to be optimal it is necessary to:

²²⁶ Federal Ministry of Economics and Technology (2012), German 'Mittelstand' – Engine of the Economy. Facts and figures about small and medium-sized German firms.

²²⁷ Nijhof, W.J. and Nieuwenhuis L.F.M. (2008), The learning potential of the workplace.

- ensure that the three dimensions of development required for learning are combined – cognitive (what is learnt), emotional (motivation, enjoyment, etc.) and social (interaction process and practice).
- balance between assimilation (elaborate new impressions and integrate them into those previously held) and accommodation (this requires the person to reconstruct previously learnt structures because the new impulses do not fit with those previously held)²²⁸ and
- avoid non-learning (resistance and defence mechanisms to the environment).²²⁹

Ideally, apprenticeship schemes should aim to reach out to those employers who can offer the best conditions in terms of both equipment and learning support. This is not likely to be the case in all structures, where certain employers may be motivated to engage in apprenticeships because of favourable labour costs rather than anything else. In those countries where apprenticeships are being upgraded and developed, one of the challenges is to reach out to 'champion' employers and promote their engagement in apprenticeships.

Finally, in some regions or local areas, the development of apprenticeships may be hampered by the development of the informal economy.

Regional differences

Regional/local specificities shape the provision of VET. Particularly in countries with strong regional authorities, the provision of VET is (co-)determined by regions: in all 10 countries researched in depth, local needs are taken into consideration when deciding education and training offers. For example, the development of alternance schemes can greatly differ between regions of the same country, as unemployment rates and dominant economic sectors vary. Across countries, variations in local economies underline the different needs in employment and training on a regional level that can affect policy making. Such variations have been identified in all selected countries. As expected, regional differences are more prominent in countries where the government structure is devolved and regional authorities have high responsibilities in the formulation and/or delivery of VET. This is the case in Italy, where regions are responsible for VET and the gap between the economic development level between the North and the South of the country is reflected in the level of development of VET. For example, vocational pathways are widespread in the northern regions where strong industrial economies generate a high level of labour demand and labour markets are increasingly in need of highly specialised technical professional profiles. Therefore, more students opt for technical courses in the North²³⁰, where more than half of apprenticeship contracts were realised in 2011.²³¹ In France²³², there are also major regional differences in the numbers of apprentices. While there are more than 20,000 apprentices (in 2010-2011) in regions attached to the following cities (regional division of the French national education): Creteil, Lille, Lyon, Paris, Versailles, there are less than 10,000 apprentices in Auvergne (Clermont Ferrand), Corsica, Champagne-Ardenne (Reims), Limousin (Limoges).

²²⁸ Poortman C. L. (2007), Workplace learning processes in senior secondary vocational education.

²²⁹ Poortman C. L. (2007), Workplace learning processes in senior secondary vocational education.

²³⁰ Isfol (2012b).

²³¹ Isfol (2012a).

²³² DEPP (2012), Repères et références statistiques - édition 2012, Les apprentis.

Location of students' residence

Adjusting the VET offer to local/regional specificities strengthens the link of VET qualifications to the local labour market needs, increasing graduates' employability. On the other hand, this can limit the choices a young person can make regarding the VET qualification/apprenticeship to follow. The location of a learner, i.e. where s/he resides, can be one of the factors influencing the participation in alternance schemes and mainly the type of VET track and qualification chosen. In rural areas in particular, students' choices are influenced by the opportunities available to them within a relatively limited distance.²³³ Enhancing the mobility of apprentices within the country could overcome such barriers.

Location can also affect the quality of the apprenticeship/alternance scheme available. As regional differences are observed in terms of employment and economic development, it can be expected that prospective VET students/apprentices that reside in less advantaged areas have less opportunities to find placements, as there are less employers in the area/region that can offer high quality placements. The lack of sufficient employers and therefore placements, does not only affect areas with economic/labour challenges, but also geographically remote areas. For example, this is an identified challenge for Finland and Portugal.²³⁴ In France however, some experts interviewed point out that in some rural areas learners have a better perception of apprenticeships (due to family traditions in crafts or agriculture) and hence there are more learners who choose apprenticeships as their first option or orientation.

Demographic developments

The demographic composition of a country impacts its economy, growth potential, and all relevant sub-systems, from education to pension schemes. Europe has an ageing population that directly affects the size and the composition of the youth cohort and the future working population. Among the EU countries, Germany and Italy²³⁵ are more severely challenged: along with Japan, they are the countries with the highest median ages globally.²³⁶ The shrinking youth cohorts imply an increased competition between VET and general education/higher education²³⁷. This stresses the need to bring down any silos in accessing VET and increase the quality of the training provided, so as to attract students.

Past demographic trends also impact the current and future availability of the workforce and learners; in Finland, the mass retirement of 'baby-boomers'²³⁸ in 2010 subsequently shrunk the size of the working population. As 'baby boomers' have started retiring across Europe, this is a challenge that policy measures, including education and training should tackle.

²³³ Champollion P. (2008), La territorialisation du processus d'orientation en milieux ruraux isolés et montagnards: des impacts du territoire à l'effet de territoire in Ministère de l'Éducation nationale (2008), Éducation & formations n° 77, L'orientation (http://cache.media.education.gouv.fr/file/revue_77/07/2/E&F77_Orientation_43072.pdf).

²³⁴ ICF International research on the selected countries.

²³⁵ Buhler P. (2011), The shrinking North. Project Syndicate. Retrieved from <http://www.project-syndicate.org/commentary/the-shrinking-north-on-23/5/14>.

²³⁶ United Nations, Department of Economic and Social Affairs, Population Division (2013), World Population Ageing 2013. ST/ESA/SER.A/348.

²³⁷ OECD (2011b).

²³⁸ 'Baby-boomers' are people born after World War II, from mid-1946 to 1964. The term highlights the significant increase in birth rates after the end of the war. 'The Older Population: 2010'. U.S. Census Bureau. November 2011. Internet: (<http://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>)

5.4. The role of policy learning across countries

Due to the relatively low rates of youth unemployment in Germany, Austria and the Netherlands, even amidst the economic crisis, the role of apprenticeships and work-based learning VET overall has risen in the policy agenda. There is a growing interest among European countries, the EU and the International Labour Organization (ILO) about ways that countries can join their efforts and learn from each other about promoting apprenticeships and offer viable solutions to youth unemployment.²³⁹ The exchange of learning, experiences and active collaboration between European countries seems to have a significant impact on the introduction or improvement of alternance schemes and the forms that these schemes take.

Exchanging learning and experiences

The European Alliance for Apprenticeships was launched in 2013 and it aims to stimulate the further development and improvement of apprenticeships in the EU. Through this initiative several countries prepared commitments to further developments in this field.²⁴⁰ In association with this commitment, Germany and the following countries: Spain, Greece, Portugal, Italy, Slovakia and Latvia, signed a Memorandum of Understanding on cooperation in the development of apprenticeships.²⁴¹ In this network, the German model of apprenticeships is considered a key source of inspiration.

Even before the signature of the European Alliance for Apprenticeships, several peer reviews on this topic were organised under the Mutual Learning Programme (MLP) of the European Employment Strategy.²⁴² These focused on youth unemployment, stressing work-based learning in VET and apprentices as possible remedies.²⁴³

The ILO also brings together countries to discuss apprenticeships and ways to promote them; the ILO hosted a Sub-Regional Workshop on Apprenticeship Systems in Europe in December 2013²⁴⁴, bringing together experts from countries with well-developed apprenticeship schemes and low youth unemployment (AT, DK) with countries that face employment challenges (CY, EL, ES, LT, PL, PT). Beyond the workshops, the ILO offers expertise to countries that try to upgrade or expand their apprenticeship schemes (e.g. in EL²⁴⁵).

The influence of the German dual education system

Germany's dual education system is constantly the focus of learning exchange initiatives among EU countries. This comes as no surprise, given that the German dual education system has been in place for many years, stemming from the Middle Ages. The German system is known to have inspired and continues to inspire alternance schemes in other countries.

²³⁹ Internet: <http://ec.europa.eu/social/main.jsp?langId=en&catId=1047&newsId=1989&furtherNews=yes>.

²⁴⁰ Internet: http://ec.europa.eu/education/policy/vocational-policy/alliance_en.htm.

²⁴¹ Internet: <http://www.bmbf.de/en/17127.php>.

²⁴² Internet: <http://ec.europa.eu/social/main.jsp?catId=1047>.

²⁴³ European Commission (2013c); European Commission (2013f); European Commission (2013i).

²⁴⁴ Internet: http://www.ilo.org/global/about-the-ilo/activities/event-coverage/WCMS_232391/lang-en/index.htm.

²⁴⁵ In December 2013, when interviews were conducted with Greek experts/stakeholders, this project was not yet officially launched and no additional information was available. According to the Hellenic Confederation of Professionals, Craftsmen & Merchants (GSEVEE), the project was expected to begin in January 2014.

In Portugal, the 'apprenticeship-type courses' were created during the 1980s, inspired by the German and French models of alternance training. The Training Association for Industry (Associação de Formação para a Indústria, ATEC), promoted by several German companies and by the German-Portuguese Chamber of Commerce and Industry, offers 'apprenticeship-type courses' with placements in large German and Portuguese companies as well as other foreign companies.²⁴⁶

The strong economic position of Germany, amidst the economic crisis in Europe, has intensified the influence of the German dual system on relative developments in other countries. Bilateral agreements/memoranda of understanding between Germany and Member States ES²⁴⁷, EL, IT²⁴⁸, LV, PT²⁴⁹ and SK), highlight the central role of Germany in the current setting of VET reforms in Europe.²⁵⁰

The impact of the German system was also underlined by the 2012 Berlin Memorandum²⁵¹, which was co-signed by VET ministers from Germany, Greece, Italy, Latvia, Portugal, Slovakia and Spain.²⁵² The Memorandum not only has set the ground for collaboration between Germany and the other countries, but is identified as one of the triggering factors for the VET reform in Greece (see Section 4.1). The collaboration of the six countries aims at setting the ground for a common European Vocational Education Area²⁵³ and contributes to the goals of the European Alliance for Apprenticeships of the European Commission. The Memorandum declaration²⁵⁴ identifies high youth unemployment rates as the igniting factor of the collaboration and highlights 'dual or work-based training' as a means to reduce unemployment and as a possible 'model of vocational education and training systems in Europe'.²⁵⁵

5.4.1.1. German paradigm: to copy or to inspire?

It is of no surprise that countries, which face severe challenges regarding unemployment, especially youth unemployment, try to come up with efficient solutions and fast. 'Learning from the best' is a way to achieve that. However, is the German dual system 'the best' and should, therefore, other countries adopt it?

No VET system is a panacea ...

It cannot be claimed that there is 'one best' VET system: a national/regional VET system, as part of the education system is one of several socio-economic sub-systems of a country/region. Therefore, a successful VET system is one that serves the needs of that particular economy and society. Granted the differences in economic and societal structures that exist even between relatively similar European countries, there is no room to doubt that a VET system should be tailored to each specific country.

²⁴⁶ For information on courses and participant companies, please refer to the ATEC web-page: Internet: <http://www.atec.pt/en/qualificacao-profissional/em-destaque/escolhe-o-teu-curso.html>.

²⁴⁷ Internet: http://www.bmbf.de/pubRD/absichtserklaerung_deutschland_spanien_berufliche_bildung_esp.pdf.

²⁴⁸ Isfol (2012a).

²⁴⁹ Internet: <http://www.portugal.gov.pt/pt/os-ministerios/ministerio-da-educacao-e-ciencia/mantenha-se-atualizado/20121105-mec-alemanha.aspx>.

²⁵⁰ More information on the memoranda of understanding that have been signed between Germany and Italy, Portugal and Spain can be found in Annex 5.

²⁵¹ More information on the Berlin Memorandum can be found in Annex 5.

²⁵² Internet: http://www.bmbf.de/pubRD/memorandumvocational_education_and_training_2012.pdf.

²⁵³ Internet: <http://www.bmbf.de/en/17127.php>.

²⁵⁴ Internet: http://www.bmbf.de/pubRD/memorandumvocational_education_and_training_2012.pdf.

²⁵⁵ Internet: <http://www.bmbf.de/en/17127.php>.

Comparing dual training approaches enforces this argument. Developed dual VET systems can be found in countries other than Germany; for example in Austria, Denmark and Switzerland. But even between the dual systems, the approaches are not identical, given that they are implemented in countries with differences in legislation, labour market/economy structure, prevailing VET tracks, etc. Also, the fact that the German system has not been adopted by many countries highlights the difficulties in importing it to other country settings. For example, one of the recognised success factors of the German approach to VET is the central role of the social partners and especially chambers. Introducing such roles in countries where the labour market is structured and organised differently, or where employer representatives do not have capacity equivalent to those of German Chambers, could be potentially ineffective.

... or doesn't need improvements

Undoubtedly, Germany holds a long tradition in the dual system, which is considered successful in meeting objectives regarding the economy, the society and the individual. However, the dual system is only a part of the German VET system. It can be inferred that the efficiency of these tracks and the education system overall also contribute to low youth unemployment rates.

Additionally, the German dual system is not a flawless system or one that faces no challenges.

- The demographic developments of the country highlight the challenges that will have to soon be met (See Sections 4.1.6 and 5.3.6).
- Another weak point of the German system is the transition period/system that is designed for those young people who do not find places in the dual system. Although it offers youngsters additional training to improve their chances of being accepted as an apprentice, the system is under criticism that it functions as a 'waiting loop'.²⁵⁶
- The structure of the selection process of apprentices has another negative implication. Although companies can choose apprentices even without qualifications, in practice most employers require a school diploma. This marginalises early school leavers, who face problems in finding training places.²⁵⁷
- The provision of guidance to students could be improved: the vast majority of youth choose apprenticeships that relate only to a small fraction of the existing apprenticeships/occupations.²⁵⁸
- The system faces difficulties when it comes to transition from other forms of education and training towards the dual system. In practice learners' prior achievements are rarely recognised and they need to start the programme from the beginning (even if they previously studied in a related field of study).
- Critics of the dual system as delivered in Germany could support the concept that apprenticeships heavily depend on the skills developed within one specific company or industry. At the same time, there is an increased need for individuals to combine job-relevant skills with transversal core skills (e.g. ability to analyse and organise complex information, take responsibility, manage risks and take

²⁵⁶ Hoeckel K. and Schwartz R. (2010), Learning for Jobs: OECD reviews of Vocational Education and Training – Germany and Bundesministerium fuer Bildung und Forschung-BMBF (2013) Berufsbildungsbericht.

²⁵⁷ Bundesministerium fuer Bildung und Forschung-BMBF (2013), Berufsbildungsbericht, p. 29.

²⁵⁸ Statement during the discussion following the presentation of Euler. D. (2013), Germany's dual vocational training system: a model for other countries? Presentation on 26/11/2013 in Brussels.

decisive actions).²⁵⁹ The knowledge economy and the permeability of technology across sectors demand the systematic improvement of skills, while workers need to have broader (in terms of more theoretical and flexible) skills.²⁶⁰ Some research findings²⁶¹ support these views: apprentices may experience shorter transition periods from training to employment in comparison to general education or school-based VET graduates, but this benefit is eliminated as time goes by, especially in countries with strong apprenticeship traditions (CH, DE, DK). One of the reasons for this could be that general education graduates are more likely to attend further career-related training during their working life than VET graduates. This offers them the opportunity to update the skills that facilitate their employment in the knowledge economy. It should be noted, however, that apprenticeships are considered to offer mostly general skills (i.e. skills that apprentices can use in other working environments)²⁶² and not firm-specific ones, which would limit the individual's employability/mobility to other firms. In particular, the average German firm has been found to offer just 12 % of firm-specific skills to apprentices.²⁶³ Skill profiles have been enriched with more theoretical aspects, leading to an increase in the length of training (on average from less than 34 months in mid-1980s to almost 37 months since 1990).²⁶⁴

Therefore, as with all education systems, the German dual system needs to find ways to be further improved and tackle future challenges. Any relevant changes will again be country-specific and should not be merely implemented in other countries, even if they face similar challenges.

Inspiring rather than blueprint

In conclusion, the German approach to the dual system can inspire other countries about how to upgrade and/or further strengthen the dual component in their VET systems; however, it should not be imported as such, in an existing and different legislative, policy and cultural framework. As noted in a recent study on this topic, it is important that countries identify the elements that can be easily integrated into an existing framework and then adapt and modify them as necessary.²⁶⁵ In the context of the Berlin Memorandum and the bilateral agreements of some Member States with Germany, the former can greatly benefit by drawing knowledge and expertise from German experts, identifying good practices that could be adapted to their national situations, grasping the opportunity to enhance the mobility of their learners, etc.

²⁵⁹ European Commission (2010c).

²⁶⁰ Thelen K. (2007), Contemporary challenges to the German vocational training system.

²⁶¹ Hanushek et al. (2011), General Education, Vocational Education, and Labor-Market Outcomes over the Life-Cycle.

²⁶² Acemoglu D. and Pischke J.S. (1998), Why do firms train? Theory and Evidence and Mohrenweiser, J. and Zwick, Th. (2008): Why Do Firms Train Apprentices? The Net Cost Puzzle Reconsidered.

²⁶³ According to Pfeifer H. et al. (2011), How large is the firm-specific component of German apprenticeship training? the average German firm offers just 12% of firm-specific skills to apprentices.

²⁶⁴ Thelen K. (2007), Contemporary challenges to the German vocational training system.

²⁶⁵ Euler D. (2013), Germany's dual vocational training system: a model for other countries?

6. FUNDING ALTERNANCE SCHEMES

KEY FINDINGS

- School-based VET is financed by government budgets (national or regional). The work-based part of apprenticeships/other alternance schemes is primarily financed by employers. It covers costs such as remuneration, insurance, tutor/trainer time and material equipment. Alternance schemes in several EU countries are also co-funded by the European Social Fund (ESF).
- The criteria used to determine the level of state funding to VET providers should be carefully chosen, to avoid directing the focus away from the quality of the training provided. For example, funding that relies mainly on the number of students trained in the school/provider offers incentives to increase the number of students, but not necessarily the quality of the provided training.
- In order to boost the offer of placements, governments try to incentivise employers by providing them with financial incentives (grants, subsidies, tax reliefs, etc.). Financial motives/reliefs are also provided to learners, so as to make participation in VET/alternance schemes more attractive, but also to support challenged social groups.
- The effectiveness of financial tools and measures highly depends on the specific national/local context and the relevant tax system. Financial incentives to employers should also be designed so as to avoid the deadweight effects and increased red-tape.
- Apprenticeships are more costly for employers than other VET schemes. However, there are direct and indirect benefits to expect. It is these expected net benefits that motivate employers to take on apprentices. So, employers need to be convinced about these foreseen benefits.
- The cost of apprenticeships/other alternance schemes is influenced by: the sectors where it takes place; the duration of work-based learning; the balance between general and firm-specific training that is offered to apprentices; the role of social partners, especially trade unions; labour market regulations, such as minimum wage; and student demographics.
- There is little analysis of the costs and benefits of alternance schemes where learners spend a limited amount of time in the workplace. It can however be expected that in such instances the benefits are mainly for the learners and much less for the employers. This also certainly depends greatly on the profession and the tasks but there is likely to be a minimum duration below which there is potentially little interest for the company to take on an apprentice (unless the tasks are those of unskilled workers). An important issue for the cost-benefit ratio of these schemes is the articulation between the work-based learning part and the school-based learning part of the scheme. If this process is not managed there is a risk that rather than a continuum, the two parts will take place in parallel, diminishing the benefits for the learner.

6.1. Overview

Having sufficient funds and an efficient funding mechanism in place are key factors for the sustainability and performance of a VET system.²⁶⁶ However, identifying suitable and sustainable funding mechanisms for VET can be challenging. The Helsinki Communiqué (2006)²⁶⁷ underlined the need to find a balance between public and private funding and investment mechanisms so as to promote and improve VET.²⁶⁸ Having a suitable funding mechanism in place is even more important amidst the recent economic crisis, when public and employers' resources have shrunk in many countries. Because during recessions the number of offered apprenticeships tends to decrease²⁶⁹, the economic crisis also highlights the need for funding schemes that are sustainable in economic downturns.

Research in the 10 selected countries highlights that, VET systems/alternance schemes' funding schemes bear differences across Europe. The key actors in financing are the state (central government or regional/local authorities), employers and individuals (learners). However, other organisations (e.g. chambers) are active in some countries, depending on the structure of the national VET system. Common characteristics have been observed among these funding schemes, regardless of their differences.

6.2. Public funding and incentives

Public funds targeting VET mainly concern the financing of public VET providers and publicly-funded (private) providers. Governments further support alternance schemes by offering financial incentives, direct or indirect, to employers that offer placements.

School-based VET- Who pays?

Public school-based VET is mainly financed by state/regional funds.²⁷⁰ State/regional funds are the main funding source of totally/mostly school-based VET systems and the school part (theoretical training) of alternance/apprenticeship schemes. State/government funding comes from the Ministry of Education or other educational authorities. State funds cover a wide range of costs, such as school infrastructure, teachers' salaries, textbooks, etc. Private VET providers co-exist with public ones in all countries, but their share is smaller. Private VET providers may receive financial support in some countries (DE, PT, UK (ENG)). This support usually depends on providers fulfilling specific criteria and/or their agreement to implement the state curricula. Regional/local authorities may also be involved in financing and/or managing, partially or fully, the budget for VET schools.

²⁶⁶ Tessaring M. (1998), *Training for a Changing Society. A Report on Current Vocational Education and Training Research in Europe*.

²⁶⁷ The Helsinki Communiqué on Enhanced European Cooperation in Vocational Education and Training. Communiqué of the European Ministers of Vocational Education and Training, the European Social partner and the European Commission, convened in Helsinki on 5 December 2006 to review the priorities and strategies of the Copenhagen Process.

²⁶⁸ Cedefop (2009a).

²⁶⁹ Brunello G. (2009), *The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence*.

²⁷⁰ Hoeckel K. (2008), *Costs and Benefits in Vocational Education and Training*.

Table 12: Main funding sources for school-based VET²⁷¹

Funding sources	Countries
State/central government (direct funding)	EL, FR, PT, UK(ENG), NL Teacher salaries: CZ, SK
Regional authorities	CZ (infrastructure), DE, ES, FI, FR (infrastructure), IT, LT, LU, PL, SK (infrastructure)

Sources: ICF International research on the selected countries; Eurypedia; European Commission- DG Employment (2012c)

However, VET providers may receive funding from additional sources, such as the Ministry of Labour (IT).

School-based VET: How is funding calculated?

The allocation of funds from state/government or regional authorities to VET providers is usually based on a wide range of criteria. Key criteria can be identified that drive the allocation of state funds to VET schools (Table 13).

Table 13: Criteria²⁷² for VET schools/providers' funding allocation

	Countries
Number of students/ Per capita	CZ, DK, EE, FI, IT, NL ²⁷³ , PL, PT ²⁷⁴ , SK, UK (Wales)
Programme characteristics	FR, PL, PT ²⁷⁵ , UK(ENG)
Outputs (e.g. number of qualifications achieved)	NL; reforms underway in FI and the UK(ENG)
(no one main criterion found)	EL

Sources: ICF International research; Eurypedia

As highlighted in Table 13, the number of students is the most common criterion used by governments to calculate funding directed towards VET schools, as it is the case for funding general education schools. Such funding systems typically motivate schools to try to attract more students. This creates a certain competition for students among

²⁷¹ European Commission- DG Employment (2012c).

²⁷² Categories drawn from Cedefop (1998), Output-Related Funding in Vocational Education and Training: A Discussion Paper and Case Studies, available on the Internet: (http://www.cedefop.europa.eu/EN/Files/5080_en.pdf).

²⁷³ The latest reform will change the funding system of schools: although the per capita rule will be kept, funding will be based on a cascade model that will link the amount per student to the student's year of training.

²⁷⁴ For public schools in general, including VET; Ministry of Education Portugal (2011a), accessed on 28/2/2014 from Internet: <http://dre.pt/pdf2sdip/2011/04/079000000/1802418026.pdf>.

²⁷⁵ For public funding to private providers of Professional Courses; Ministry of Education Portugal (2010), accessed on 28/2/2014 from Internet: <http://dre.pt/pdf2sdip/2010/12/236000000/5944459447.pdf>. Ministry of Education Portugal (2011b), accessed on 28/2/2014 from Internet: <http://dre.pt/pdf2sdip/2011/09/180000000/3752337525.pdf>.

training organisations (also between general education and VET schools). If implemented in a very liberal way it can result in an increase in supply of those programmes that are most 'popular' amongst young people (and their families). It is noted however, that this does not guarantee responsiveness to labour market needs. In fact some programmes that are popular (in terms of positive image) may have weak employability prospects.

State funding of VET providers can also depend on the characteristics of the VET programme offered: the duration, the demands in infrastructure and material, etc. This is more relevant to providers offering training within an alternance scheme or those in school-based VET where schools need equipped workshops, as the cost of such schemes varies across sectors (see Section 6.5).

Funding of apprenticeships in the UK (England) is also based on weighting. Funding comes from the Skills Funding Agency and goes to the training provider (for example, a further education college). Apprenticeship rates are applied to individual apprenticeships and based on a programme weighting formula. For example, apprenticeships are 'programme weighted' in order to recognise the relative costs of delivering in different sectors and subjects. So for example, the administration programme is weighted as 'base'; performing arts is 'low'; construction, planning and the built environment as 'medium'. Each component of the apprenticeship is assigned a funding rate depending on the programme weighting.

In Finland, the funding system takes into consideration cost variations in different VET fields/specialisations, since funding is calculated separately for each VET provider, based on unit costs.

Output-related funding does not take into consideration input indicators, such as enrolment of students, but considers the outputs/results of the training, for example the number of qualifications achieved.

In the Netherlands, the funding system of VET is based both on the number of students and the number of qualifications awarded.

However, the allocation of state funding to schools may also take into consideration the characteristics of the municipality/region (such as population, demographic composition, share of migrants, etc.) rather than the school itself (e.g. SE²⁷⁶).

Motivating employers and learners

Alternance schemes are considered less costly for governments/authorities than school-based VET, as a significant share of the learning (and thus the expenditure) takes place in a working environment. Particularly in apprenticeships, employers mainly cover the costs of the workplace training, (see Section 6.5). Nonetheless, governments may reimburse employers in order to encourage them to offer more placements; placements for the first time; and/or placements to specific groups of students (e.g. in DE).

Apprentices/students may also receive financial support from the state, while participating in an alternance scheme. However, since employers bear a greater share of the cost of apprentices/alternance schemes, financial incentives more frequently target employers rather than students.

²⁷⁶ 2012 Refernet country report.

Table 14: State funding incentives to employers

Financial incentives from state to employers	Countries
Grants	DE, FR, UK
Reduction in social contributions costs	AT, BE, CY, EL, FR, IT, SI
Tax incentives	FR, HU, SI
Subsidies	AT, CY, EE, NL, PL
Compensation for wages paid; bonus; other allowances/provisions	BE, DK, EE, FI, FR, HU, PL
No financial incentives	PT

Sources: European Commission-DG Employment (2012c); Refernet country reports (2012); European Commission (2013e); Torres C. (2012), Taxes and Investment in Skills; Steedman H.(2010), The state of apprenticeship in 2010: International Comparisons; ICF International research on the selected countries

Research highlights that several financial mechanisms are in place across Europe with the goal to promote work-based training. Table A6.1 in Annex 6 provides a more detailed overview of financial motives offered to companies and learners, to boost their participation in alternance schemes/apprenticeships.

As displayed in Table A6.1, subsidies or fixed payments to companies are one of the key financial instruments used by European countries. The provision of subsidies is usually linked to specific criteria, such as the employer having to offer additional apprenticeship placements. Linking apprenticeships with the provision of subsidies can make apprentices a more appealing choice than other groups of workers; so, the number of apprentices is expected to increase due to the subsidies.²⁷⁷ Therefore, subsidies can be used as a way to shrink the gap between the demand and supply of apprenticeship placements. In cases where subsidies are linked to the provision of placements to specific groups of young people, they further promote the training and up-skilling of youngsters that have not found an apprenticeship placement or are not sufficiently equipped to find a job. As the provision of subsidies is linked to specific individuals, this tool may also provide incentives to employers to ensure subsidised apprentices do not drop out.²⁷⁸

Tax incentives are another common financial tool that governments use to attract more employers into apprenticeships/alternance schemes. Given that employers bear costs (direct and indirect) by offering placements, tax incentives are a way to minimise their total financial burden; thus, tax incentives are viewed as a form of reward.

Training levies²⁷⁹ can be used to promote training as well. Employers contribute to a fund that pays for training and their organisations play a key role through training

²⁷⁷ Westergård-Nielsen N. and Rasmussen A.R. (1997), Apprenticeship Training in Denmark- The impacts of subsidies.

²⁷⁸ Fries J. et al. (2012), Do employment subsidies reduce early apprenticeship drop out?

²⁷⁹ ILO (2011), An Introductory Guide for Employers' Organizations: Tackling Youth Employment Challenges. Internet:
http://www.ilo.org/public/english/dialogue/actemp/downloads/projects/youth/tackling_ye_guide_en.pdf.

boards, or collective agreements. Employer organisations can agree with specific sectors on developing such a levy. Companies contribute to the levy usually based on a share of their wages; so, large companies' contributions are higher. Given that all companies can apply for financial support, training levies are believed to encourage companies to offer training to young people. Two main types of training levies have been identified:

- Disbursement schemes: all companies contribute to the tax, and the funds collected are then distributed only to companies that meet specific training criteria.
- Exemption schemes: companies that offer quality in-house training may be exempted from part of or totally of some of their taxes.

State funding tools may focus on specific sectors that face the biggest challenges in engaging employers. For example, in the UK (England), the ratio of apprentices' wages in relation to adult wages is higher in hospitality, customer service and retail, as less apprenticeship placements are offered in these sectors. The goal is to motivate learners/apprentices and companies, so as to tackle the gap in the training offered.²⁸⁰

Financial measures can also be used not as a reward for offering placements, but as a punishment for not offering them.

Since the 1970s, public debate in Germany has supported the idea of a training levy that would be implemented if a company (financially and from their infrastructure) is able to provide training places to youth, but decides not to do so.²⁸¹ A levy similar to this was included in the Apprenticeship Promotion Act of 1976, but was abandoned in 1980.²⁸² The debate is recurring – e.g. the current Training Pact ('Ausbildungspakt') is the result of a relevant public debate. Instead of opting for a fine, stakeholders who engaged in the Training Pact agreed to a 'voluntary self-commitment' to increase the number of training places.

Larger companies (more than 250 employees) in France have to fulfil a minimum quota of 'alternance' learners²⁸³ among their staff. This quota has been raised by 3 % to 4 % and will be raised to 5 % as of 2015. Employers that do not fulfil this quota have to pay an additional tax (malus).

6.2.1.1. Financial support from the European Social Fund

Several apprenticeship schemes across the EU are co-financed by the European Social Fund (ESF) (See Table A6.2 in Annex 6).

The extent to which alternance schemes rely on ESF funding varies greatly between countries. This shows that many countries do not have the capacity to stimulate sufficient employer engagement so they bear the full costs of apprenticeships. Given the current restrictions in public budgets, EU funding is used to support the supply of apprenticeship placements. Therefore, ESF seems to offer support to apprenticeships in Belgium, Bulgaria, Cyprus, France, Greece, Ireland, Italy, Latvia, the Netherlands and the UK.²⁸⁴ Its importance increases in countries/areas with slim state/regional budgets,

²⁸⁰ Steedman H. (2010), The state of apprenticeship in 2010: International Comparisons.

²⁸¹ Internet: <http://www.servat.unibe.ch/dfr/bv055274.html>.

²⁸² The regulation declared unconstitutional by the Federal Constitutional Court.

²⁸³ Either apprentices or persons who have signed a 'contrat de professionalisation'.

²⁸⁴ European Commission (2013d).

such as Greece and regions in South Italy.²⁸⁵ This does however raise the question of the sustainability of schemes that might heavily rely on European funds.

6.3. Employer contribution

The involvement of employers in the funding of apprenticeships is recognised as one of the quality criteria²⁸⁶ and key elements of apprenticeships.²⁸⁷

The level of employer contribution varies significantly across countries and is directly linked to the share of work-based learning in VET programmes.

Table 15: Level of investment by firms in upper secondary VET programmes with a work-based component (low, medium, high) relative to the share of students (low, medium, high) enrolled in these programmes²⁸⁸

	Importance of investment by firms ²⁸⁹		
Share of dual/part-time VET to all pupils	LOW	MEDIUM	HIGH
HIGH (30 %)	CZ, DK, EE	AT	DE, CH
MEDIUM (6-30 %)	FI, NO, SK	FR, HU, LU, UK	
LOW (<6 %)	BE, EL, IE, PL, PT, SI, SE		
Subsidies	AT, CY, EE, NL, PL		

Sources: OECD (2011a).

Although country differences exist, employers in all the selected countries cover the apprenticeship wage, and most often the social security insurance costs. Besides the direct funding of apprentices' costs (wages), employers may contribute to funding through taxes (e.g. the apprenticeship tax -taxe d'apprentissage- in France).

Collective employers' contributions and employer/sectoral associations can also play a critical role in supporting the funding of apprentices/alternance schemes.

In Poland²⁹⁰, employers can be reimbursed for the apprentices' wage and social security insurance costs by the Labour Fund, which is part of the state budget, but is supported by contributions from all companies in the country. Also, members of the Polish Craft Association can be funded by the Educational Fund of the Association.

²⁸⁵ Data not available for regions in Italy.

²⁸⁶ Berneri L. in Linderholm and Parker (2000), Quality in Apprenticeships in the European Union.

²⁸⁷ Fuller A. and Unwin L. (2003) in Rudd H. et al. (2008), Rapid Review of Research on Apprenticeships.

²⁸⁸ Only EU countries, Norway and Switzerland included; the source includes all OECD countries.

²⁸⁹ According to the OECD (2011a), the importance of investment by firms is an index that reflects the time that trainees spend in the workplace, the intensity of training (weekly instruction time) at the workplace, and controls for public reimbursement of such expenditure.

²⁹⁰ Minister of Labour and Social Policy Regulation of 26 April 2007 on the reimbursement from the Labour Fund salaries paid to apprentices (Journal of Laws 2007, No 77, item. 518 with further amendments), <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20070770518>; and interviews with experts during the ICF International research on Poland.

6.4. Costs and benefits of apprenticeship and other alternance schemes

In VET systems with alternance schemes, the equilibrium between costs and benefits (monetary or not) has several implications on the decision of actors to be involved in alternance schemes/apprenticeships, and effectiveness.²⁹¹ Costs are borne by governments/authorities, employers and learners and benefits are expected for all three actors. Table A6.3 in Annex 6 offers an overview of the direct and indirect costs for the student and the employer for the school-based part and the workplace training.

When combining all costs (direct and indirect) school-based VET systems imply lower investment than work-place training, especially apprenticeships. But alternance schemes are less costly for the state compared to full school-based VET: as students spend time periods in workplaces, less infrastructure/machinery is needed in schools, fewer teaching time is needed from VET teachers, etc., all suppressing the state expenditure. It is estimated that the state bears about 25 % of the cost of an apprenticeship.²⁹²

However, one should not claim that the costs are high or low without viewing them in relation to benefits. All stakeholders should receive returns on their investment in alternance schemes, regardless if the investment is monetary or in terms of time invested. However, as holds true for education overall, some forms of positive impact on the direct beneficiary (learner) and even more on employers, society and the economy overall, may be visible only in the medium or even long-term.²⁹³ A cost-benefit analysis of apprenticeship and alternance schemes should therefore take into consideration both the short and medium-term benefits. For example, when it comes to medium-term benefits, it is estimated that in 2021-22, English apprenticeship completions between 2012-13 and 2021-22 will contribute GBR 3.4 billion net productivity gains to the UK (England) economy.²⁹⁴

Given the high cost, why do employers engage in apprenticeships? Employers agree to share the costs of apprenticeships as they anticipate recouping their costs through direct and indirect benefits. Therefore, they need to be convinced of the benefits of engaging in alternance schemes in order to participate.²⁹⁵ This holds even in countries with well-developed apprenticeship schemes, such as Switzerland.²⁹⁶

Moreover, the expected net benefits are believed to impact on employers' attitudes towards apprentices.²⁹⁷ If an employer expects to receive net benefits from apprenticeships, they will potentially have more tolerance for less productive performances from apprentices in the initial stages of training. On the contrary, employers that expect to benefit from net costs will focus on the apprentices that can be productive immediately, i.e. those with greater abilities. This can boost the dropout rates for apprentices that are 'weaker'. Likewise, the expected net costs can also impact on employers' selection of apprentices²⁹⁸, by leaving out the weak students, dropouts of

²⁹¹ Berneri L. in UEAPM in Linderholm and Parker E (2000), Quality in Apprenticeships in the European Union.

²⁹² European Commission (2013f).

²⁹³ Table A6.4 in Annex 6 includes the main short-term and long-term benefits from VET programmes/apprenticeships.

²⁹⁴ Based on data produced by the Centre for Economics and Business Research (March 2013).

²⁹⁵ Hogarth T. et al. (2005), Maximizing apprenticeships: completion rates.

²⁹⁶ Wolter S.C. et al. (2003), Why Some Firms Train Apprentices; Muehleemann S. et al., 2007 in Dionisius R. et al. (2008), Cost and Benefit of Apprenticeship Training: A Comparison of Germany and Switzerland.

²⁹⁷ Muehleemann S. et al. (2013), in Muehleemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

²⁹⁸ Muehleemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

other education levels or youth from any kind of group that can be considered likely to be less productive or likely to drop out from the scheme.

Factors affecting the costs and benefits of apprenticeship schemes

Literature underlines a variety of factors that influence the funding schemes of VET schemes/alternance programmes, especially apprenticeships:²⁹⁹

- Type of training provided: school-based versus mostly company-based:
 - net costs/benefits incurring for companies;
 - net costs and benefits for learners; but also,
 - perceived costs and benefits for both companies and learners.
- For alternance schemes with a high share of work-based learning, the sector/industry where this takes place affects the costs.³⁰⁰
- The balance between general or (firm) specific training offered by employers.
- Framework conditions, such as:
 - the level of involvement of employers in training;
 - the role of social partners in VET, and especially trade unions;
 - labour market regulations, defining minimum wages.
- The popularity of VET and alternance schemes in particular that can underline the need for financial or other incentives to companies and/or learners to boost participation.
- Student demographics and characteristics (age, previous education attainment, time needed to complete the VET programme and to secure an apprenticeship placement).³⁰¹

The apprentice wage is the key direct cost that employers bear. The level of this wage is identified in the apprenticeship contract, may be defined in national legislation, and is usually calculated as a percentage of the national or sectoral (minimum) wage. Apprentices receive different levels of wages across countries³⁰², due to differences in wages, sectors, relevant regulations, duration of the scheme, etc.

Table A6.5 in Annex 6 presents the remuneration of apprentices in the selected countries that have apprenticeships in place. The level of apprentices' remuneration may depend on the age of apprentices (FR, NL); the specific qualification they are hoping to attain (DE) and the working experience of the apprentice (FR, PL).

Significant differences have also been observed between the apprenticeship wages in different sectors. Ryan et al. (2011)³⁰³ identified a gap between the initial wage of

²⁹⁹ There is more information from countries and literature on the costs and benefits of apprenticeships, as the latter are more regulated and have drawn the interest of researchers.

³⁰⁰ European Commission (2013g) and Ryan et al. (2011), Financial aspects of Apprenticeship Training in Germany, Great Britain and Switzerland.

³⁰¹ Hoeckel K. (2008), Costs and Benefits in Vocational Education and Training and Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

³⁰² Ryan P. et al. (2011), Financial aspects of Apprenticeship Training in Germany, Great Britain and Switzerland.

³⁰³ Ryan P. et al. (2011), Financial aspects of Apprenticeship Training in Germany, Great Britain and Switzerland.

apprentices in engineering and retail in Germany, Switzerland and the UK. The gap can be attributed to the time that apprentices spent in companies; due to the complexity of infrastructure and tasks in engineering, apprentices spend more time in the vocational school than in the company during the first year of apprenticeship. In retail, the opposite holds true. Sectoral differences in wages may also stem from the different educational background of apprentices. In Germany, an apprentice for mechatronics, who holds an upper secondary degree, receives about EUR 930 gross wage, while an apprentice hairdresser, who holds a lower secondary or even no degree, only about EUR 370 gross.³⁰⁴ Sectors influence the cost of apprentices through the demanded infrastructure: sectors like manufacturing and engineering, where high-tech infrastructure is mostly necessary, involve higher costs than other apprenticeships, such as cooks.

The structure of the training plan, the share of firm-specific training and all the above factors determine the net costs/benefits per sector and the anticipated pay-back period for companies. For example, in the UK (England), engineering and construction apprenticeships demand more pay-back periods (two to three years) than retail, hospitality and business administration.³⁰⁵ In Germany, companies need more time to recoup their costs from apprenticeships in manufacturing than from apprenticeships in trade, commercial, craft and construction occupations.³⁰⁶

Although the level of wage depends on country-specific regulations and agreements, trade unions positively affect the apprentices' wage level³⁰⁷; in Germany, firms belonging to unions are far more likely to be engaged in training and minimum wages/wage compression has a greater influence in those firms than in non-unionised ones.³⁰⁸

But are these wages sufficiently attractive, both for apprentices and employers? It can be inferred that apprentices are interested in high wages and employers in low ones. So, is there an ideal wage, satisfying both ends? Apprentices can accept a low wage (lower than that of a worker), if at the end their skills can be certified, nationally recognised and valued³⁰⁹, as this would increase their employment mobility. The net investment (which includes the apprenticeship wage) that employers are willing to make is directly linked to the content of the training provided and viewed as the balance between training on firm-specific³¹⁰ and general skills.³¹¹ General skills are more easily transferred to other firms/work environments and allow apprentices to easily move to another employer after the completion of the scheme. However, it is easier for employers to offer firm-specific training, as the production line/working style is not disturbed. The size of the firm plays a role in the balance between general and firm specific skills provision: larger firms offer more general skills, while smaller ones more

³⁰⁴ ICF International research. There are also significant differences in apprenticeship wages between East and West Germany, e.g. for hairdresser: 469 West, 269 East. Internet: http://www.bibb.de/dokumente/pdf/a21_dav_internet-fachbeitrag_azubiverguetungen-2013.pdf.

³⁰⁵ Gambin L. et al. (2010), Recouping the costs of apprenticeship training: employer case study evidence from England.

³⁰⁶ Mohrenweiser J. and Zwick Th. (2008), Why Do Firms Train Apprentices? The Net Cost Puzzle Reconsidered.

³⁰⁷ Ryan P. et al. (2011), Financial aspects of Apprenticeship Training in Germany, Great Britain and Switzerland.

³⁰⁸ Dustmann Chr. and Schönberg U. (2004), Training and Union Wages.

³⁰⁹ Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses; Bassanini A. et al. (2009), Workplace training in Europe.

³¹⁰ For example, operating a specific software, company process etc.

³¹¹ For example, selling skills.

company specific skills.³¹² Therefore, apprentices in large firms can be expected to have better labour market prospects.³¹³

The duration of the apprenticeship/alternance programme also influences the cost-benefit equilibrium for employers. Research highlights that employers can recoup their investment at the end of the apprenticeship, given that the productivity of the apprentice is progressively growing. So, employers will have at the end a skilled worker, who is paid less than an individual who is recruited from the labour market. It is estimated, that apprentices reach 70-85 % of the productivity of a skilled worker³¹⁴, at the end of an average apprenticeship, but variances are observed between countries, due to the different training systems, intensity of training, etc.³¹⁵ The productivity of an apprentice related to a skilled worker also depends on the sector. For example, a study found that an apprentice in engineering reached 45 % of a skilled engineer's productivity: whereas in hospitality, the relative share was 80 %.³¹⁶ On the other hand, incurring net costs at the end of the apprenticeship means that the company should retain the apprentice for a longer time period, to break even its investment - which is also beneficial to the apprentice, as the transition period into employment is nullified.

Retaining an apprentice as an employee offers additional indirect benefits: the company saves the significant costs incurred by recruiting skilled workers from the labour market, training them to firm-specific processes/tools and allowing them to adjust to their new working environment³¹⁷. This feature of costs and retention varies between countries. In Germany, companies on average have net costs at the end of apprenticeships, so the retention of apprentices is quite high (60 % in 2007³¹⁸). On the other hand, the retention rate in Switzerland is lower, as firms receive the net benefits at the end.³¹⁹

The tasks that apprentices perform in the company also determine the net cost/benefit; if the tasks demand skills, then net cost/benefit is implied by the time the apprentice needs to complete the task, comparing the productivity of the apprentice with that of a skilled worker and that worker's wage. For unskilled tasks, however, the benefit to the firm is equal to the wage of unskilled workers in the market. This highlights the link between apprenticeships' costs and benefits and wages in the labour market.³²⁰ Most importantly, it proves that the tasks apprentices are asked to perform directly affect the company's costs and benefits. Therefore, having the apprentice perform more productive activities can minimise the (net) costs, as has happened in Germany.³²¹

Costs and benefits of other alternance schemes (not apprenticeships)

In comparison to the literature on apprenticeships as analysed above, there is little analysis undertaken on the costs and benefits of other alternance schemes. Nevertheless the following assumptions can be proposed:

³¹² Pfeiffer H. et al. (2011), How large is the firm-specific component of German apprenticeship training?

³¹³ European Commission (2013g).

³¹⁴ Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

³¹⁵ Lerman R.I. (2013), Skill Development in Middle Level Occupations: The Role of Apprenticeship Training.

³¹⁶ Gambin L. et al. (2010), Recouping the costs of apprenticeship training: employer case study evidence from England.

³¹⁷ Blatter M. et al. (2012), Hiring Costs of Skilled Workers and the Supply of Firm-Provided Training.

³¹⁸ Internet: http://www.bibb.de/dokumente/pdf/Apprenticeship_Training_in_Germany.pdf.

³¹⁹ Lerman R.I. (2013), Skill Development in Middle Level Occupations: The Role of Apprenticeship Training.

³²⁰ Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

³²¹ Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses.

- the costs of those schemes where learners spend less time on the workplace are highly likely to be lower than in apprenticeship schemes. The time and material needed is lesser.
- at the same time the benefits are likely to be smaller because the learner spends less time in the workplace being productive. Furthermore, given that in some schemes the time spent by learners in the workplace is limited to a few weeks or months, the extent to which they can build up sufficient understanding of the company to really productively contribute can be questioned. As shown in the cost-benefit analysis of apprenticeships it takes time for learners to become productive in these intensive schemes. Therefore, it is possible that in some alternance schemes the main benefits are mainly for the learner and the benefits to the company are marginal. This is however likely to vary greatly from one sector to another depending on the complexity of the tasks.
- there can be traineeships or other forms of alternance placements where learners can be productive from early stages however, these are likely to:
 - either require low levels of skills and competence; or
 - activate very general skills and competence; or
 - require very good coordination between the school-based and company based part (see below).
- the fact that the benefits to employers are lower for these more short term schemes explains the absence or very minimum level of remuneration expected in these schemes. In most countries where learners spend from a few weeks to a few months in the workplace, the learner receives no remuneration but only an allowance expected to cover his/her costs, providing rather symbolic motivation.
- consequently, there is likely to be a minimum duration of time for employers below which the direct benefits of hosting a learner are likely to be zero. Nevertheless, this can still offer mid-term benefits, as employers can identify young people with potential whom they may want to target once they obtain their qualification.

The discussion above highlights one key challenge for the effectiveness of alternance schemes (which is also partly applicable in apprenticeships) and that is the articulation between what happens in school and what happens in the work-place. In order for these forms of work-based learning to be most effective, it is important that there is continuity and ongoing feedback between what happens in each setting. Due to the frequent alternation this is probably taking place more naturally in apprenticeships. Though there is little analysis of the quality of traineeships or placements in alternance schemes, some interviewees voice concerns about the linkage between workplace and school-based training. Countries such as France³²², Finland or the Netherlands have introduced measures to improve this articulation.

³²² Kalck P. et al. (2013), La mise en œuvre de l'alternance intégrative dans les formations du travail social, Etat des lieux dans trois régions.

6.5. Main issues with the different funding schemes

Public funding

Fixed amount of lump-sums: It could be argued that fixed amounts of lump-sum funding do not provide schools with incentives to promote the quality of VET, nor does it reward good practices/exemplar schools. Another weakness of fixed amounts of funding links to the lack of providers' incentive to encourage students to complete their studies.

In Finland, where the funding system of IVET providers includes fixed annual grants per student, a reform is currently under discussion. The new funding system is expected to place greater emphasis on output-related indicators, such as completion rates and the prevention of dropout, as the funding will be based on the number of new completed qualifications.³²³

Per capita: This type of funding poses the challenge of schools focusing only on increasing their number of students, which could loosen admission criteria. In alternance schemes, per capita funding may allow schools to invest fewer resources in quality assuring the training programme offered by employers, trying to match placements with students' preferences, etc. This of course, should be possible with national/regional/local regulations. Therefore, such funding schemes should be linked to performance-based indicators that will stress the quality of the training offered, their infrastructure and the alternance schemes and not just quantity. Relevant legislation and quality assurance mechanisms should safeguard the quality of the admission criteria and the learning experience of students. In the cases where per capita funding is calculated based on weights/rules, what they entail and how they are calculated should be apparent to VET schools/providers: otherwise, the incentives to schools/providers are unclear- as is reportedly the case in the Czech Republic, where funding is allocated based on regionally-defined rules (called normatives).³²⁴

Per capita funding can create further issues in countries with demographic challenges: since in these countries the number of young people is shrinking, schools find themselves competing to attract more students (e.g. CZ). One may argue that increased competition can positively influence quality however in most cases the competition takes place on image solely and this is not necessarily related to the labour market relevance, quality of learning or employability prospects.

Employer support from state financing tools/measures

Although financial incentives to employers may have advantages, their implementation can raise concerns. For example, subsidies offered to employers to accept additional apprentices can affect the profile of the average apprenticeship applicant; the additional apprentices may not have the necessary skills and capabilities, therefore demanding additional training and effort from the in-company trainer/master. This leads to an increase in the costs for the employer³²⁵, which in turn can disengage them from offering apprenticeships in the future. Also, direct subsidies are believed to impact on an employer's decision to start offering placements, but not increase the demand for apprentices with employers that already offer such training.³²⁶

³²³ ICF International research on the selected countries.

³²⁴ Internet: <http://www.msmt.cz/vzdelavani/skolstvi-v-cr/ekonomika-skolstvi/otazky-a-odpovedi>.

³²⁵ Steedman H. (2010), The state of apprenticeship in 2010: International Comparisons.

³²⁶ Mühlemann S. et al. (2005) in Hoeckel, K. (2008), Costs and Benefits in Vocational Education and Training.

To avoid deadweight effects, financial support should be targeted to specific sectors/industries³²⁷ which would otherwise not offer apprenticeship placements. Offering financial support across all employers/sectors could also incentivise firms in sectors where apprenticeship training bears low costs. These companies will offer more apprenticeships even if the skills involved are not sought after from the labour market.³²⁸ Subsidies can also strengthen substitution effects, i.e. employers are provided with incentives to hire more apprentices instead of unskilled and semi-skilled workers. This is especially evident in times of economic downturn³²⁹, such as the one Europe is currently experiencing.

The same holds for tax incentives. Their effects are believed to be stronger for SMEs (and especially very small companies) that have less available resources and are severely challenged by the current economic crisis. However, tax incentives may not be as efficient for large companies that are already engaged in offering placements and are, thus, more likely to participate in apprenticeships/alternance schemes regardless of any financial motives (deadweight effects).³³⁰

The effectiveness of taxes relevant to apprenticeships/alternance schemes also depends on their complexity and the way companies perceive them. For example, in order to apply and receive tax levies, employers often have to deal with red-tape. Complex application processes mean that few companies seek grants for training, and funds often build up a cash surplus. Moreover, levies that are too high will increase labour costs to the extent that employers are unwilling to take on more apprentices.

In order to attract employers, all types of financial tools/measures should also be easy to apply. Experts underline the setback of the substantial bureaucracy needed for applying and receiving reimbursement and for participating in apprentices in general.³³¹ The timing of reimbursement can also impact the decision of employers about who to involve; for example, in the Netherlands, the newly established national subsidy will be provided to employers at the end of the training or in instalments. This raised concerns from some companies regarding their liquidity levels.³³²

³²⁷ Brunello G. (2009), The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence.

³²⁸ Wolter S.C. and Ryan P. (2011) in European Commission (2013e).

³²⁹ Brunello G. (2009), The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence.

³³⁰ Cedefop (2009b).

³³¹ European Commission (2013h).

³³² ICF International research on the selected countries.

European Social Fund

The European Social Fund (ESF) facilitates the implementation of alternance schemes across Europe. In the current adverse economic situation, especially in the South of Europe, ESF can keep those schemes running and provide the basis to take over necessary reforms. However, ESF should be viewed by national governments and stakeholders as an additional, supporting measure, rather than a permanent funding mechanism.

In Greece, the only apprenticeship scheme available before the 2013 reform (See Section 4) was co-financed by ESF. The reform introduces alternance schemes and apprentices in all VET tracks and its implementation is expected to again heavily rely on the 2014-2020 Operational Programme of ESF. Although this allows bridging the gap from slim state funds, experts express concerns that it may lead to a new VET system that is not self-funded and therefore will not be viable if the flow of EU funds changes or ceases.

The role of ESF can also impact on some of the characteristics of apprenticeships/alternance schemes. ESF offers funding to young people up to 25 years old. This could have an effect on the age cohorts of apprenticeships in some countries, especially in those that are over reliant on the Fund.

7. ALTERNANCE SCHEMES: EXISTENCE OF DIFFERENT MODELS – THEIR STRENGTHS AND WEAKNESSES

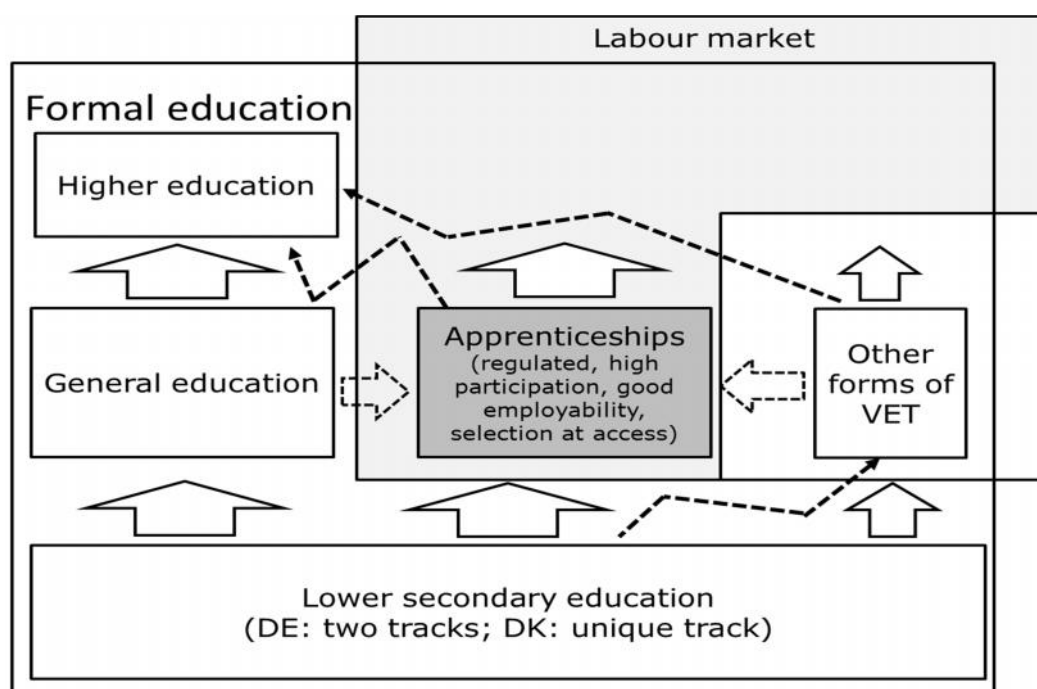
KEY FINDINGS

- Although alternance schemes across Europe are adjusted to the country VET system, four main types of VET pathways can be identified, concerning if and how work-place learning is embedded: a fully-fledged apprenticeship system; systems where apprenticeships are parallel to other VET tracks; school-based VET tracks with high shares of work-based learning; and predominantly school-based VET systems/programmes.
- The so-called fully fledged apprenticeship can be found in Austria, Denmark, Germany and Switzerland. Apprenticeships exist in other countries, as well - but it is in these three countries where apprenticeships are the main VET track: it is highly recognisable and regarded by young people and employers and therefore attracts a significant share of VET students (the majority in Germany and Switzerland). Other alternance schemes may be in place, but they are only complementary or considered to be of lesser value than apprenticeships.
- In the countries with fully fledged apprenticeships, apprentices can enjoy the benefits of this type of training (such as real work experience, development of vocational and soft skills, high employability), but also face challenges. The system is highly dependent on employers, so when they offer fewer placements, young people, especially those with disadvantages, can be left out of training and marginalised. Because they rely heavily on employers, apprenticeships demand developed infrastructure and the capability to offer training which covers the whole qualification. This can be challenging for smaller companies.
- Apprenticeships can be a significant part of the VET system, but not necessarily the 'key pathway'; in some countries (EL, FR, IT, NL, PL, UK [England]), apprenticeships are offered as a parallel track to other VET schemes. In these countries, dual education covers a broad range of qualifications and offers training in highly respected professions with interesting career opportunities. However, the risk of exclusion of students that face challenges is smaller than in the full-fledged apprenticeships, as there are more alternative pathways. Hence, alternance schemes often play an important role in the efforts of countries to reduce early school-leaving and direct students at risk of dropping out back into education.
- On the other hand, there are school-based programmes that include significant shares of work-based learning. The work-based learning takes place in an employer's company and is mandatory to acquire a qualification. The share of the work-based learning may depend on the scheme (PT) or the type of qualification to be attained (FR).
- Such programmes are easier to implement than apprenticeships, as the work-based learning is usually less regulated and more flexible, can be suitable for students that are not 'apprentice ready', and employers bear less costs. However, the increased flexibility mandates the need for stricter quality assurance, while employers may be more reluctant to participate, given that training periods are shorter and trainees do not have the sufficient time to reach the productivity level of an apprentice.
- School-based VET programmes may be the most common type of programme offered across Europe, but in the cases where it is the main type of VET available in a country, there are weaknesses that need to be overcome; the training offered is not linked to the labour market needs, as employers have none or little collaboration with schools. This impacts the employability of graduates and hence the attractiveness of these schemes to students.

7.1. The fully fledged apprenticeship as a mainstream model of VET in a given country (for example: Germany)

Key features of the fully-fledged apprenticeship system

Figure 3: Schematic presentation of fully fledged apprenticeships' place in the rest of the education and training system



Source: ICF International

In several countries (e.g. CH, DE, DK) apprenticeships are the mainstream model of VET and the regular pathway of acquiring a specific vocational qualification. In these countries apprenticeships are the core of VET. This does not mean that there are no school-based VET programmes, but these tend to be restricted to specific sectors and qualifications (e.g. the health care and education sectors in Germany). As illustrated in Figure 3, in these systems apprenticeships are:

- closely integrated into the labour market and embedded in labour market related legislations (contract, remuneration, social security, other benefits).
- part of the formal education and training system.
- one of the main options for those who complete lower secondary education, next to general education or other forms of VET (sometimes students from these other pathways aspire to become apprentices and move towards apprenticeships by positive choice).
- a popular choice among students.
- selective pathways meaning that not all students manage to find an employer willing to take them for an apprenticeship, directing these young people towards other options.
- they do not always provide learners with direct access to higher education, requiring them to pass through complementary courses or examinations.

This section describes the main commonalities between apprenticeship systems in these countries. There are however also notable structural differences between them. For example, in Denmark³³³, the VET programmes start with a so called foundation course. This is an introductory programme in a given sector that students follow before they choose their specialisation. These programmes are mostly based in VET colleges and workshops. It is only on completion of these programmes that young people need to find an apprenticeship placement. These differences can be important to understand the features of each of the country system but they are not discussed here.

In a fully-fledged apprenticeship system, apprenticeships are an established way of learning, are well-known and well-accepted in the society. In the relevant countries, participation rates in apprenticeships are high, and apprenticeships are offered for a broad range of qualifications.³³⁴ The training leads to the development of the comprehensive professional capacity of the apprentice. Apprenticeships end with a final exam leading to a diploma that is in general widely recognised and has a high value on the labour market.

Learning is systematically shared between two learning venues: the company and an educational institution. Practical training takes place in a real-life work environment on employers' premises. In-company trainers are experienced professionals and providing training to prepare apprentices for their role is mandatory. Complementary to the practical training, theoretical training takes place in educational institutions (schools, training centres, VET providers). In both Denmark and Germany, the school part of apprenticeships takes place in public education institutions. The standards or the curriculum depend on the occupation. In Germany, there are national framework curricula, but the final curriculum is decided upon at the Laender level.³³⁵

Although most of the training takes place in the workplace, learning at the school is also considered an important element of fully-fledged apprenticeships. The aim of school-based learning within the framework of apprenticeships is to ensure that individuals acquire essential, theoretical knowledge, to foster and complement their company-based learning, and to broaden their general education.³³⁶ Consequently, the curriculum contains general educational elements along with the occupation/field specific elements.

Despite the strong work-place element, apprenticeships in these systems are viewed as training pathways that are based on pedagogical understanding and not a type of employment.³³⁷

This duality of learning venues is reflected by plural governance structures involving national ministries³³⁸ as well as business associations and educational organisations through established cooperation structures and formalised (legal) regulations. While the state governs vocational schools and school curricula, social partners play a key role in relation to both the content and organisation of work-place learning.

³³³ Cedefop (2012), Vocational Education and Training in Denmark Short Description.

³³⁴ AT: 206 legally approved qualifications, DE 348 training occupations, DK: 12 foundation courses which are the basis for 109 main programmes comprising different steps and specialisations leading to a total of 309 recognised qualifications. Source: Refernet reports (2012) and ICF International research on the selected countries.

³³⁵ Institut für Bildungsforschung der Wirtschaft Factsheet Lehrlingsausbildung Deutschland – Österreich.

³³⁶ As noted, for example, in Article 46 of the Austrian School Organisation law. Available on the Internet: http://www.jusline.at/46_Aufgabe_der_Berufsschule_SchOG.html.

³³⁷ Deissinger, Th. (2010), Dual System.

³³⁸ AT: Federal Ministry of Economy, Family and Youth; DE: Federal Ministry of Education and Research, DK: Ministry of Children and Education.

- In Germany, employers, through their chambers, provide their opinion regarding school curricula, supervise the provision of work-based training, and regulate examinations.
- The Danish VET system is characterised by a high level of stakeholder involvement where not only the social partners, but also vocational colleges, teachers and students, are involved in the development and delivery of VET qualifications based on consensus and shared responsibility.³³⁹

Due to the high level of employer engagement, qualifications are transparent to employers. Nationally approved training regulations, occupational profiles and qualification frameworks support recognition at the national level. In countries with a high level of decentralisation in education, national coordination may be supported by governmental agencies or centres of expertise. In Germany, for instance, the Federal Institute for Vocational Education and Training (BIBB) works to identify future challenges in VET, undertakes research and data collection supporting monitoring and review, and develops reforms. In Denmark, regional differences are stronger, due to the training centres' higher degree of leeway.

Equally reflecting the principle of duality, costs for apprenticeships are shared between state and business stakeholders; school-based training (schools, equipment, teachers) is funded by the state and in-company training is funded by the companies. In-company training may be funded:

- by each individual training company: Employers cover the wages of apprentices (incl. social benefits) and provide training in line with the official regulations (incl. in-company trainers) (DE); or
- through a national apprenticeship fund: All employers, regardless of whether they provide training or not, are obliged to pay an annual contribution. The money is then allocated to the training companies to cover apprenticeship costs (DK).

Apprentices are contractually linked to the employer and receive remuneration, including health insurance and pension rights. Contracts are signed between the training company and the apprentice and valid for the duration of the apprenticeship; hence, apprentices have a form of employee status. Yet, since it is regarded to be in the public interest, that apprentices receive the opportunity to finalise training and acquire a qualification, they may be better protected than regular employees.

In line with their employee-like status, it is the responsibility of the future apprentice to find a placement. All youth seeking a training place have to go through an application process; their selection lies at the decision of the employers. Employers in these countries see apprenticeships as part of their recruitment strategies, hence they select very carefully and in view of whom they would like to employ long-term. In Denmark though, it is also the student's responsibility to find a placement; VET schools have a brokerage function between the school and companies. They take it upon themselves to develop a network and ensure a sufficient supply of apprenticeship placements to students. This approach is strongly encouraged by national level authorities as it is seen as a measure to prevent dropping out from apprenticeships.

In Germany (and also in Austria), apprenticeships are seen as holistic qualifications leading to comprehensive professional capability.³⁴⁰ Training lasts for two to three and a

³³⁹ Refernet country report Denmark (2012).

³⁴⁰ For students with special needs, Austria offers an inclusive IVET pathway leading to a partial qualification (2012 Refernet country report).

half years (depending on the professional profile) and ends with a final exam, upon which a diploma is granted. Once a student has achieved a degree or a qualification, s/he can proceed to next level of education. As noted earlier, in Denmark, training starts with a one-year foundation course, which is concluded with an exam. Students continue on from there and enter the main vocational programmes. The certification for the foundation course already provides a partial qualification but it does not qualify for a profession and does not have specific labour market relevance. Instead it enables persons to better choose their orientation.

The key characteristics, as described above, stress the indispensable link between dual education and the labour market; dual education, especially in its fully-fledged form, is built around the vocational/occupational principle (Berufsprinzip in Germany and Austria).³⁴¹ This is also reflected in the balance between general and firm-specific skills. The German system is especially considered to offer 'portable occupational skills'.³⁴² Apprentices are trained to receive a qualification on a specific occupation that will allow them to become employed. Employability is fostered through the institutional involvement of the labour market, and all social partners in shaping and implementing apprenticeships. So, dual education functions for and in accordance to the labour market, supplying the economy with well-trained workers in sought-after occupations and offers young people significant opportunities for personal development.

It should be also stressed that fully-fledged apprenticeship models in IVET are usually complemented by options to continue training in a differentiated CVET system, offering options for further qualifications and career advancement.³⁴³ A transition into higher education is also possible; the apprenticeship-diploma, together with professional experience, can be used as a university entrance qualification (DE); or grant access to a specific higher education entrance exam (AT).

The case of apprenticeships in Austria³⁴⁴

The Austrian system is somewhat different from the German or the Danish systems as the participation in apprenticeships is comparable to the participation in school-based VET. However, the Austrian apprenticeship system shares the majority of characteristics described above.

This is why the Austrian VET system is a 'two-pillar model'³⁴⁵, consisting of the dual system and the full-time school-based VET. The latter is more or less equivalent to apprenticeships in terms of the share of IVET students they attract³⁴⁶, in contrast to Germany. The fact that the two school-based VET tracks do not compete with apprenticeships, but offer learners additional training choices, is considered by some to allow the Austrian VET system to provide additional flexibility and innovation than the German system.³⁴⁷

³⁴¹ Graf L. (2013), The Hybridization of Vocational Training and Higher Education in Austria, Germany, and Switzerland.

³⁴² Thelen K. (2007), Contemporary challenges to the German vocational training system.

³⁴³ Refernet country reports Austria, Denmark, Germany (2012).

³⁴⁴ Refernet country report Austria (2012).

³⁴⁵ Deissinger Th. (2012), Reforming the VET System via National Qualification Frameworks ? A Comparison of Germany and Austria. and Leonardo Project Hybrid qualifications-Increasing the value of Vocational Education and Training in the context of Lifelong Learning. Country Report of the Austrian project partner. 'Illustration, analysis and reflection of the structure of the vocational education on secondary level II'.

³⁴⁶ Deissinger Th. et al. (2011), The dominance of apprenticeships in the German VET system and its implications for Europeanisation: a comparative view in the context of the EQF and the European LLL strategy.

³⁴⁷ Deissinger Th. (2012), Reforming the VET System via National Qualification Frameworks ? A Comparison of Germany and Austria.

Main strengths of the fully-fledged apprenticeship system

Considering the key features summarised above, the following main strengths of the fully-fledged apprenticeship system can be identified:

- In these countries, apprenticeships are a well-known and well-respected way of learning.
- The close involvement of the business sector guarantees a shared responsibility for education and training between the public and the private sector.
- A high number of companies are actively involved in training.
- In-company trainers are experienced professionals who have completed extensive preparatory training.
- Employers and social partners decide about the content and the implementation of the training – as a consequence, qualifications have a high value on the labour market.
- Training takes place in a real context in a company. Apprentices are closely supervised, gradually take over more complex work tasks and work increasingly independently.
- The time scale of the training is long enough for apprentices to acquire a comprehensive set of knowledge, skills and competences leading to occupational competence.
- Moreover, apprentices also acquire the social and transversal skills needed at the work place – hence, upon completion of the training, apprentices are ‘work ready’.
- The training leads to a formally recognised qualification giving access to a specific (group of) occupation(s).
- Qualifications are recognised by employers on a national basis.
- Qualifications are holistic and allow for a broad range of professional competences and flexibility. They enable a student to apply their learning outcomes in a broad range of employment contexts – hence, not just within the training company.
- Since employers see apprenticeships as a part of their recruitment strategies, the transition rates into work are usually good.
- The high number of qualifications offered and good opportunities for career advancement makes the system attractive to a large group of students.
- Youth unemployment rates are generally low in these countries, though this is also influenced by other factors.

Main challenges of the fully-fledged apprenticeship system

Despite their generally good results, countries with strong and well-established apprenticeship systems need to address specific challenges as well.

- The system is highly dependent on the willingness of employers to take on apprentices and their capacity to do so.

When apprenticeship systems are based on longstanding cultural traditions, employers usually see it as their duty to train youth. However, under unfavourable economic circumstances, they might decide not to. This jeopardises

the availability of a sufficient amount of training places, which has a negative impact on youth unemployment rates. Governments then step in and provide incentives to employers to (re-)engage them in the system by offering training places in general or to specific groups of students. Governmental incentives can take the form of subsidies to the apprenticeship costs borne by the company (AT), or grants for hiring specific target groups of apprentices, such as young people with disabilities or long-term applicants (DE). In Denmark, a principle of solidarity is applied; apprenticeships costs are divided equally between all public and private employers, regardless of whether or not they offer training/apprenticeship places. All employers are obliged to contribute to the 'Employers' Reimbursement Scheme'. Employers that offer apprenticeship placements receive wage reimbursements from this fund.

- To be able to train students, companies need a certain amount of personnel and infrastructure. This might be difficult for some, in particular small, small companies.

Traditionally, apprenticeships in Germany and Austria are mainly provided by SMEs.³⁴⁸ They are often family-owned businesses with a particularly long-term approach to business, based on stable client relations, a continuous human resources policy, and strong ties to the region. This might also explain their strong engagement in education and training; in 2011, German SMEs employed 83.2 % of all apprentices.

However, small companies (10-50 employees) are also able to train apprentices. Under the umbrella of the national 'Training Pact' in Germany, efforts were undertaken to encourage new groups of small businesses (e.g. migrant entrepreneurs) to take part in the dual system. These efforts went hand in hand with an enhanced support system; the chambers help these companies find and select suitable apprentices, train and prepare in-company trainers or mediate in conflicts.

- Employers need to be able to provide learning opportunities covering the entire range of learning outcomes connected to a holistic qualification. This might be difficult for small companies offering a limited portfolio of services or in sectors where a company offers one specific solution (e.g. the IT sector).

Countries tackle this challenge by offering models of sharing apprentices among several companies and jointly performing the training with additional support from chambers (including grants). This can then take the form of a trilateral agreement, involving a second company, providing those parts of the practical training cannot be provided by the main training company (AT, DE). In Denmark, three main types of contracts are available to accommodate this:

1. Regular training agreement: This apprenticeship is conducted in one company and an agreement is signed;
2. Combination training agreement: Agreements are signed with two or more companies; and
3. Short training agreement: This type of apprenticeship involves companies that cannot support the student's entire training period, or have a relatively short production horizon.

³⁴⁸ Up to 250 employees or up to EUR 50m annual turnover.

- The fully-fledged apprenticeship systems can be considered to be fairly competitive and selective in terms of access. If employers decide who will receive a training place, students with disadvantages run the risk of exclusion.

In Austria and Denmark, students who do not secure a training place with a company are either oriented towards bridging programmes or school-based programmes. In Germany, students who fail to find an apprenticeship place are enrolled in preparatory programmes in the so-called transition system. Such programmes are mostly school-based, but can also be provided within companies (as short-term 'entrance' apprenticeships). In these schemes, students with social disadvantages and those from ethnic minority groups are often overrepresented. Moreover, it is difficult for students to move from the transition system into a regular apprenticeship. Employers are offered compensation through grants if they take on students from this group (so-called 'long-term applicants'). The transition system and the issues arising for the participating youth are believed to 'remain a persistent structural challenge' for the education system and policy making in Germany for the next 10-15 years. Additionally, there is no curricular of pedagogical differentiation embedded in the German apprenticeship system regarding the special needs of students and especially the disadvantaged ones.³⁴⁹

- When apprenticeships are the only way to learn a specific profession, students who do not find a company willing to take them on are not able to fulfil their career goals. This can lead to demotivation and dropping out from education and training.

When school leavers from lower secondary school have to choose a profession, they usually choose from a very limited range of popular (and gender specific) professions. This leads to a high degree of competition in some sectors, while in others, training places remain open.

In Germany, efforts were undertaken to improve this situation through a better guidance system. All school leaver classes from lower secondary education undergo a competence check and are systematically introduced to possible available career options. Existing partnerships and school networks were strengthened and business stakeholders have already engaged more closely in this phase. Students get the opportunity to take part in internships, to 'test' whether a job meets their expectations.

Denmark has also given high priority to educational and vocational guidance to ensure that all young people receive the opportunity to find a training place suitable to their talents, and ensure they complete an education.

- The principle of holistic qualifications can result in a lack of opportunities for dropouts.

Due to the principle of holistic qualifications, students who leave the VET system without a final exam enter the job market as unskilled workers – even if they drop out only shortly before finalising their apprenticeship period. To tackle this

³⁴⁹ Deissinger Th. (2012), *Reforming the VET System via National Qualification Frameworks? A Comparison of Germany and Austria*.

challenge, the need to make the German VET system more flexible has been recognised by researchers.³⁵⁰

7.2. Apprenticeships as a smaller scale track parallel to other forms of VET (Greece, Poland, Italy, France, Netherlands and the UK (England))

Key features of apprenticeships as a parallel track

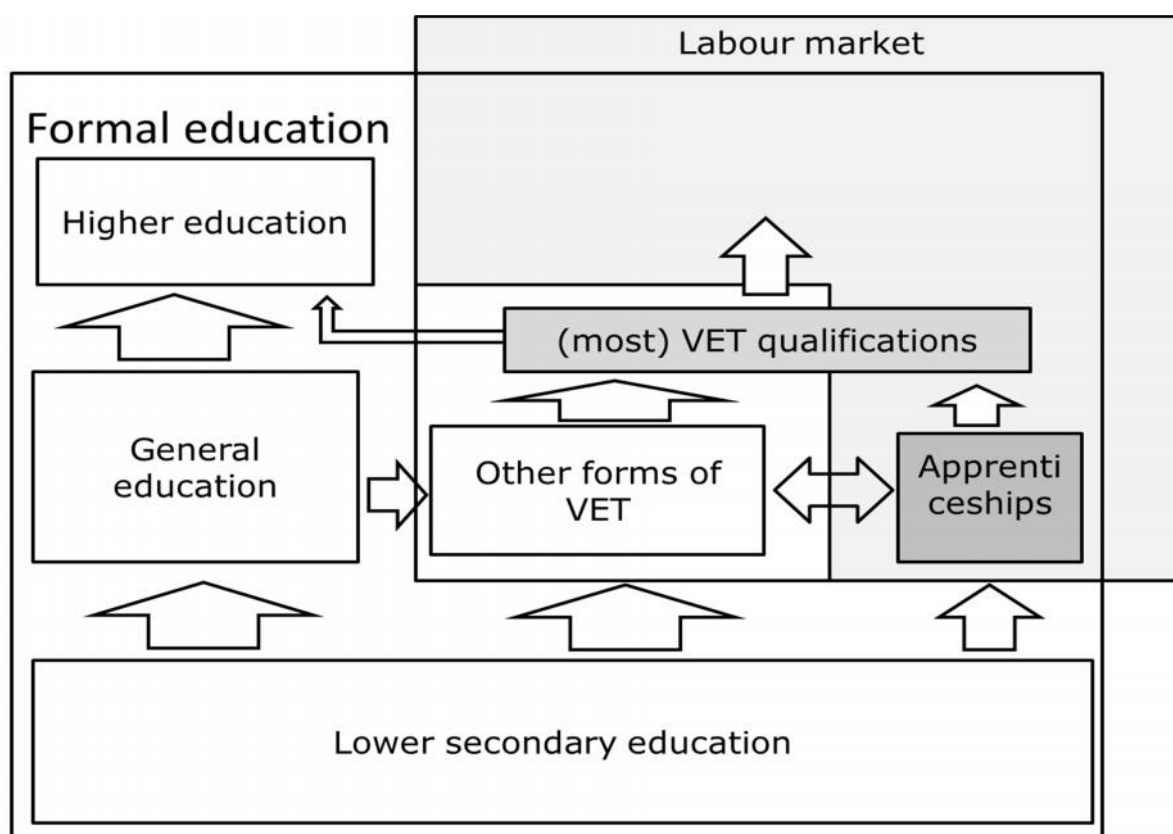
In a number of Member States, apprenticeships run parallel to other mainstream VET programmes and general education. Such countries include for example: Greece, France, Italy, Poland, the Netherlands and the UK (England). France, the Netherlands and the UK (England) each have a long tradition of apprenticeships as a parallel route to other VET provision and general education. In other countries apprenticeships may have existed in the past but have been neglected or elapsed. The perception of their status is often lower than other forms of VET. The political attention they receive and the efforts to revive these strands in some countries are relatively new. The number of employers engaged in apprenticeships is much lower than in the fully-fledged systems and the scale of professions covered by apprenticeships is also less broad. The benefits and protection of apprentices may also be to a lesser degree than in currently the case in countries such as Germany. However, this is not to say that in these countries apprenticeships do not provide good quality learning.

Where apprenticeships exist amongst a range of other alternative VET pathways, it is often the case that individual pathways operate under different governance arrangements – with different ministries involved and with different levels of stakeholder engagement. For example, in Greece, until the 2013 reform, apprenticeships fell under the responsibility of the Ministry of Labour and Social Insurance (MLSI), while alternance schemes and mainly school-based VET fell under the Ministry of Education. Similar examples can be observed in the UK (England) and in France where apprenticeship provision and VET provision often falls under the responsibility of different ministerial departments, the responsibility of regions or even of sectoral organisations. This clearly has implications for funding methods and approaches to quality assurance.

In some countries (FR, NL), the same qualifications can be achieved via different routes, apprenticeship being one of them. This is the case in the Netherlands, for the alternance pathway (BOL) that offers practical periods in enterprises and the apprenticeship pathway (BBL). Similarly, in France, upper secondary VET diplomas can be acquired in two ways: either through a school-based track where learners attend an upper secondary VET school (lycée professionnel) and are required to complete compulsory traineeships or through an apprenticeship. This situation is illustrated in figure 4.

³⁵⁰ Deissinger Th. (2012), Reforming the VET System via National Qualification Frameworks ? A Comparison of Germany and Austria.

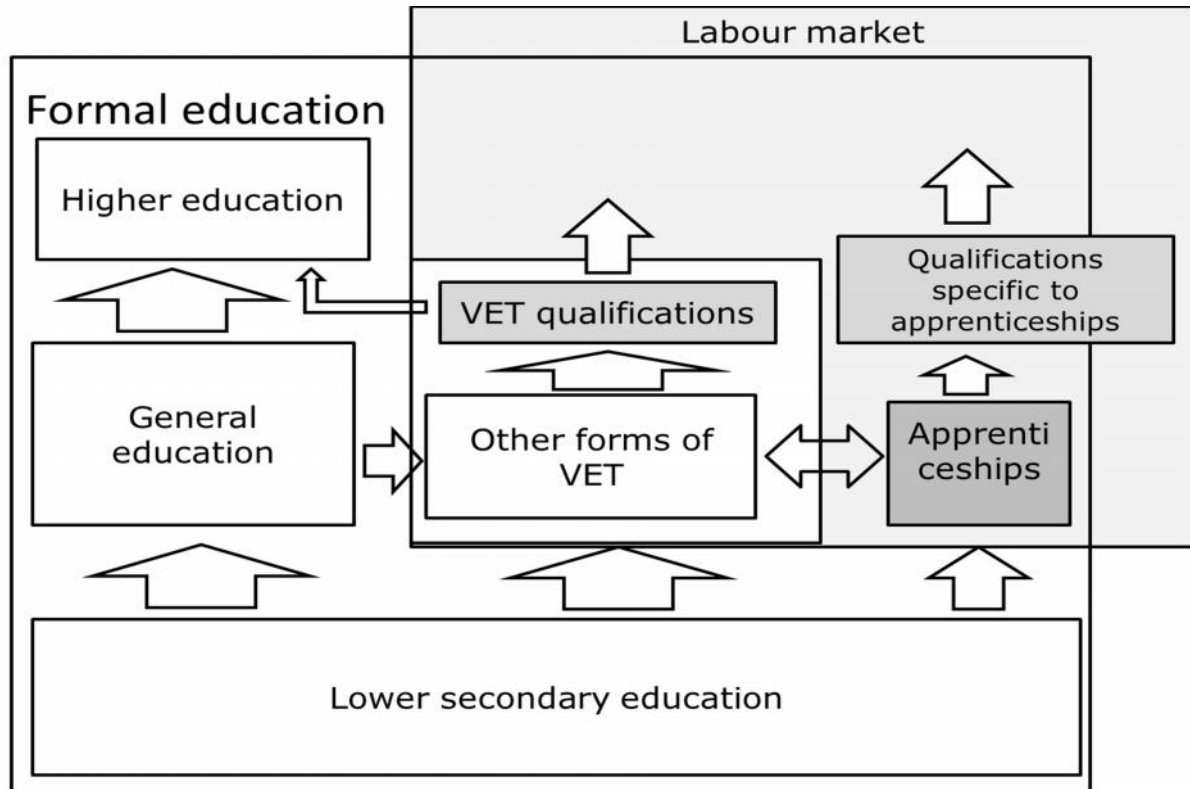
Figure 4: Apprenticeships as one pathway to VET qualifications (FR, NL)



Source: ICF International

In some cases (e.g. EL, PL, IT) apprenticeships do not lead to the same qualifications as those achieved through school-based VET but to a different group of qualifications. These are not always considered as being part of the formal education and training system (for example in PL or IT). Whilst they facilitate access to the labour market they do not entitle the holders to, progress towards higher education for example as the school-based route affords (see figure 5).

Figure 5: Apprenticeships as a pathway to specific qualifications



Source: ICF International

The core elements of apprenticeships in these countries are not different from those in the countries of the fully fledged apprenticeships; there is a contract (in the Netherlands, there is also a learning agreement), remuneration and social security is provided to apprentices; the latter gain, at the end, a recognised qualification. The main difference is in the scale of apprenticeships (they attract a much smaller proportion of students) and sometimes the target audience (they are often perceived as an option for those students who face difficulties in more academic programmes).

In Italy, the Netherlands, Poland, and the UK (England) aspiring apprentices are generally responsible for finding their own placement, as is the case in Austria and Germany, as presented earlier. The selection process is at the decision of employers. Intermediary organisations exist (FR, NL) and have an important role to play in identifying placements. National databases can also be found and can be used to help identify apprenticeship opportunities. For example, a national database of accredited learning companies is available in the Netherlands³⁵¹ and in the UK (England) the National Apprenticeship Service provides a vacancy matching service. In Greece, apprentices under the auspice of the MLSI are selected based on the final grade of their qualification and on social criteria; priority is given to children of large families, orphans, individuals with low family income³⁵² or to those who have a family that runs a business relevant to the specialisation that the applicant seeks to be trained in.

³⁵¹ Internet: www.stagemarkt.nl.

³⁵² Equal or lower to EUR 9163 annually.

In terms of what happens to young people who are unable to secure placements, it is possible in some countries for young people to move freely between different routes – for example in Netherlands, where young people can move between the school-based and work-based (apprenticeship) pathway.

As with fully-fledged apprenticeships, costs for apprenticeships as a parallel track are shared between the state and employers. The cost for parallel VET provision is typically covered by the state and in some cases with ESF contribution. Apprentices typically enjoy employee status and full social security coverage. Research shows that in some of the countries where apprenticeships run parallel to other VET provision and general education, the general education route is typically considered more favourable and the most suitable route for higher achieving learners, even compared to VET provision. Within VET provision, in some countries the apprenticeship is considered to be the most appropriate for students who are deemed as less likely to succeed in academic paths (e.g. EL, IT, PL). Given that perceptions are very positive in countries with similar structures (e.g. NL), it can be argued that it is not the existence of parallel tracks, but other socio-economic and system-level reasons that drive perceptions towards apprenticeships (Section 5).

In Greece³⁵³, France, the Netherlands and the UK (England), a small share of apprentices progress to higher education. In France, the UK (England) and Italy apprenticeships are also offered at higher levels. The latter is a relatively recent phenomenon and it shows that the potential of apprenticeships to develop higher level skills is being recognised. This development could have a positive effect in terms of the recognition of the role of apprenticeships also at lower levels.

Main strengths of apprenticeships as a parallel track

The benefits of having a system where the apprenticeship is a parallel track to other VET programmes and general education are that:

- This is a more suitable model for countries that do not have the infrastructure and employer/ social partner capacity, as in Austria and Germany. The fully-fledged apprenticeship models are heavily dependent on employers' engagement in training. Countries where apprenticeships are a smaller segment of the VET system usually do not have such strong employer buy in. As discussed in earlier sections, employers in Germany, for example, are characterised by rather long-term vision and progressive growth strategies. This characteristic of companies is unlikely to be present in countries with other business cultures. Furthermore, companies in some of the countries in this group, such as Greece or Italy, are facing quite adverse economic climate which makes it difficult for them to plan ahead. Hiring an apprentice is in most cases a several years commitment. To provide sufficient numbers of learning opportunities to all learners, these countries need to make sure that there is also a good quality school-based track available next to the apprenticeship one.
- In line with the discussion above, the apprenticeship as a parallel track allows for greater flexibility with matching demand and supply for placements in VET. In cases where employers are reluctant/unable to offer apprenticeships, young people can still engage in VET and receive training towards the desired qualification.

³⁵³ For VET school graduates who chose to do the optional, one-year apprentice in the fourth year of studies.

- Achieving the same qualification through different routes, especially if permeability exists between tracks, can minimise dropouts. In the Netherlands, for example, where the apprenticeships co-exist in parallel with other VET provision, young people on apprenticeships (BBL) can easily switch to other vocational provision (BBO) if placements are not found. In France, bridges exist between the school-based and the apprenticeship pathways, as they lead to the same qualifications. For instance, an apprentice who has interrupted his/her apprenticeship contract can be reoriented towards a VET school and continue to prepare for the same qualification.
- Where apprenticeships exist alongside other VET provision there is sufficient scope and flexibility within the system to cater for a range of different types and characteristics of young people; different cohorts can be satisfied through different alternance schemes.
- Since apprenticeships are not the only gateway to specific qualifications, employers have less responsibilities overall for the completion of VET schemes. This means that they can provide placements for a smaller number of apprentices. Also, in the cases where apprenticeships are very well-received from a specific economic sector and/or there is a tradition in this sector to foster apprenticeships, it can be expected that employers in this sector are highly committed and claim strong ownership of these apprenticeships. In Poland, for example, the chambers in certain trades very strongly support and value apprenticeships as the primary route to train young people. In apprenticeships have historically developed in some sectors (such as construction and public works) and has not been rooted in all sectors in a homogenous way³⁵⁴.
- Also linked to the point above, this model is perhaps more suitable for countries that are planning to expand or establish new apprenticeship schemes as it enables them to target specific sectors only. For example growth sectors with employers who seek a qualified workforce for which they have difficulties in recruiting.

Main challenges of apprenticeships as a parallel track

In countries with parallel tracks, apprenticeships can be perceived as a second choice track: by young people and parents (affecting participation) and employers (shrinking placements offered). Several reasons, such as the quality of apprenticeships and embedded cultural perceptions, can encourage such beliefs. Efforts are being made by governments to boost the attractiveness of apprenticeships, introducing new or improving existing schemes (Section 4). Additionally, the perception may be improved due to better employability opportunities for apprentices, especially in countries like Greece, with high youth unemployment rates and a weak labour market.

- Employers are often reluctant to take on apprentices amidst the perception that they are low achievers. Also, apprenticeships bear more costs for employers, who may opt to train students from other alternance schemes that demand fewer resources. At the same time, in some countries where apprenticeships are not the primary VET route, there have been negative reports of employers exploiting apprentices by paying less than the legal minimum wage or being seen overall as cheap labour, at the expense of full-time employees being laid off or in lieu of

³⁵⁴ Arrighi, J.-J. and Fadda Y. (2012), *Tendances nationales et identités régionales : éléments de cadrage pour un diagnostic régional de l'apprentissage*.

recruiting additional employees. The likelihood of such practice is greater in countries where quality assurance processes associated with apprenticeships are weaker.

- The above factors hinder the development of apprenticeships, especially in sectors severely hit by the crisis, such as manufacturing. Moreover, the challenges and constraints that employers may demonstrate are stronger in SMEs. This is why governments have introduced specific measures to support SMEs and their participation in apprenticeships.
- Progression to higher education is less common in apprenticeship tracks than for school-based VET. This may hinder some students in choosing apprenticeships.

7.3. Integration of strong elements of work-based learning into school-based programmes (Finland, France, the Netherlands, Portugal)

Key features of school-based programmes with strong elements of work-based learning

As analysed in Section 3, all European countries offer at least one track of school-based VET. In the majority of the countries, there are school-based tracks, which include work-based learning. In these tracks, work-based learning is compulsory and takes place in a company. In this context, work-based learning is integrated and developed in very different ways across countries.

The main part of the learning takes place in VET schools/institutions, so these schemes are usually governed by the national/regional ministries of education. In Portugal, however, the 'apprenticeship-type courses' run under the employment and vocational training (Instituto do Emprego e Formação Profissional, IEFP) of the Ministry of Solidarity, Employment and Social Security. IVET programmes are also offered from other ministries across countries, based on the qualifications.

The work-based part of the training takes place in a real working environment and it is usually the VET school/institution responsible for the details of the work placement implementation and arrangements with employers.

The share of the work-based learning in school-based programmes varies substantially between countries, but also between different tracks and qualifications offered within the same country.

- In Finland, all programmes under so-called 'school-based VET' include on-the-job training of at least six months. The work-based element must correspond to a minimum of one fifth of the total credits, but can even reach as high as one fourth of them.
- In the Netherlands, the share of work-based learning depends on the VET qualification: across qualifications, on-the-job training needs to be at least one fifth of the learning period, but can be up to two thirds.
- In France, it is the qualification aimed at that defines the share of learning that is spent in an employer; the so-called 'internships' can last from about 20 %-25 %

of the total study time for the certificate of professional skills (CAP) and 22 % for the vocational baccalaureate.³⁵⁵

- In Portugal, work-based learning comprises up to 15 % of the 'educational courses', 18 %-24 % for the 'professional courses' and up to 40 % for the so-called 'apprenticeship-type courses'.

It is often the responsibility of the school in agreement with the employer(s) to decide how the alternation will be organised. In the same country one school may decide that in the first year all students attend one month traineeship in autumn and one month in spring, while another school may decide to concentrate the traineeship periods later in the programme. In Finland, in some VET schools, the practice is fully individualised to fit the needs of the student together with the possibilities and needs of the employer. While this practice has great benefits in terms of flexibility and needs' based approach, it also requires very good organisational skills. Teaching staff must also be equipped with the skills and expertise to tackle differences within a student cohort.

The differences between these school-based programmes that include work-based learning and apprenticeships are significant, as analysed in Section 3:

- These school-based programmes are less regulated than apprenticeships, regarding the work-placement part of training;
- The school-based and employer-based training may not 'alternate'; i.e., the student can spend a specific period of time (for example a month or two) in the employer's premises and then return to school;
- No employment contract is signed between the student and the employer in most cases. However, learning contracts/agreements are signed between the student and the VET provider (for example, in Portugal) or are tripartite, as in the case of the Netherlands, between the student, the VET provider and the employer. In France a specific traineeship contract is signed;
- Students maintain a student status not an employee or apprentice status;
- Remuneration of the student is not mandatory for the employer;
 - Trainees may receive some form of allowance (for example in Finland and the Netherlands), but it is in most cases not considered as remuneration. It is also often at the discretion of the employer to decide the amount.

Reflecting the characteristics of this type of VET programme, funding comes from national/regional sources, as employers are not burdened with direct financial costs. Depending on the country, financial incentives may be provided to students in order to attend such schemes.

Finding a placement with an employer is usually the responsibility of the VET provider. In Finland, it is the responsibility of the providers to identify possible organisations suitable for providing on-the-job training for students and ensure that the in-company trainers are appropriately skilled, trained and qualified to carry out their role.³⁵⁶ Nonetheless, it may be the responsibility of the learner, as in Greek IEKs before the reform and in the school-based track in the Netherlands. VET institutions are however expected to help the student.

³⁵⁵ 420 to 560 hours of the 2300 total (CAP) and 770 hours of the 3400-3500 total hours; Refernet report (2012).

³⁵⁶ In-company trainers are involved in the planning of the training together with the provider and the student, assesses learning taken place in the workplace, guides the student in work tasks, and acts as a contact point between the employer and the provider.

Main strengths of school-based programmes with strong elements of work-based learning

Based on the main characteristics of the school-based programmes that include significant shares of work-based learning, main strengths can be identified.

- For VET systems that are largely school-based, this approach offers an intermediary solution that is feasible. Given that these types of programmes can be integrated into existing structures of school-based VET (with adjustments), the degree of change and restructuring required is manageable. Considering that it is unlikely that systems with no or little tradition of apprenticeships and related institutional capacity can transform into fully-fledged dual systems, this approach provides an opportunity to integrate work-based learning.
- These programmes require less engagement from employers. As said earlier, in apprenticeships, employers commit to working with a young person for several years while they may not have such visibility for their business. They may also be reluctant to take on young people whom they are not 100% confident about as apprenticeships require a strong commitment from their side. These shorter periods of work-based learning represent less risk for employers, particularly when there is no fit with the young person or in the event there is insufficient work for them to do.
- Compared to fully school-based programmes, they offer students the opportunity for on-the-job learning in real working environments.
- Compared to systems where apprenticeships are a rather minor parallel track, these systems enable all VET students to gain work-based learning experience.
- The involvement of employers is higher than in the case of wholly school-based VET. It can be expected that learning (curricula, infrastructure, teaching methods etc.) is adjusted to the labour market needs, which increases graduates' employability.
- The fact that they are less regulated than apprenticeships and the lack of mandatory remuneration alleviates costs for employers, offering them an incentive to offer placements.
- A high-quality school-based programme with strong elements of work-based learning may be the optimal solution for students that lack 'apprenticeship-readiness' (Section 3.6.2), thus eliminating the possibility of dropping-out. Some interviewees note that it can be a difficult step for young people to move at a relatively young age (around 15-16 years) to an apprenticeship where they are in a regular working environment and expected to abide by the codes of the workplace. The alternation of school-based and work-based training enables a more progressive acculturation to the workplace.
- Young people who are most vulnerable are also most likely to find it difficult to find apprenticeship placements (in particular young people from ethnic minorities or migrant background for example). Young people who are most vulnerable, often do not have the social codes employers find acceptable in the workplace – in particular for a long duration. However, employers may be more willing to take them on board for a shorter period of time and in particular if the costs for them is low. That is why many schemes that target young people at risk of dropping out or those who have dropped out, use this form of work-based learning based on shorter traineeships combined with other forms of learning.

In practice school-based VET programmes tend to have better developed progression routes into higher education. However this is probably not an inherent strength of these forms of pathways but rather a result of the difficulty faced by apprenticeships in terms of being considered as equivalent form of learning.

Main challenges of school-based programmes with strong elements of work-based learning

Although school-based programmes with significant work-based learning are well-embedded in VET systems across Europe, one can highlight challenges that need to be overcome. These challenges mainly relate to ensuring placements in companies. More specifically:

- Finding placements-reluctance of employers: As noted in the section on strengths, despite the fact employers who are reluctant to open apprenticeships may be more willing to take on trainees, developing a network of companies offering traineeships is still a considerable challenge. It is particularly challenging when this approach is being initially established as it requires VET schools to take on a new role. This typically requires them to go beyond the school environment and negotiate with companies (something most of them are not used to when operating in a fully school-based system). This form of local networking with companies requires personnel who have the skills to convince employers to buy into the scheme.

Another issue why employers may be reluctant to take on trainees is the lack of visible benefits to them. Though these schemes are less costly for employers, they are often less beneficial to them. In many cases the time spent on the workplace is relatively short and hence, unless the tasks are routine and rather simple, it may be difficult for employers to see the added value of having a trainee who requires supervision and tutoring.

- Ensuring the quality of the work-based learning period: As discussed, VET providers are often responsible for finding placements. This leaves the responsibility of quality assuring the training (selecting the company, ensuring the availability and experience of in-company trainers, monitoring the content of the training delivered, etc.) on the providers. In Finland, considerable differences are recognised in practice, in the extent to which VET providers are active in identifying training places and ensuring the quality of on-the-job training. While a majority reportedly do a very good job and all of their students are assisted in finding a placement, there are also providers who are less active and supportive and students are placed with greater responsibility for finding a placement on their own. Experts highlight that it is the providers that work together in a local or regional partnership with local authorities, enterprises and their representatives to identify and arrange placement opportunities for VET students that best support students, and find and ensure high quality work placements for them.
- Finding placements: students' responsibility: In the cases where the work-based element is mandatory and students are responsible for finding a placement, two key challenges arise:
 - Students with personal acquaintances or even family ties in the relevant sector can more easily secure a placement. This is especially the case where students conduct their work-based learning in micro/small companies.

- In these VET programmes, students try to find a placement after they are accepted into the programme and usually after some learning period has taken place in the school. So, if students do not manage to find a placement, there is the risk of them dropping out of the programme.
- Articulation between school-based and work-based components of training. For these work-based periods to be valuable learning experiences, they need to be carefully situated in the programme to ensure there is a link between what is learnt in the school-based component and how it is applied in the work-based component. One of the difficulties is that the work-based component often takes place in block periods, at a point in time when it is easy to organise them rather than when it is logical to hold them. Furthermore, such articulation between the two venues requires good cooperation between the trainer from the school and the in-company tutor/trainer. In France for example, trainers are obliged to visit students in traineeships several times during the course of the study. Simple tools are used to ensure that both parties are well informed on the learning that has taken place and how it has been mastered by the student.
- School-to-work transition. Though there is no hard data to support the issue, it is likely that the school-to-work transition from these schemes is not so good than in the case of apprenticeships. There is less acculturation to a specific company and employers are less committed to the trainees than to the apprentices who succeed in completing an apprenticeship that is several years in duration. On the other hand, as previously noted, fully-fledged apprenticeships select at entry. As such, it could therefore be that these young people who struggle with school-to-work transition in this form of alternance, are also the ones who may not have the opportunity to enrol in an apprenticeship in the first instance.

7.4. Challenges faced by predominantly school-based programmes and how work-based learning is being integrated (Czech Republic, Greece and Poland)

School-based VET tracks are the ones where learning takes place almost exclusively at schools. Practical learning may also be included in the curricula, but it is conducted most of the time in the school premises (workshops) and rarely at a company. In cases where work-based learning takes place in a real working environment, it is very short in duration.

- In the Czech Republic, secondary vocational education with a professional certificate includes practical training (35-45 % of curricula). However, the extent to which this takes place in companies varies from one school to another and from one programme to another. Often the practical training takes place in school-workshops or mini-companies.
- In Greece before the 2013 reform, the internship in IEKs lasted for one semester (25 % of the studying time demanded to achieve a qualification). It was optional and according to authorities, it rarely took place.³⁵⁷ The formal VET path, offered by vocational schools was purely school-based, with any practical training taking place in the school premises.

³⁵⁷ The 2013 reform made the internship mandatory and will comprise 20 % of the learning period. It will be available for students available after 2014-2015.

- In Poland, work-based learning in the school system is conducted during 'practical training classes' that take place in schools (workshops, laboratories or farms), continuing education centres or practical training centres. However, they rarely take place in a company.

VET by default includes a more practical element in comparison to general education. The practical element may be sufficiently developed in school premises for some subjects, but more is needed to equip a VET graduate with the necessary skills to launch his/her first job. The lack of on-the-job training, included in the curricula and ideally mandatory, underlines a key improvement area for such programmes. Graduates are not given the opportunity to develop soft skills that are developed in a working environment (for example, team working, understanding of corporate systems and processes) and have no working experience. Even in the cases where short internships take place, they are usually loosely regulated and optional (for example in Greece³⁵⁸ and Poland). Not surprisingly, official data has not been found in any of the three countries regarding the number of students that have completed a short internship with an employer, the duration and precise content of the internship, etc.

The fact that work-based learning does not take place or at least not with an employer means that:

- employers have minimum or no involvement in the overall development and content of the school-based programmes (Greece and Poland);
- or that the collaboration between schools and employers bears weaknesses.

For example, in the Czech Republic, about 80 % of schools report that they collaborate with employers on the provision of practical education. Besides this, employers are legally required to participate in the evaluation of the final exam leading to the professional certificate. However, it seems that the collaboration does not bring about desired results. Based on a 2013 study carried out by the National Institute for Education³⁵⁹, half of employers in technical fields reported that graduates had an unrealistic image of working conditions and salary and lacked practical experience. Employers also complained about the quality of graduates' general competencies and technical skills.

- the lack of continuous and established relationships and collaboration with employers overall and specific sectors, can lead to the conclusion that curricula do not necessarily reflect the needs of the labour market;
- the qualifications achieved also have limited visibility among employers;
- in turn, this limits the acceptance of the relevant qualifications by the labour market, creating a vicious circle of low employability. In turn, it can be expected that students' and parents' negative perceptions towards VET overall will be strengthened, leading to low participation in these programmes. High achievers in particular, can be expected to opt for education tracks that are perceived as having greater acceptance by the labour market.

Although well-embedded in the examined countries, such programmes face significant challenges regarding the efficient training of students for the current knowledge-based economy:

³⁵⁸ References to Greece regard the state of play before the 2013 reform, unless otherwise stated.

³⁵⁹ Dolezalova, G. (2013), *Postoje zam stnavatel k zam stnávání absolvent škol*.

- curricula may be outdated and/or not adjusted to current labour-market needs;
- co-operation between VET schools and employers is not systematised and quality assured;
- participation rates are low and the students that enrol are usually low achievers and come from specific socio-economic backgrounds (this is the case mainly in Greece, where before the 2013 reform, IVET was mainly school-based³⁶⁰);
- under the current structure of the programmes, employers are reluctant to offer placements for students from school-based programmes.

The need to strengthen the training provided in predominantly school-based programmes with on-the-job training and establish strong collaboration with the labour market has been recognised and triggered relevant reforms in the Czech Republic, Greece and Poland, among other countries.

These reforms are too recent to be evaluated. However, they underline a positive change towards the development of more competitive VET tracks. Making the shift, nonetheless, is not without challenges, as discussed in Section 4. The types of measures supported by these reforms are:

- developing apprenticeship tracks parallel to school-based VET, starting with selected professions or economic sectors;
- providing incentives for schools to develop systematic cooperation with employers and encourage the development of work-based learning periods in companies. In the initial stages such work-based learning is not required as it is the case in alternance schemes described earlier, but it is encouraged;
- developing school based mini-companies or other forms of work-based learning in schools.

³⁶⁰ According to the reform, the new work-based schemes and apprenticeships will take place after school years 2014-15 or 2015-16.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1. Key conclusions on alternance schemes in the EU-28

Policy makers and stakeholders at national and EU level are paying attention to the role of apprenticeship programmes in improving the skills supply and addressing difficulties during education to work transitions. There is growing consensus over the fact that work-based learning has strong potential in preparing young people for employment. However, countries are in very different starting positions. The initial conditions when it comes to the existence of alternance schemes, their take up, as well as the supply of work-based learning opportunities by employers vary greatly. Most countries are rather far away from having a mainstream dual education VET system as in Germany or Austria. Education systems are highly context dependent and evolutions of these systems tend to be slow. Radical and rapid changes, if not sufficiently rooted in their context, can create more disruption than positive effects. Therefore, it cannot be expected that all EU countries will be able to transfer substantial features of the dual education model (as it exists in Germany, for example), radically reviewing their VET systems. A school-based VET system will not change into an apprenticeship-based system overnight. Alternance and apprenticeship systems require a strong commitment from companies, the capacity of training providers to work with companies and systemic capacity at the level of intermediary organisations (such as chambers) to ensure the implementation of apprenticeship schemes. This capacity needs time and commitment to develop. Intermediary solutions are needed that are more realistic for those countries where work-based learning is not yet well integrated into VET.

Furthermore, even strong and well performing apprenticeship systems face challenges such as access and equal opportunities, but also innovation and adaptation to new professions. It also needs to be recognised that there is not a simple relationship between the existence of apprenticeship schemes and the quality of VET. Not all work-based learning automatically leads to good quality learning process. There are a number of conditions that have to be met to ensure that the work-based learning offered as part of publicly funded and recognised schemes is of high quality.

The cross-country analysis highlighted that there are alternance schemes in most of the EU countries. The study identified four main types of VET tracks according to the different ways of integrating work-based learning.

1. Alternance schemes, including apprenticeships, are the main VET path in some countries. In these cases, apprenticeships are called dual education and employers hold a key role in the implementation of the system. This brings implications for the governance of these systems, the funding schemes, etc.;
2. In other countries, students can choose between a variety of VET tracks that may be equally popular and lead to the same qualification. In these countries, apprenticeships run in parallel to other alternance schemes. These schemes can offer the same qualifications as apprenticeships and include significant parts of work-based learning that is mandatory to achieve the qualification;
3. School-based programmes, which offer significant portions of work-based learning;
4. School-based programmes that may not include work-based learning. In cases where they do, it is most often conducted on the premises of the school.

Several countries share concerns over the provision of guidance and counselling, although the schemes and their implementation differ significantly; although schools, public employment services (PES), VET providers, guidance institutions, etc., already support students in their decisions, it is believed that guidance is not sufficiently developed. This is more evident in countries where misconceptions are held against VET or where students' choices demonstrate their need for broader information - even in Germany, where the vast majority of students opt for a small number of qualifications, while others have only minimum demand.

However, no matter the context that they are offered in, apprenticeships share common characteristics across countries, such as the existence of a contract, remuneration, and some improved conditions compared to full-time employees. On the other hand, the way they are selected, the way placements are found, the duration of the apprenticeship or exit assessment, can vary considerably between countries.

Nonetheless, the employment outcomes of apprentices are positive across their different approaches to implementation. Overall, medium-level VET graduates enjoy higher employability than general education graduates in most EU countries. Most importantly, higher employability and a faster transition from training to employment is found to be positively linked to work-based learning.

The study explored the funding schemes and tools in place across Member States. Amidst the economic crisis, sufficiently addressing the financial needs of alternance schemes is a challenge that most countries seem to face. Common basic principles are followed, across the various schemes; school-based VET (and school-based part of alternance schemes) is financed by national/regional budgets, while employers almost entirely bear the costs of the work-based part of apprenticeships/other alternance schemes. ESF is also a significant support for alternance schemes in several countries. All types of financing have weaknesses, regarding the provision of incentives that do not promote the quality of VET (for example, mainly relying on per capita funding). This should be kept into consideration when designing a funding scheme, especially for alternance schemes/apprenticeships, where more than one stakeholder is involved.

The engagement of employers in alternance schemes/apprenticeships is shared between several countries and schemes. Typically, governments use financial incentives to attract employers, such as grants, subsidies, tax relief, etc. Different combinations of tools are used in the Member States, either to engage employers for the first time; to convince them to offer more placements; or regarding taking up challenged youth as apprentices. Research underlines that although such tools have been proved helpful, they are not a panacea; they should be carefully chosen and used, to match the labour market structure of the country and target those employers, perhaps in specific sectors, that have not been engaged, regardless of the incentive. Moreover, complex or unclear processes disengage employers from participating, regardless of the financial attraction. These observations also prove that more state financial incentives (which equal larger state expenditure) will not necessarily bring better results.

Given the proven benefits, how can low levels of participation in VET/apprenticeships be explained? This study proved that the level of students' participation is influenced by a broad selection of factors: cultural beliefs regarding the quality of VET and the perceived social status that VET graduates/apprentices have; socio-economic characteristics of the learner and his/her family; as well as a range of socio-economic factors that regard the whole economy and its structure, which in turn, shape the way education systems are developed. The analysis stressed the risk of sustaining a vicious cycle; if in a country, VET tracks overall or apprenticeships in particular are regarded as a 'second choice', then the odds are it will attract low achievers. Parents, especially from middle and upper

socio-economic backgrounds, will most probably discourage their children from following such pathways. So, VET will mainly attract low achievers from more challenged backgrounds. If VET studies are demanding, there are high chances that these students will fail or drop out; in turn, performance expectations become more lenient, leading to less demanding/lower quality VET. The state has, of course, a significant role to play, by supporting and ensuring the quality of all learning across types of education. But since the focus of students/parents will be on general education rather than on VET, it can be inferred that investments in infrastructure, the quality assurance of processes and teachers or the upgrading of curricula, etc., in VET will be a lower government priority. Employers will be reluctant to become involved in alternance schemes and offer high-quality jobs to its graduates, if they believe apprentices/VET students are low achievers and the quality of training is questionable. As a consequence, the employability of VET graduates will be challenging, as opposed to popular tracks, such as general education, which attracts stronger students.

Increasing the attractiveness of apprentices/alternance schemes is a complex equation, where a single change in one of the factors may not be sufficient. Moreover, where negative perceptions exist, shifting them usually takes time.

Low attractiveness and thus, participation rates are not the only challenge that VET systems/alternance schemes face in Europe. This study discussed the key challenges that the 10 selected countries are trying to tackle through recent legislative reforms. Common drivers are recognised across these countries, although their VET systems and economic situation vary significantly. All drivers are significant in the context of the countries, but some of them (especially high unemployment rates) create more concerns than others across Europe. Depending on the country, long-term approaches to VET, insufficient former policies and cultural characteristics, to name a few, lie behind the challenges. The economic crisis is a key factor in recent developments, as it has abruptly created inconsistencies in established VET systems, shrunk available resources or merely highlighted the significant (and emergency) need to tackle long-term issues. Although common, the reforms try to overcome these challenges through different approaches which reflect the country-specific situation and possible ways of coping. This stresses the importance of adjusting solutions to country-relative conditions.

The emphasis given to VET and mostly apprenticeships by the European Commission seems to have impacted Member States in viewing the development or improvement of apprenticeships/alternance schemes as a viable solution to their problems. Therefore, the reforms regard the introduction of apprenticeships/alternance schemes, even in countries with predominantly school-based systems. Where VET is mostly school-based, governments identified the deficiencies of having loose or no collaboration with the labour market and offering limited work-based learning opportunities to learners. Interestingly enough, challenges and respective reforms took place even in countries with well-developed VET systems/alternance schemes.

Expanding existing schemes and introducing new ones implies increased demands for apprenticeship/alternance placements. Engaging employers is a common challenge across the 10 selected countries, although from a different angle, due to country differences. For example, in countries where the collaboration of government authorities, schools and social partners is not embedded in the system (EL), or where employers overall or from a specific sector provide less placements, due to the adverse effects of the economic crisis (e.g. FI).

8.2. Policy recommendations

	Recommendation	Comment
EU level	<p>Recommendation 1:</p> <p>Recognise the diversity of the starting conditions in VET systems and the fact that depending on the status quo, the necessary changes and the approach to integrating work-based learning may differ.</p>	<p>There is a need to recognise that there are different models of integrating work-based learning and that a fully-fledged apprenticeship system is not the most suitable for all countries. In some countries, depending on the initial position, more progressive changes are needed.</p>
	<p>Recommendation 2:</p> <p>Set priorities and support mutual learning on the integration of work-based learning that takes into account this diversity.</p>	<p>Provide country specific advice (or type of VET system specific advice) on concrete measures to develop and enhance work-based learning VET.</p>
National level	<p>In apprenticeship based systems:</p> <p>R3: Develop or continue measures that support access to apprenticeships that also include those who tend to be left out (e.g. migrants, those with low prior achievement).</p> <p>R4: Support innovation in apprenticeship programmes. Ensure that emerging professions and emerging skills that are not yet widely present in companies, are developed through apprenticeships.</p>	<p>R3: Additional support may be required to help these groups complete their apprenticeships.</p>
	<p>In systems where apprenticeships are a parallel track to other VET pathways:</p> <p>R5: Integrate apprenticeships into formal VET if it is not yet the case. Make sure that they represent an alternative that is equivalent (in terms of recognition of qualifications) to more school-based tracks.</p> <p>R6: Encourage the development of apprenticeships in a greater number of professions and support the growth of apprenticeship programmes.</p>	

	<p>In systems with alternance VET:</p> <p>R7: Ensure the work-based learning periods represent a significant proportion of students' learning time. Put in place or further develop measures that emphasise the quality of these work-based periods.</p> <p>R8: Develop measures that support strong articulation between the school-based and the work-based parts of learning, such as:</p> <ul style="list-style-type: none"> • Develop actions that bring together VET schools and employers: quality collaboration should be based on continuous communication; • Involve employers/company trainers in the development of curricula, to ensure the compatibility and coherence between what is taught in the two venues; • Develop/improve quality assurance measures and controls for VET providers/schools. 	
	<p>In largely school-based systems:</p> <p>R9: If starting to develop apprenticeships, focus on selected professions and sectors first. Priority sectors should be selected, in terms of economic targets and sectors that are already involved in other alternance schemes and/or participation with VET schools and authorities. Put in place measures that ensure that stakeholders have the required capacity to provide support to the learners.</p> <p>R10: In parallel, provide work-based learning opportunities to those in school-based VET by transforming these programmes into alternance-type programmes.</p> <p>R11: Measures to support SMEs should be further adjusted to the needs of micro companies, especially if these companies hold a significant part of employment in the country.</p>	<p>This gradual implementation can allow taking small but firm steps towards the engagement of employers and learners, identifying challenges, and securing funds.</p>

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ANNEX 1: ANALYTICAL FRAMEWORK

Question	Indicator	Scope	Comment (more detailed indicators)	Sources
What are the main differences in existing VET systems when it comes to the existence and key features of alternance programmes?	The nature of VET tracks in the country	EU-28	The number of tracks Duration Level	Refernet country reports 2012;
	Existence of apprenticeships	EU-28 EU-10	Features of apprenticeships – status, remuneration, etc.	European Commission-DG Employment (2012c); Eurypedia;
	Existence of other alternance programmes	EU-28 EU-10	As above	European Commission (2012b)
	Pathways into alternance programmes	EU-28	Existence of exams Early tracking in general education Employers' choice	Eurypedia, Education at Glance (OECD countries)
	Participation in VET	EU-28		Eurostat
	Participation in alternance programmes	EU-28		European Commission-DG Employment (2012c); Education at Glance (OECD countries) 10 countries – national data
	Availability of guidance	EU-28		Eurobarometer study 369
	Completion rates of VET programmes	EU-28		Education at Glance (OECD countries)
	Exit assessment of VET programmes	EU-28	(alternance schemes in particular)	Refernet and Education at Glance (OECD countries)
What are the recent reforms (planned) in alternance	Outcomes of alternance schemes and other VET schemes	EU-28	Completion rates Employment outcomes Progression to higher levels of education	Education at Glance (OECD countries)
	Existence of recent reforms to strengthen alternance schemes	EU-28	Introduction of new apprenticeship schemes Upgrading of apprenticeships	Refernet European Commission-DG Employment

Question	Indicator	Scope	Comment (more detailed indicators)	Sources
schemes and what is driving them?			Strengthening of other forms of alternance schemes	(2012c)
	Description of recent reforms	EU-10		National sources
	Narrative about main reasons behind these reforms	EU-10		National sources and interviews
How do different factors influence VET and alternance programmes in particular?	Perceptions about VET programmes	EU-28	Perceptions about the image of VET, the quality of jobs to which VET leads	Eurobarometer study 369
	Perceptions of learners/ parents/ employers about alternance schemes	EU-10		National sources and interviews
	Existence and nature of guidance schemes	EU-10		National sources and interviews
	Main economic sectors in the country	EU-28	Proportion of services versus industry	Eurostat
	Company size	EU-28	Share of SMEs	Eurostat
	Influence of perceptions on learners' choice			Academic literature review
	Influence of economic context on the supply of apprenticeship placements			Academic literature review
	Sectoral differences regarding supply and demand for apprentices			Academic literature review
	Influence of the geographical coverage of alternance schemes on learners' choice			Academic literature review
Measures being put in place	Measures regarding school-business cooperation	EU-10	Types of measures (governance, funding, etc.) Focus of these measures Strengths and weaknesses	National sources and interviews
	Measures regarding information and guidance of students to	EU-10	Types of measures (career guidance, online tools, etc.)	National sources and interviews

Question	Indicator	Scope	Comment (more detailed indicators)	Sources
	enter VET pathways		Focus of these measures Strengths and weaknesses	
	Measures to promote attractiveness	EU-10	Types of measures (competitions, advertisement campaigns, etc.) Focus of these measures Strengths and weaknesses	National sources and interviews
	Measures to ensure quality	EU-10	Types of measures (trainers' preparation, companies' capacity, etc.)	National sources and interviews
How does funding of VET and in particular alternance support or hinder development of these schemes?	Types of funding schemes for VET	EU-28	general overview	Education at Glance (OECD countries)
	Influence of funding schemes on the supply of training placements			Academic literature review
	Costs and benefits of alternance training			Academic literature review
	Financial incentives for employers to offer alternance placements	EU-10		National sources and interviews
	Employers' contribution to alternance schemes	EU-10		National sources and interviews
	Outcomes' based funding of schools	EU-10		National sources and interviews
How do alternance schemes perform when it comes to equal opportunities and tackling early school leaving?	Proportion of women in VET (in particular alternance schemes)	EU-10		National sources and interviews
	Proportion of socio-economically disadvantaged students	EU-10		National sources and interviews
	Enrolment of students with disabilities	EU-10		National sources and interviews
	Measures to support equal opportunities in alternance schemes	EU-10		National sources and interviews

Question	Indicator	Scope	Comment (more detailed indicators)	Sources
Challenges and success factors	Reasons for strengthening alternance schemes	EU-10		National sources and interviews
	Strengths of reforms implemented	EU-10		National sources and interviews
	Weaknesses of reforms implemented	EU-10		National sources and interviews

Source: ICF International

ANNEX 2: TABLES AND COUNTRY EXAMPLES FROM SECTION 2

Table A2. 1: The 10 EU countries, selected for in-depth analysis

Country	Type of VET	Enrolment in VET at upper secondary level*	Youth unemployment**	Geographical criteria
Czech Republic	Mainly school-based	High	Less than EU average but high compared to overall unemployment	Central & Eastern – 2004 enlargement
Germany	Mainly work-based	Medium	Low	Continental
Greece	Mainly school-based	Low	Very high and more than double the overall population	Southern
Finland	Mainly school-based but significant periods of work-based learning	High	Less than EU average but high compared to overall unemployment	Nordic
France	Mixed	Medium	Above EU average and high compared to overall unemployment	Continental
Italy	Mainly school-based but significant periods of work-based learning	Medium	Significantly above EU average and high compared to overall unemployment	Southern
The Netherlands	Mixed	High	Low	Continental
Poland	Mainly school-based	Medium	Above EU average and high compared to overall unemployment	Central & Eastern – 2004 enlargement
Portugal	Mixed	Medium	Very high and more than double the overall population	Southern
United Kingdom	Mixed	Low	Less than EU average but high compared to overall unemployment	Western

Source: ICF International

*OECD (2012a) Table C1.3. Upper secondary and post-secondary non-tertiary enrolment patterns (2010 data). High= >60% of students enrolled in VET; Medium = 40-60% of students enrolled in VET, Low = <40% enrolled in VET

**Based on Eurostat data (2012) Indicator: Unemployment rate by sex and age groups - annual average, %

Table A2. 2: Interviews conducted per type of organisation

Type of organisation	Number of interviews
Ministry of Education/other national/regional VET authority	27
VET providers/ teachers/students	9
Employers and employees organisations	12
Guidance sector	1
Experts / researchers	11
TOTAL	60

Source: ICF International

Table A2. 3 Organisations interviewed per country

Country	Number of interviews	Organisation
CZ	7	National Institute of Education (Department for analysis of qualification requirements of the labour market; Department for lifelong learning ; project « Together»); The Association of Industry and Transport; Regional office of Karlovarsky Kraj
DE	5	Federal Ministry of Education and Research; Chamber of Industry and Commerce Frankfurt a.M.; German Confederation of Skilled Crafts; Association of German Chambers of Commerce and Industry; Federation of Teachers at vocational schools e.V. (BLBS)
EL	7	Ministry of Education and Religious Affairs; General Secretariat of Lifelong Learning; National Organisation for the Certification of Qualifications & Vocational Guidance; Manpower Employment Organization (OAED); Hellenic Confederation of Professionals, Craftsmen & Merchants (GSEVEE) VET teacher
FI	5	The Central Organisation of Finnish Trade Unions (SAK); Confederation of Finnish Industries (EK); Union of VET students / Suomen Ammattiin Opiskelevien Liitto (SAKKI); National Board of Education
FR	5	CCCA-BTP (bipartite organisation in charge of the development of apprenticeship training in the sector of construction and public works); Ministère de l'éducation nationale; Cereq (Public research centre on qualifications); CNRAA (national documentation centre on apprenticeship and alternance training)

IT	8	Isfol; Confidustria; National training provider; Ministry of Labour
NL	6	Ministry of Education, Culture and Science Directorate for VET; Ministry of Education, Culture and Science & Ministry of Social Affairs and Employment Special directorate early school leaving; SBB Secretary to the Advisory committee Macro-efficiency; VHG (branch organisation in the landscaping sector); VET schools; Centre of expertise in the trade sector)
PL	6	Ministry of National Education; Polish Craft Association; Association of Vocational Education Centres; Institute of Labour and Social Studies
PT	6	Ministry of Education and Science -Cabinet of the Minister; Lusíada University of Lisbon; Institute for Employment and Vocational Training (under the Ministry of Solidarity, Employment and Social Security; Portuguese Association of Professional education Teachers; National Association of VET Schools; Teachers' Democratic Union of Grande Lisboa Subregion (interviewee also member of General Union of Workers (UGT)
UK (ENG)	5	National Apprenticeship Service; Apprenticeship Unit; UKCES; SEMTA (employers' organisation)

Source: ICF International

ANNEX 3: TABLES AND COUNTRY EXAMPLES FROM SECTION 3

Table A3. 1: Existence of different types of VET-pathways in some EU countries

	School-based VET	Mixed VET	Work-based VET (apprenticeships)
Austria		40 % of students who complete lower secondary education enrol either in a VET school or college. Work placement is a required component of the programme	Another 40 % of students who complete lower secondary education enrol in the apprenticeship system.
Belgium-nl	The majority of VET at upper-secondary level is school-based. This includes practical training, but there is no requirement for this to take part in a company setting. The extent to which traineeships are integrated into programmes depends on VET schools.		Apprenticeship programmes exist but remain a relatively small part of VET provision (around 12 000 students per year compared to nearly 200 000 in school-based programmes) ³⁶¹ .
Croatia	Four-year school-based VET (five years for nurses at ISCED 3B). The programmes lead to EQF level 4 qualifications and allow access to higher education.		Three-year IVET programmes that lead to ISCED 3B qualifications are mainly delivered as apprenticeships.
Czech Republic	Two school-based upper secondary VET pathways exist, leading to: <ul style="list-style-type: none"> • A professional certificate (with 35-45 % practical training); • A university entrance qualification (with little practical training). 		
Denmark	Those students who fail to find an apprenticeship placement can have a training agreement with a school offering the practical part of the training.		Students in upper-secondary VET are expected to also have an apprenticeship contract with an employer. This is the standard pathway for all VET students.

³⁶¹ Scheys M. (2011), Vocational education and training in Flanders.

	School-based VET	Mixed VET	Work-based VET (apprenticeships)
Finland	The majority of VET students undertake their studies in a vocational training institute. This pathway is often known as 'school-based VET', but includes an on-the-job training element of at least six months.		Almost all upper secondary VET qualifications can also be obtained through apprenticeship training; 70—80 % of the training takes place in a workplace and an employment contract is drafted.
France		VET programmes that provide full-time education to students have to contain periods of in-company training (traineeships). These programmes receive the majority of VET students.	Apprenticeships exist alongside full-time education. They lead to the same qualifications as the other programmes. There are much less apprenticeship placements than training in schools.
Germany	School-based VET is offered as preparation for those who do not succeed in finding an apprenticeship placement.	School-based programmes with obligatory work-place learning exist in certain economic sectors (e.g. health care).	Apprenticeships are the main form of VET in Germany. The majority of students in VET attend dual education pathways.
Greece	Formal IVET is provided by upper secondary VET schools. In 2013, a reform was introduced that enhances practical learning opportunities, in the form of an optional one-year apprenticeship to mandatory traineeship/apprenticeship in post-secondary non-formal IVET ³⁶² .		Ca. 10 % of VET students are trained in the apprenticeships of the national PES (OAED), following a dual training pathway.
Italy	The IS pathway (Istituzioni Scolastiche) includes work-based learning which mostly takes place in schools. A 'traineeship' in a company is optional and its implementation depends on the Regions.	VET courses are managed and implemented by either VET training agencies or secondary schools. Internships and traineeships constitute at least 30 % of the courses.	Apprenticeships exist but are not considered an integral part of the vocational system. National legislation classifies them as a 'permanent work contract aiming at the training and occupation of young people'. ³⁶³
The Netherlands		Practical training in companies has to represent a minimum of 20 % and a maximum of 60 % of the training time for full-time students. This form of VET receives roughly two thirds of students.	At least 60 % of the training takes place in the work-place. The student has to have an apprenticeship contract. This form of programme hosts roughly one third of students (mostly older age cohorts). The qualifications prepared are the same as those offered through mixed VET.

³⁶² More information on the 2013 reform can be found in Section 4.

³⁶³ Art.1 D.Lgs n. 167/2011.

	School-based VET	Mixed VET	Work-based VET (apprenticeships)
Poland	VET at upper secondary level is provided by technical secondary schools. Practical training is offered through special classes and cover ca. 20 % of the training time.		Apprenticeships offered for many technical subjects by employers. There exist two forms: comprehensive 3 year training or a shorter 3-6 months track preparing for specific qualifications. Theoretical training is either provided in schools or organised by the employer as well.
Portugal		<p>Three types of courses exist:</p> <ul style="list-style-type: none"> • 'Apprenticeship – type courses'³⁶⁴ with up to of 40 % learning in companies • Professional courses (18 % - 24 %) • Educational courses (up to 15 % work-based learning; students have to pass an internship of 210 hours) • Vocational courses³⁶⁵ (pilot project), targeting early school leavers: includes an internship that can take place by means of an alternance training model, including training in a real work context within a company and practical training. Its minimum duration is of 1 400 hours. Training in a real working environment and the practical learning, which takes place in school laboratories/kitchens etc. constitutes 46 % of the total studying time. 	

³⁶⁴ The so-called 'apprenticeship-type courses' in Portugal do not include a contract between apprentice and employer and were hence classified as mixed VET.

³⁶⁵ Vocational courses in ISCED 2 are school-based. These are pilot courses, so their form may change.

	School-based VET	Mixed VET	Work-based VET (apprenticeships)
Spain	The vast majority of VET is school-based with practical training taking mostly part in workshops. There is no requirement for in-company training as part of these programmes		Models for training and apprenticeship contracts are being developed. Apprenticeship pathways are already being offered in some regions but remain a minority.
UK	Education providers can offer fully school-based VET. The extent to which practical training takes place in a work-place is not regulated.		Different types of apprenticeship programmes exist: from entry programmes aimed at disadvantaged students to VET at higher levels leading to tertiary level qualifications.

Source: ICF International country research for the 10 selected countries; 2012 Refernet country reports; Cedefop (2013b); Ioannidou A. and Stavrou St. (2013), Prospects for reform of vocational education in Greece (in EL); Flanders.be Authorities (2011), Vocational education and training in Flanders

Table A3. 2: Apprenticeships in EU countries³⁶⁶

Country	Name of programme	Country	Name of programme
AT	Dual Apprenticeship in companies and schools	IT	-Apprenticeship for gaining a vocational qualification or diploma - Professionalising Apprenticeship
BE	- Apprenticeship Contract for lifelong learning in SMEs - Part-time Employment Contract for Alternating Training - Industrial Apprenticeship Contract (Federal Programme)	LV	Apprenticeship
BG	Craftsmanship training	LT	Apprenticeship (Pameistryst s profesinio mokymo forma)
CY	- Apprenticeship System (Systima Mathiteias) - New Modern Apprenticeship (NMA)	LU	Initial Apprenticeship
HR	The dual system was introduced in 1995. Qualifications for 55 occupations can be achieved through dual training/apprenticeships.	MT	-Technician Apprenticeship Scheme -Extended Skills Training Scheme (ESTS)
DK	- Vocational Upper Secondary Education and Training, IVET traineeship (EUD) - Combined Vocational and General Upper Secondary Education, EUX Programme - New Apprenticeship	NL	Work-Based Secondary Vocational Education (BBL: beroepsbegeleidende leerweg) Levels 1; 2; 3; and 4
EE	ISCED 2c, 3c, 3b, 4b qualifications can be achieved through apprenticeship	PL	Apprenticeship (vocational training for juveniles)
FI	Apprenticeship Training at Vocational Upper Secondary Level (IVET and CVET, ISCED Levels 3 and 4).	RO	Apprenticeship Contracts in Firms

³⁶⁶ IMPORTANT NOTE: The source categorised available schemes per country in 'apprenticeship-type schemes' and 'traineeships'. ICF International selected those schemes that fall under the definitions agreed and the scope (education levels) of this study.

Country	Name of programme	Country	Name of programme
FR	- Apprenticeship contract (Contrat d'apprentissage) - Professionalisation Contract (Contrat de professionnalisation)	SI	Practical Training in Programmes of Vocational and Technical Education
DE	Apprenticeship within the dual system of vocational education according to the Law on Vocational Education and Training (BBiG)	ES	Apprenticeship during IVET (under development, available in some Autonomous Communities ³⁶⁷)
EL ³⁶⁸	Apprenticeship Programmes in Vocational Schools of the national PES (OAED EPAS)	SE	Upper Secondary School Apprenticeship
HU	- Contract-based Training of Vocational school-students (mainstream programmes until 2013/14) - Training Contract- Based Training of Vocational School students (so-called 'early VET2 programmes (since 2010) and 'dual model' (since 2012 to be mainstreamed 2013/2014) - Contract- Based training of Secondary Vocational School Students (post-secondary VET)	UK	Government Apprenticeship Programme (ISCED 3) ³⁶⁹
IE	FAS Apprenticeship		

Source: European Commission (2013d); ETF (2001) Vocational Education and Training in Croatia.

³⁶⁷ Spain Refernet report 2012.

³⁶⁸ The 2013 reform introduced additional options for apprenticeships that will be implemented in 2015-16.

³⁶⁹ Also available in ISCED 5, which falls out of the scope of this study.

Table A3. 3: Types of contracts identified in apprenticeships in the selected countries

Country/ Scheme	Existence of contract	Type of contract	Remu- neration	Social security / health insu- rance	Signing parties	Employee Status
FR	yes	Apprenticeship contract	yes	yes	Apprentice ³⁷⁰ and training company	yes
FI	yes	Employment / apprenticeship contract	yes	yes	Apprentice and employer	Yes- during periods of on-the-job learning
DE	yes	Apprenticeship contract	yes	yes	Apprentice and training company	yes
EL	yes	Employment contract	yes	yes	Apprentice and employer	yes
IT ³⁷¹	yes	Employment contract	yes	yes	Apprentice and training company	yes
NL	yes	1) Employment contract 2) Learning Agreement	yes	yes	1) Training company and apprentice 2) Tripartite agreement –School, apprentice and VET- provider	yes

³⁷⁰ Should apprentices and trainees be under age, contracts are signed by their legal guardians in all selected countries.

³⁷¹ In Italy, three types of apprenticeship contracts can be found to distinguish between apprenticeships with different target groups and/or targets: i) The Apprenticeship leading to a qualification and professional diploma (Apprendistato per la qualifica e il diploma professionale) that targets 15-25 year-olds and enables apprentices to fulfil the right-duty to study and training³⁷¹, as well as to acquire a professional qualification or diploma. This contract was launched in 2012, but is not fully implemented nationally; ii) The Professional apprenticeship (Apprendistato professionalizzante o contratto di mestiere) that targets 18-29 year-olds (or 17 for those holding a professional qualification) and enables apprentices to acquire a professional qualification. This study focuses on this apprenticeship contract as it falls in the scope of the study and is implemented across the country; and iii) The Higher education and research apprenticeship (Apprendistato per l'alta formazione e la ricerca): targets 18-29 years-old (or 17 for those holding a professional qualification) and enables trainees to complete a secondary and / or tertiary diploma or a doctorate. This apprenticeship contract falls out of the scope of this study. Sources: Refernet Country report (2012) and Isfol (2012a).

Country/ Scheme	Existence of contract	Type of contract	Remu- neration	Social security / health insu- rance	Signing parties	Employee Status
PL	yes	Employment contract	yes	yes	Apprentice and training company	yes
UK(ENG)	yes	Employment contract	yes	yes	Apprentice and training company	yes

Source: ICF International analysis (based on 2012 Refernet country reports and ICF International country research)

Table A3. 4: Types of contracts identified in other alternance schemes in the selected countries

Country/ Scheme	Exis- tence of contract	Type of contract	Remuneration	Social security / health insu- rance	Signing parties	Employee Status
Czech Republic: School- based VET	No contract	Agreement	Yes: according to legislation, students are entitled to financial remuneration (min. 30 % of the minimum wage ³⁷²) for productive activities ³⁷³ during their practical education	no	VET school and employer	No
Finland: Mixed scheme (so-called 'school- based')	yes	-	Some learners get a salary from their employer for the on-the-job periods but this is not common and employers are not obliged to do so	no	VET school and employer	No
Greece: Mixed VET (Institution s of Vocational Education- IEKs)	No (until the 2013 reform)	-	not obligatory, but employer may offer small compensation; remuneration (EUR 250 per month) foreseen for traineeships in tourism ³⁷⁴	yes		No
	Yes (accordin g to the reform; to be available for	To be defined	To be defined	To be defined	OAED (national PES) and employer	To be defined

³⁷² Assuming a 40 hour work week.³⁷³ Productive is defined as generating income.³⁷⁴ Common Ministerial Decision 919-17/7/2006.

Country/ Scheme	Existence of contract	Type of contract	Remuneration	Social security / health insu- rance	Signing parties	Employee Status
	students after 2014- 2015)					
Netherlan ds: Mixed scheme (bol)	yes	Learning Agreement	Not obligatory; students often receive small remuneration for the productive hours of the practical period	no	2) Tripartite agreement –School, student and VET- provider	No
Poland: School based VET	yes	Learning contract	no	no	School and employer	No
Portugal: Mixed schemes	yes	Learning contract	no	no	Trainee and VET- provider	No

Source: ICF International research on the selected countries analysis and 2012 Refernet country reports

Table A3. 5: Actors involved in the governance of alternance schemes in the 10 selected countries

Country	Overall policy strategy - lead	Other organisations involved	Funding	Design of standards/ curricula	Certification/ assessment	Quality assurance
CZ	Ministry of Education, Youth and Sport	National Institute for Education Sectoral councils	Ministry of Education, Youth and Sport	Ministry of Education, Youth and Sport National Institute for Education Sectoral councils	VET schools	School inspection
FI	Ministry of Education and Culture	Finnish National Board of Education, VET-providers	Governmental funding	Finnish National Board of Education	VET-providers	Finnish National Board of Education
FR	Ministry of Education, Ministry of Employment, Labour, Vocational training and Social Dialogue	Sectoral ministries, sectoral organisations, Training centres for apprentices (CFAs) - through their umbrella organisation CCCA-BTP	Companies and regions	Ministry of Education and sectoral ministries	Training centres for apprentices (CFAs) and regional education authorities	Ministry of Education

Country	Overall policy strategy - lead	Other organisations involved	Funding	Design of standards/ curricula	Certification/ assessment	Quality assurance
DE	Federal Ministry of Education and Research	Chambers, Federal Institute for Vocational Education and Training	Regional Ministries of Education (VET-schools) and training companies (work-place learning)	School curricula: regional Ministries of Education; Training standards are national, so are designed by the Chambers, Federal Institute for Vocational Education and Training (BIBB). Chambers offer the views of employers; social partners overall need to give consent. The Standing Conference of the Ministries of Education ensure (regional) school curricula and (national) training standards are aligned ³⁷⁵	Chambers	Ministries (regional level) and Chambers

³⁷⁵ BIBB (2003), Wie entstehen Ausbildungsberufe; available on the Internet at: <http://www.bibb.de/dokumente/pdf/leitfaden-entstehung-ausbildungsberufe.pdf>.

Country	Overall policy strategy - lead	Other organisations involved	Funding	Design of standards/ curricula	Certification/ assessment	Quality assurance
EL	Ministry of Education and Religious Affairs (mixed scheme-IEKs) ³⁷⁶ ; Ministry of Labour and Social Insurance (apprenticeship)	Social partners, and regional local authorities (to assess labour market needs with OAED ³⁷⁷ and decide apprenticeships' offer) (apprenticeship). Under the 2013 reform, OAED	Ministry of Education and Religious Affairs (mixed scheme-IEKs); OAED and ESF funds (apprenticeship)	General Secretariat of Lifelong Learning (Ministry of Education and Religious Affairs) (mixed scheme-IEKs). EOPPEP; Ministry of Labour and Social Insurance and employers' and employees' organisations	National Organisation for the Certification of Qualifications & Vocational Guidance (EOPPEP) (mixed scheme-IEKs). Ministry of Labour and Social Insurance/ National PES (OAED) (apprenticeship)	VET provider (mixed scheme-IEKs); OAED (for its apprenticeships) VET schools and OAED will ensure the quality of apprenticeships (in the reformed school-based track)
IT	Ministry of Education; Ministry of Labour and Social Policies and the Regions	ISFOL	Regions	State/Regions Conference	VET-providers	Regions (based on State/Regions agreement)
NL	Ministry of Education, Culture and Science; Ministry of Economic Affairs	Knowledge Centres VET, MBO Council	Ministry of Education, Culture and Science and Ministry of Economic Affairs	Designed on sectoral level through Knowledge Centres VET. National coordination by Foundation SBB.	VET-providers	National Inspectorate

³⁷⁶ IEKs are run by other Ministries, too (e.g. Labour and Social Insurance; Health; Agriculture etc.), but the vast majority runs under the Ministry of Education.

³⁷⁷ National Public Employment Service (PES).

Country	Overall policy strategy - lead	Other organisations involved	Funding	Design of standards/ curricula	Certification/ assessment	Quality assurance
PL	Ministry of Education	Polish Craft Association, Chambers of trade.	Ministry of Education (VET-Schools), Labour Fund governed by the Ministry of Labour and Social Policy (work-based part)	Ministry of Education in cooperation with sectoral ministries.	District Examination Boards	Ministry of Education, Polish Craft Association
PT	Ministry of Solidarity, Employment and Social Security; Ministry of Education and Science	Institute for Employment and Vocational Training (IEFP), National Agency for Qualifications and VET (ANQEP), Regional authorities	Several programmes funded by IEFP and ANQEP	National Agency for Qualifications and VET (ANQEP)	VET Providers	Ministry of Solidarity, Employment and Social Security; Ministry of Education and Science
UK (England)	Department for Education (DfE – age 16-18) Department of Business, Innovation and Skills (BIS – age 19+)	Skills Funding Agency, National Apprenticeship Service, Ofqual, companies	Education Funding Agency, Skills Funding Agency, National Apprenticeship Service	Awarding organisations (monitored by Ofqual)	Awarding organisations (monitored by Ofqual)	Ofqual/Ofsted

Source: ICF International research on selected countries and 2012 Refernet country report

Table A3. 6: Entrance requirements to alternance schemes in the selected countries

Country	Minimum. Educ. Attainment:	Entrance examination	Required prior grades	Early tracking	Free selection of VET provider or training company	Selection according to social criteria
Czech Republic	Lower secondary		For some programmes			
Finland	None or Lower secondary				ð	ð
France	Lower secondary				ð	
Germany	None or Lower secondary	Up to employer	Sometimes training companies look at achievement in STEM studies	ð	ð	
Greece	1st year of general/vocational upper secondary ³⁷⁸				ð	ð
Italy	Lower secondary				ð	ð
Nether-lands	None or lower secondary			ð	ð	
Poland	None or lower secondary	Up to employer			ð	
Portugal	None or lower secondary				ð	ð
UK (England)	None or lower secondary				ð	ð

Source: ICF International research; Refernet country reports (2012)

³⁷⁸ For apprenticeships under the national PES (OAED); for requirements under the new apprenticeships/schemes introduced by the 2013 reform, see Section 4.

The 'transition system in Germany' ³⁷⁹

Graduates from the lowest tier of lower secondary education (Hauptschule) in Germany are on average about 16 years old. Those who do not or cannot start an apprenticeship are subject to compulsory education until they are 18 years old. For those students, the so-called transitional sector between school and entrance in the dual system was established, financed by the 'Laender' and implemented by schools and VET providers.

Shrinking numbers of places for apprenticeships led to a high number of students in the transition sector (in 2009: 30.7 %) and to increased competition. Usually these students attend classes in VET schools which prepare for the dual system (e.g. by helping those students to improve their basic skills and personal attitudes), but do not lead to a qualification; or to learning outcomes relevant for a VET qualification.

It should be noted that:

-47 % of those in the transition sector find a place in the dual system rather fast (within a year);

- 23 % find a place in a school, ending with a vocational certificate, also rather fast;

- Still, about 31 % cannot find a position in the dual system even 2 years after attending one of the vocational qualification measures.³⁸⁰

Long-term applicants are at high risk: over time, even with the same qualification as their competitors their chances shrink to get an apprenticeship place for an occupation they want. Hence, to avoid further waiting loops, students in the transition system take up an apprenticeship in the dual system which is not in line with their wishes (e.g. are trained to be a plumber because there are training places available), which increases the risk of drop out.

About one third of students in the transition system are left with low chances to enter the dual system even if the relation between the supply of open places and new entrants is balanced.

The improvement of the 'transition system' is also one of the objectives of the 'Education Pact'³⁸¹: Existing instruments of supporting youth at risk were aligned and coordinated; e.g. through regional initiatives such as the OloV Strategy in the federal state of Hesse; aiming to optimise local cooperation structures between the stakeholders of the regional labour market. The objective is to improve young people's opportunities of transition into vocational training by means of quality standards. OloV focuses three fields of action: job-orientation in school, acquisition of training places and internships and the process of matching and placement.

Moreover, measures were taken in Germany to enhance the 'dualisation' of the transition sector: experiences proved that those measures offered to young people who include a high amount of work-based learning in company are more helpful to bring youth into dual education than those that are school-based. A specific example here is the 'entry qualification' (EQ): companies offer a six-month-traineeship to youth who did not find a training place. During the six months, the trainee is exposed to parts of the official training content (e.g. in form of a specifically constructed module or unit) and takes part in the school-based parts of the training as well. This measure was found to be particularly successful in terms of transition to training in the dual system. Hence, emphasis is put on strengthening the efforts in this direction.

³⁷⁹ ICF International research on Germany.

³⁸⁰ Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013.

³⁸¹ A joint action between employers, trade unions, federal and regional governments and other stakeholders, set up in 2004 and renewed in 2010 (See Section 4 for more details).

Table A3. 7: Alternance schemes and other efforts targeting disadvantaged youth – examples from the selected countries

Country	Alternance schemes targeting ESL	Alternance schemes targeting other disadvantaged group	Alternance schemes targeting students with special needs	Alternance schemes targeting migrants
Czech Republic	Pedagogical and psychological counsellors at schools.			
Finland	Career Start Guidance programmes are offered: student admission gives priority to school-leavers, unqualified persons and those who have dropped out before.			
France	Apprenticeship training is promoted as a means of improving school-to work transitions			
Germany	Guidance initiatives and pre-vocational training		Counselling, special needs schools, courses and integration measures	Guidance initiatives and pre-vocational training ³⁸²
Greece		If applications for apprenticeships ³⁸³ exceed available positions, selection takes into consideration socio-economic criteria, such as being an orphan, having low family income etc.	Special vocational schools for students with disabilities	
Italy	The IFP system addresses specifically those less likely to succeed in academic paths			
Netherlands	National programme 'Diminishing early school leaving' ('Aanval op de uitval').			
Poland			Adapted training programmes for students with	

³⁸² Despite several measures being taken, the integration of migrants in the dual system is still weak.

³⁸³ Run by PES (OAED), before the 2013 reform.

Country	Alternance schemes targeting ESL	Alternance schemes targeting other disadvantaged group	Alternance schemes targeting students with special needs	Alternance schemes targeting migrants
			special learning needs	
Portugal	Education and training courses, as well as the vocational courses (pilot project)		Vocational courses	
UK (England)	Specific apprentice-ships are offered for NEETS		Action plan from August 2012 aimed at creating an inclusive apprenticeship offer to learners with learning difficulties and/or disabilities (LLDD)	16 'Diversity in Apprenticeships' Pilots aimed at identifying new ways to engage people from underrepresented ethnic minority groups

Source: ICF International country reports

Completion and graduation: definitions by OECD (2013) Education at a Glance

'Successful completion' describes the percentage of students who enter an upper secondary programme for the first time and who graduate from it a given number of years after they entered. It is a measure of how efficiently students flow through upper secondary education. It represents the relationship between the graduates of and the new entrants into the same level of education. The calculation is made using the amount of time normally allocated for completing the programme and also after an additional two years (for students who had to repeat a grade or individual courses, who studied part-time, etc.). This indicator also includes the percentage of students who do not graduate from an upper secondary programme but are still in education. These might include part-time students who need more time to complete their studies and adults who decide to return to school, perhaps while they are working. Only initial education programmes are covered by this indicator. This measure should not be confused with upper secondary graduation rates.

Graduation rates represent the estimated percentage of people from a certain age cohort that is expected to graduate at some point during their lifetime. It measures the production of graduates from upper secondary education, relative to the country's population, and represents the relationship between all the graduates in a given year and a particular population. For each country, for a given year, the number of students who graduate is broken down into age groups. For example, the number of 15-year-old graduates is divided by the total number of 15-year-olds in the country; the number of 16-year-old graduates is divided by the total number of 16-year-olds in the country, etc. The graduation rate is the sum of these age-specific graduation rates.

A third indicator in Education at a Glance (2013) uses the notion of educational attainment. Attainment measures the percentage of a population that has reached a certain level of education, in this case, those who graduated from upper secondary education. It represents the relationship between all graduates (of the given year and previous years) and the total population'.

Table A3. 8: Trends in graduation rates of pre-vocational and vocational programmes, upper secondary education; 2005-2010

Countries with high share of students in work-based learning VET are highlighted in blue

Countries	2005	2006	2007	2008	2009	2010	% change 2005-2010
Austria	52	50	74	75	74	76	47.9
Belgium	58	56	55	68	69	69	19.9
Czech Republic	71	72	67	65	61	57	-19.5
Denmark	45	46	47	46	47	47	2.6
Estonia	18	17	19	19	20	20	12.5
Finland	79	83	87	88	94	94	19.3
France	62	60	61	62	65	65	5.2
Germany	61	63	58	56	45	47	-23.7
Greece	38	35	30	28	-	28	-27.4
Hungary	19	19	15	16	17	17	-8.4
Ireland	-	52	52	55	62	68	32.1 ³⁸⁴
Italy	69	69	65	65	59	60	-12.9
Luxembourg	48	43	47	45	43	41	-13.6
Netherlands	66	66	64	69	71	85	29.4
Poland	42	36	32	33	35	38	-11.0
Portugal	12	15	19	20	31	36	188.3
Slovakia	72	72	72	67	65	67	-6.9
Slovenia	81	79	74	70	76	73	-10.7
Spain	36	35	39	38	41	43	18.0
Sweden	41	41	41	42	42	44	6.7

Source: OECD (2013), Education at a Glance; No available data for the UK.

³⁸⁴ Percentage change for Ireland regards 2006 to 2010 rates.

Table A3. 9: Drop-out rates per country and scheme

Country	No. and % with certified qualifications	No. and % of drop-outs/non-completion rates	Country	No. and % with certified qualifications	No. and % of drop-outs/non-completion rates
Belgium Apprenticeship Contract for Lifelong Learning in SMEs	82.7 % (2010-2011)	60 % (2010-2011)	Luxembourg Initial Apprenticeship	In 2011, 670 qualifications were awarded to male apprentices (61.5 % of the total) and 420 to female apprentices (38.5 % of total). (Diplomes et Certifications 2010/2011: 56). In 2009/ 2010 67.2 % of females and 60.3 % of males aiming to obtain a CATP (who started in 2002/2003) achieved their diploma	In 2009/2010, more than one third of students aiming for a CATP left with no diploma. This was higher for male students than female ones.
Part-time Employment Contract for Alternating Training		17.3 % (2010-2011)			
Cyprus Apprenticeship System	29.9 % (2009-10)	70.1 % (2009-10)	The Netherlands		
Denmark Vocational Upper Secondary Education and Training, IVET traineeship (EUD)		46%	Work-Based Senior Secondary Vocational Education – Level 1 – Assistant Training		2010/2011: 43.8 % dropped out for BBL1

Finland Apprenticeship Training at Vocational Upper Secondary Level (IVET and CVET, ISCED Levels 3 and 4)	25 %	6.9 %	Work-Based Senior Secondary Vocational Education – Level 2 – Basic Vocational Education		2010/2011: 13.6 %
VET at Upper Secondary Level (IVET, ISCED levels 3 and 4) On-the-Job Learning.	around 80 % completed IVET qualification (2011)	9.1 % (2011)			
France Apprenticeship contract (Contrat d'apprentissage)	Approx. 75 % of apprenticeship contracts were completed.	Approx. 25 % of apprenticeship contracts were not completed ³⁸⁵	Work-Based Senior Secondary Vocational Education – Level 3		2011/2012: 3.9 %
Germany Apprenticeship within the dual system of vocational education according to the Law on Vocational Education and Training (BBiG)	In 2011, 503 900 apprentices completed with certified qualification. In 2011 89.7 % of those who attempted passed their exam	In 2011, 24 % of the apprenticeship contracts were resolved prematurely About 18 % of young people with a minimum secondary education (Hauptschulabschluss) leave dual apprenticeships without a diploma. About 9 % of young people with intermediary secondary education	Work-Based Senior Secondary Vocational Education – Level 4 – Management Training & Specialist Training		2011/2012: 4 %

³⁸⁵ Not formally measured. Data based on a survey carried out between September and December 2006 (according to the source).

		(Mittelschulabschluss) leave dual apprenticeships without a diploma ³⁸⁶ .			
Ireland FAS Apprenticeship	74 % completed the apprenticeship (based on registrants in 1999)	26 % did not complete (based on registrants in 1999) 9 % attended Phase 1 only; 6 % attended up to Phase 2 only: Engineering had highest levels of incompletes (33 %)	Sweden Upper Secondary School Apprenticeship		56 % (2011)

Source: European Commission (2013d) IMPORTANT NOTE: ICF International selected information from the source to include in this table that regards apprenticeship/alternance schemes that comply with the definition and the scope of this study. Country data was included when enhancing comparability (percentages preferred to absolute numbers). Where possible, ICF International calculated share of drop-outs.

³⁸⁶ Beicht U. and Walden G. (2013), Duale Berufsausbildung ohne Abschluss – Ursachen und weiterer bildungsbiografischer Verlauf. Analyse auf Basis der BIBB-Übergangsstudie 2011.

'Apprenticeship-readiness'

In Germany, a share of 12 % of young people dropped out of VET entirely in 2011 and entered the job market as unskilled workers (in total, there is a share of 14.1 % unskilled workers in the age group 20-29 [2010]).³⁸⁷ This group also boasts a conglomerate of factors which, in the literature, is called 'lack of apprenticeship-readiness'. These factors can be³⁸⁸:

- Insufficient competences/attitudes;
- Insufficient knowledge or skills to perform work tasks;
- Failure at school (e.g. due to truancy); and
- Personal and social reasons (illness, family problems, drug abuse, teenage pregnancy etc.).

This phenomenon was observed in other countries as well (France, Finland, Poland)³⁸⁹, and is related to the fact that undertaking vocational training in an alternance scheme means that students enter the world of work. Besides skills and competences related to the concrete work tasks, this also requires many social skills and attitudes, such as the need to comply with employers' requirements and regulations and collaboration with other employees and supervisors. Training in the workplace is on one hand, a very good opportunity to shape a variety of professional and social competences. On the other hand, this is very challenging to 15-16 year olds; and not every young person reacts positively to his/her new responsibilities and the need to comply with the rigors of a school and an employer at the same time.

Hence, drop-out may occur because of a mixture of the following factors:

- Insufficient social competences/attitudes;
- Insufficient knowledge or skills to perform work tasks;
- Failure at school (e.g. due to truancy); and
- Personal and social reasons (illness, family problems, drug abuse, teenage pregnancy etc.).

³⁸⁷ Bundesministerium fuer Bildung und Forschung (2013), Berufsbildungsbericht 2013. pp. 35-36.

³⁸⁸ BIBB (2003), Gruende fuer den Ausbildungsabbruch. Available (in German) on the Internet at: http://www.good-practice.de/infoangebote_beitrag793.php.

³⁸⁹ ICF International research on the selected countries.

Table A3. 10: Employment outcomes of apprenticeship graduates, in the selected countries (where data is available)

Country	% in employment immediately upon completion	% in employment 6 months upon completion	Country	% in employment immediately upon completion	% in employment 6 months upon completion
Finland ³⁹⁰ Apprenticeship	86 %, one year after completion 90 % 5 years after completion ³⁹¹		The Netherlands Work-Based Senior Secondary Vocational Education Level 2 (BBL2)	49 % of BBL2 enter the labour market	
France Apprenticeship contract (Contrat d'apprentissage)	61 % into employment on completion	78 % were in employment 6 months after completion 7 months after completion: 60 % (CAP/BEP) and 77 % (Bac Pro) ³⁹²	(NL) Work-Based Senior Secondary Vocational Education – Level 3 – Professional Education (BBL3)	58 % enter the labour market	
Germany Apprenticeship within the dual system of vocational education according to the Law on Vocational Education and Training (BBiG)	66 % of apprentices were retained by their company in 2012 ³⁹³	In 2008, 70 % of apprentices were employed 1 month after completion of the scheme ³⁹⁴	(NL) Work-Based Senior Secondary Vocational Education – Level 4 – Management Training & Specialist Training (BBL4)	58 % to enter the labour market	

³⁹⁰ Vipunen database of the Ministry of Education and Culture and the National Board of Education (2013) Two databases: (1) Tutkinnon suorittaneiden työllistyminen ja jatko-opintoihin sijoittuminen: Koulutuksen ja oppilaitoksen mukaan. (2) Ammatillisen tutkinnon suorittaneiden työllistyminen ja jatko-opintoihin sijoittuminen. Vipunen - opetushallinnon tilastopalvelu.

³⁹¹ For 'young people', i.e. non-adults.

³⁹² DEPP (2013), Reperes et references statistiques 2013.

³⁹³ This does not reflect apprentices that found employment in other companies. BIBB (2014), Datenreport zum Berufsbildungsbericht 2014, Internet: http://datenreport.bibb.de/media2014/BIBB_Datenreport_2014_Vorversion.pdf.

³⁹⁴ BIBB (2012), Bildung in Deutschland 2012, Internet: http://www.bildungsbericht.de/daten2012/bb_2012.pdf.

Greece Apprenticeship Programmes in Vocational Schools of the national PES (OAED EPAS)	60.0 % ³⁹⁵		(NL) Work- Based Senior Secondary Vocational Education – Level 1 – Assistant Training (BBL1)	Training helps 32 % of BBL1 to enter the labour market	
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Source: European Commission (2013d). Additional national sources drawn from ICF International country research in the selected countries IMPORTANT NOTE: ICF International has selected information from the European Commission source to include in this table that regards apprenticeship/alternance schemes that comply with the definition and the scope of this study.

³⁹⁵ Data from a pilot survey in one VET school of the national PES (OAED).

Table A3. 11: Access to higher education from alternance schemes/apprenticeships in the 10 selected countries

Country	Scheme	Access to HE (y/n)	Entry requirements (y/n)	National examinations	Other
Czech Republic	Secondary vocational education with professional certificate ³⁹⁶	no			
Finland	'school-based' VET and Apprenticeship	yes			All upper secondary qualification, whether they are academic or vocational, and achieved through 'school-based' studies or an apprenticeship, give an eligibility for higher education
France	CAP (Certificat d'aptitude professionnelle) : can be obtained through apprenticeship	no			
	BEP (Brevet d'enseignement professionnel)	no			
	Baccalaureat Professionnel – bac pro	yes	no	no	no
Germany	Apprenticeship /dual system	Yes-restricted The aspired study field needs to relate to the professional field of the VET-graduates (e.g. a car mechanic would be able to			Regional differences hold

³⁹⁶ Includes practical training.

		study mechanical engineering) ³⁹⁷			
Greece	Apprenticeship (OAED)	no			
	Mixed scheme (IEKs)	no			
After the reform					
	VET school graduates (incl. optional apprenticeship year)	yes	Graduates of at least three-year VET school	yes	
	Institutes of Vocational Training (IEKs)	no			
	Vocational Training Schools (SEKs)	no			
Italy	Apprenticeship	no			
	3- and 4-year education and vocational training courses (percorsi triennali e quadriennali di Istruzione e Formazione professionale –IFP)	no			
The Netherlands	Apprenticeship (bbl) and Mixed scheme (bol)	Yes for bachelor in university of applied sciences- mbo level 4 graduates from both the bol and bbl pathways	No additional learning and examination required		
		Yes- For admission to an academic	A propaedeutic diploma in hbo (tertiary VET		Additional learning is usually

³⁹⁷ Internet: http://ankom.his.de/pdf_archiv/2009_03_06-Hochschulzugang-erful-qualifizierte-Bewerber.pdf.

		master	education) is required for admission to academic university, sometimes with additional requirements regarding specific subjects.		required in the form of a pre-master course that typically lasts for one year.
Poland	Apprenticeship	no			
Portugal	All upper secondary VET alternance courses	yes	Yes- successful completion of a secondary level course or a similar qualification level; admission exams and specific requirements relevant to the area of study.	yes	same conditions as general education students; Candidates over 23 years old who do not comply with entrance conditions may take specific entrance exams
UK (ENG)	Apprenticeship	yes: via higher apprenticeship and level 4 qualifications such as a Foundation Degree. However, progression pathways from apprenticeships to higher education vary across occupational sectors.	Admission lies at the discretion of the higher education institution	no	

Source: ICF International research on the selected countries; 2012 Refernet national reports

ANNEX 4: TABLES AND EXAMPLES FROM SECTION 4

Quality assurance and efficiency challenges in reforms in VET/alternance schemes

An 'Education Pact' ('Ausbildungspakt'³⁹⁸) was set up in Germany in 2004 and renewed in 2010. The pact comprises an 'umbrella' for strategic objectives that concern, among others, improvement of specific elements of the dual system (restructuring the transition system to enhance efficiency; and improve the data basis).

In Finland, the training of in-company trainers was reformed in 2012. The Act on Vocation Education states that learners are entitled to guidance and training that helps them to achieve the goals stipulated in the core curriculum. In practice this means that learners must be guided and trained both during school and on-the-job training periods by professionals who are appropriately trained, skilled and qualified. Providers are also in charge of training in-company trainers. It is for this reason that a national, certified training programme was developed for in-company trainers in the 1990s. Separate courses were available for in-company trainers within the 'school' and competence-based systems and the apprenticeship system. Today, the 2012 reformed in-company training programme is worth three credits (equivalent of three weeks' worth of full time study). The training consists of three parts: i) Planning of on-the-job training and vocational skills demonstrations, ii) Guiding learners and assessment of learning, and iii) Assessment of skills and knowledge of learners. The training takes into consideration sector, field and student specific requirements. It is delivered by VET providers independently or together with other providers in a consortium. The total number of trained/qualified in-company trainers and also their share of all trainers declined with the recession due to turnover in the labour market. At the start of the recession (2007/2008) around 40 % of all in-company trainers were trained and qualified.

One of the drivers of the apprenticeship reform underway in the UK (England) is improving the quality of apprenticeships. Under the suggested measures, the quality of apprenticeships is expected to be strengthened mainly by the following reforms³⁹⁹ that involve the inclusion of standards and additional assessments:

- Apprenticeships will be based on standards designed by employers and the needs of their sector. They will also need to meet professional registration requirements where they exist.
- The government will set criteria that all new apprenticeship standards will have to meet.
- An apprentice will need to demonstrate their competence through rigorous independent assessment.
- All apprenticeships will be required to last at least 12 months with no exceptions.
- The implementation plan⁴⁰⁰ sets out three new requirements of assessment in apprenticeships (end testing, synoptic element to the end-point assessment, grading). As clearly stated in the plan, 'the introduction of largely end-point assessment shifts the focus of apprenticeships to the outcome (in terms of) what an apprentice knows and is able to do at the end of their programme. This approach enables certification of full competency against the standard'. As stated in the Implementation plan, 'reducing continuous assessment also allows trainers to focus on training rather than assessment and accreditation'.

In the Netherlands, a renewed VET Inspection Framework was introduced in early 2012, providing stricter quality assurance measures.

³⁹⁸ Internet: <http://www.bmbf.de/de/2295.php>.

³⁹⁹ The implementation plan was published in October 2013, available at DfE/BIS (2013) The future of Apprenticeships in England: Implementation Plan.

⁴⁰⁰ Internet: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/253073/bis-13-1175-future-of-apprenticeships-in-england-implementation-plan.pdf.

Table A4. 1: New apprenticeships/alternance schemes in EU countries⁴⁰¹

Countries	New apprenticeships/alternance	Countries	New apprenticeships/alternance
CY Youth unemployment rate, 2012: 27.8 % Percentage shift 2007-2012: 173 %	The New Modern Apprenticeship (NMA) is expected to be fully implemented in 2015. NMA is co-financed by ESF, targets 14-21 year olds and includes two apprenticeship levels (preparatory and core).	IE Youth unemployment rate, 2012: 30.4 % Percentage shift 2007-2012: 234 %	Numerous new apprenticeship schemes have been introduced since 2008, such as the 'Redundant apprentice rotation scheme'.
DK Youth unemployment rate, 2012: 14% Percentage shift 2007-2012: 92 %	The 'New Apprenticeship' (Ny Mesterlære) was introduced in 2006 and aimed at students at risk of dropping out from IVET. A new programme, called 'eux' has recently been introduced that combines general and vocational upper secondary education and training. Graduates gain both general education qualifications to continue to higher education and vocational qualification, with which they can directly enter the labour market.	IT Youth unemployment rate, 2012: 35.5 % Percentage shift 2007-2012: 74 %	After the 2011 Consolidated Act on Apprenticeships there are three types of apprenticeship contracts: <ul style="list-style-type: none"> • 'the professional apprenticeship (Apprendistato professionalizzante o contratto di mestiere) (pre-existing, but was reformed); • the apprenticeship leading to a qualification and professional diploma (Apprendistato per la qualifica e il diploma professionale); and • the higher education and research apprenticeship (Apprendistato per l'alta formazione e la ricerca).

⁴⁰¹ Introduced after 2008.

EL Youth unemployment rate, 2012: 55.3 % Percentage shift 2007-2012: 141 %	In September 2013 upper secondary VET was reformed, introducing an Apprenticeship Cycle: an optional, one-year programme that explicitly follows the 'German dual system'. The reform also introduced a new VET track, the Vocational Training Schools (Sholes Epagglmatikh's Katartishs-SEKs). SEKs will offer three-year vocational training to graduates of compulsory education. The 3rd year will be an apprenticeship in an employer.	LT Youth unemployment rate, 2012: 26.7 % Percentage shift 2007-2012: 218 %	Apprenticeships were introduced in 2008.
ES Youth unemployment rate, 2012: 53.2 % Percentage shift 2007-2012: 192 %	A new dual model for VET programmes is under development under the auspices both of education and employment ministries/authorities.	PT Youth unemployment rate, 2012: 37.7 % Percentage shift 2007-2012: 85 %	Introduction of the pilot project on the 'Vocational courses' (Cursos vocacionais) by the ministry of education in 2013/2014. This was preceded in 2012/2013 by another pilot project on 'Vocational courses' in lower levels of education (last two years of ISCED 1 and ISCED 2), for students over 13 years old with a record of underachievement. The upper secondary Vocational courses are planned to be expanded so as to reach more schools after the pilot phase, from 2014/2015. ANESPO ⁴⁰² believes that the course are meant to replace the Education and training courses, since both have the same target population.

⁴⁰² National Association of VET schools in Portugal.

FI Youth unemployment rate, 2012: 19.0 % Percentage shift 2007-2012: 15 %	New models of alternance training have been piloted since 2007. Such pilots mix key characteristics of the mainstreaming alternance schemes to offer new types of training opportunities for young people interested in work-based training. One of these pilots is a 2+1 model. It involves following two first years of IVET studies within the 'school-based' system (with some periods of on-the-job training) and completing the final year of their studies as an apprentice in an enterprise.	SE Youth unemployment rate, 2012: 23.7 % Percentage shift 2007-2012: 23.0 %	A new apprenticeship programme (Gymnasial lärling-sutbildning) was introduced in 2008, to run in school year 2011/2012. At least half of the three-year apprenticeship is work-based.
HU Youth unemployment rate, 2012: 28.1 % Percentage shift 2007-2012: 55 %	The 2011 VET introduced a 'dual VET model', which will be the only pathway from 2013/14. Vocational school (SZI) programmes last 3 years, and offer general and vocational courses. Their focus is on vocational courses with more work-based learning and in-company training.	SI Youth unemployment rate, 2012: 20.6 % Percentage shift 2007-2012: 104 %	A 2006 law merged the dual system with school education and the apprenticeship scheme was extended to the overall system of vocational and technical education. New educational programmes were introduced in 2006-2008 that foresaw compulsory training in a company for all students.

Sources: 2012 Refernet national reports; European Commission- DG Employment (2012c); Eurypedia; ICF International research for the 10 selected countries. Data on youth unemployment is drawn from Eurostat (not seasonally adjusted data). Percentage shift 2007-2012 was calculated by ICF International

Table A4. 2: Improving existing apprenticeships/alternance schemes in EU countries

Country	Improving existing apprenticeships/alternance-schemes	Country	Improving existing apprenticeships/alternance-schemes
AT	The 'Training guarantee for young people up to the age of 18' (2008), allowed all compulsory school graduates who do not have a place at an upper secondary school or are not able to find an apprenticeship placement in a company to complete an apprenticeship at a supra-company training centre.	FR	Recent reforms have changed various elements regarding apprenticeships: -A new framework for the development of agreements between the state and regions has improved the governance and cooperation between them. The agreements regard number of apprentices to be trained and set objectives to improve training quality; - Minimum age to start an apprenticeship has been lowered from 16 to 15 years, provided that the young person has completed lower secondary education; - Cutting the red tape, simplifying the procedures for registration of apprentices; -Introducing more advantages and guarantees for apprentices: i) the duration of the apprenticeship contract has been made more flexible, with a possibility to shorten contracts when relevant; ii) wages of apprentices living with their parents are exempted from income taxation, iii) young apprentices that sign two successive contracts are guaranteed to benefit from a salary at least equivalent to the level set by their first contract; iv) all apprentices receive an 'alternance learner' card, similar to a student card and giving right to discounts.
DE	Since 2008, public authorities in collaboration with social partners have introduced a number of changes in the VET system in general and the dual system in particular. The Federal Ministry of Education and Research (BMBF) has funded numerous programmes, such as the JOBSTARTER – 'Für die Zukunft ausbilden' (training for the future), to increase the number of apprenticeships offered and improve training in companies.	IT	The 2011 Consolidated Act on Apprenticeships introduced new apprenticeship contracts, but also reformed the legal and institutional status of apprenticeships, with the goal to promote apprentices' employability.

DK	Since 2009, apprenticeship packages aim at encouraging companies to hire trainees.	NL	<p>The under-development reform introduces changes in both pathways of VET (apprenticeship/bol and 'school-based'/bbl):</p> <ul style="list-style-type: none"> -Number of learning hours are increased for apprenticeship/bol; -Maximum qualification duration is shortened by one year; number of qualifications also decreased; - Learning of maths, English and Dutch to be intensified and national exams will be introduced; -admission to higher education will be restricted; -An access requirement for level 2 qualifications to be introduced.
FI	<p>-The Development Plan for Education and University 2012–2016 includes initiatives aiming at the improvement of apprenticeship and overall VET;</p> <p>-A reform in VET funding (under development) is expected to motivate providers to eliminate drop-outs.</p>	PT	<p>The curricular structure and workload of the 'Apprenticeship-type courses' were revised in 2008 in order to promote flexibility. Furthermore, a revision of the Specific Regulation of Apprenticeship Courses entered into force in 2013 with the aim of reviewing the procedures and making them more transparent. Changes in the selection of teachers of 'Apprenticeship-type courses' were also introduced in 2013: Until 2012, these were exclusively independent contractors, selected each year and paid by the hour. In the 2013 call, teachers from the education system (civil servants under the Ministry of Education) could also apply for these positions.⁴⁰³</p> <p>-Also, the share of work-based learning in 'Professional courses' was increased in 2013.</p>
EL	The 2013 reform strengthened the work-place learning offered in the post-secondary non-formal learning track (Institutes of Vocational Training-IEKs). Before the reform, a 6-month, optional traineeship was foreseen. The traineeship lacked firm legislative framework, especially regarding quality assurance. Under the new system, 20 % of curricula (1,050 hours) will regard a mandatory apprenticeship or traineeship. The	PL	<p>For apprentices in employers that belong to the Polish Craft Association, the 2012 reform upgraded the core curricula and the examination standards. The list of occupations in which training can take place was also complemented. The same changes hold for apprentices in employers that do not belong to the Polish Craft Association.</p> <p>For the latter group, however, the</p>

⁴⁰³ This measure was introduced so as to guarantee a more stable teaching team in the 'Apprenticeship-type courses', according to the Institute for Employment and VET (IEFP).

	<p>apprenticeship/traineeship can take place in parts or for a continuous period that can last up to one year. If a student has proven prior work experience of at least 150 working days then s/he is not obliged to do the apprenticeship/traineeship. Under the new system, a contract will be signed between the employer and the national PES. The Head of IEK or a Coordinator assigned by the Head will be responsible for inspecting, coordinating, ensuring the quality and assessing the results of the traineeship/apprenticeship.</p>		<p>reform broke down occupations into several qualifications⁴⁰⁴. The examination system also changed considerably for the second group of apprentices. New examinations have been introduced for each qualification, leading to a professional diploma. Examination boards, organised by school superintendents were abolished.</p>
		UK(ENG)	<p>There are two major reforms underway in relation to apprenticeships. Following the Richard Review of Apprenticeships in June 2012, the government's approach is now set out in the Implementation Plan (October 2013).⁴⁰⁵ As part of this programme of reform, there are plans to change the relationship between employers, the government and those who educate and train apprentices. Secondly, the current apprenticeship funding reform is exploring three potential mechanisms for employer-routed funding. The reforms aim at increasing the quality of apprenticeships; simplifying the system and increasing employer engagement and putting them at the heart of apprenticeship design and delivery.</p>

Sources: ICF International research in the 10 selected countries; 2012 Refernet country reports; European Commission- DG Employment (2012c); Eurypedia.

⁴⁰⁴ For example: The 'operator of foundry machinery and equipment' is divided into two qualifications: use of foundry machinery and equipment; and operating machinery for metal melting.

⁴⁰⁵ DfE/BIS (2013), The future of Apprenticeships in England: Implementation Plan.

Reform in the Netherlands to improve efficiency and quality of VET/alternance schemes

In the Netherlands, the current reforms⁴⁰⁶ under the action plan 'Focus op vakmanschap'⁴⁰⁷ were driven by concerns of the government and employer organisations about the quality and popularity of VET. Concerns were relevant to the language proficiency in mbo⁴⁰⁸ graduates that was deteriorating and significantly diverging from the level of hbo graduates (professional education at tertiary level)⁴⁰⁹. To improve the quality of VET, the reform touches upon the governance structure, creating a joint organisation to represent both education and labour market; the number of qualifications offered; and the funding system.

Making VET more efficient mandated changes in the structure: the Ministry of Education decided to create a joint organisation to represent both education and labour market and that can provide one-way advice to the ministry concerning VET policy. As the driver of the reform was to improve VET overall, the specific measures touch upon several elements, such as qualifications (new national format and optimising their number); progression of students between mbo levels; quality of teachers; organisational/governance structure of qualifications; and a new funding system.

Under the on-going reform, the national funding system of VET will be changed and a cascade model will be introduced, although the per capita principle will be kept.⁴¹⁰ The goal of the new funding system is to decrease internal progression of students, since this generally leads to longer and more expensive studying pathways. Until now, a VET student could start his/her studies in any level of the mbo and after graduating, s/he could continue to pursue a higher level of qualification. The new funding model encourages VET institutes to place students in the 'right' programme and at the 'right' level from the beginning of the studies. A VET system with less internal progression (students starting at the level they will graduate) will be more cost-efficient. The VET institutions can still decide at which level students will enrol. The total amount of input funding (an amount per student currently enrolled in an institution) offered by the government to VET institutions will be distributed in dedicated amounts for the four levels of the mbo. The funding will be calculated based on weights- one of them will regard the number of years students have been studying (1st year the weight is 1.2; 2nd-4th 1.0; 5th and 6th 0.5 and from the 7th year of studies, the VET institution will not get funded anymore.⁴¹¹ For bbl⁴¹², the same cascade model will be applied. Currently, the amount of funding a VET institution receives for a student in bbl is 40 % of the amount of a bol⁴¹³ student.⁴¹⁴ When a student re-enters education after three years, the cascade starts again. The funding per qualification granted will be reduced to one qualification. So, awarding more than one qualification to a student will still be possible, but will not be funded.

⁴⁰⁶ The implementation of their reforming actions is expected in August 2014, Internet: <http://abonneren.rijksoverheid.nl/edition/nieuwsbrief-beroepsonderwijs-en-volwasseneneducatie/ocw-nieuwsbrief-beroepsonderwijs-en-volwasseneneducatie/1934?preview=false> (in Dutch).

⁴⁰⁷ Ministerie van Onderwijs, Cultuur en Wetenschap (2011), Actieplan mbo 'Focus op vakmanschap 2011-2015'.

⁴⁰⁸ Upper secondary IVET, available in four levels.

⁴⁰⁹ Buisman M. et al. (2013,) PIAAC, kernvaardigheden voor werk en level.

⁴¹⁰ See Section 6 for more details on the current funding system in the Netherlands.

⁴¹¹ Few students will actually be in mbo for 7 years.

⁴¹² The apprenticeship track in the Netherlands.

⁴¹³ School-based VET track, with significant share of work-place learning.

⁴¹⁴ In the national educational budget for 2013, an average amount of EUR 7400 per mbo student is reserved. Internet: <http://www.rijksoverheid.nl/onderwerpen/financiering-onderwijs/vraag-en-antwoord/welk-bedrag-geeft-het-ministerie-van-ocw-per-leerling-uit.html>.

Examples of guidance provision from the selected countries⁴¹⁵

In Finland, career guidance is a compulsory subject in schools of lower and upper secondary education. Career guidance counsellors inform young people about their post-compulsory education choices and application procedures. Visits to workplaces, VET schools and schools of academic upper secondary education are also common. Anecdotal evidence suggests that career guidance counsellors tend to have a stronger knowledge of the academic study routes than the VET pathways with over hundred different qualifications and several different forms of study. In addition to counsellors, Apprenticeship Information Offices (Oppisopimustoimisto) can be found in the biggest cities across Finland. They guide and support people who are interested in pursuing an apprenticeship. There are also numerous websites with up-to-date information about apprenticeships for prospective students and employers.

In France, at national level, various campaigns and information websites were developed with a view to communicate about the advantages of alternance pathways and promote such routes to young people and their parents, as well as to employers. Similar efforts take place at the regional and sectoral levels, as well as at the training provider level. Young people interested in apprenticeships can easily locate the providers in their area, obtain information from different channels and use (online) services available to facilitate the match between candidates and employers.

In the UK(ENG), statutory guidance from the Department for Education (DfE) published in April 2014⁴¹⁶ sets out the key responsibilities of schools in relation to careers guidance for young people. Under this legislation, schools are required to act impartially and recognise where it may be in the best interest of the pupil to pursue their education. Schools must ensure that young people are aware of the full range of academic and vocational options, including apprenticeships available to them.

⁴¹⁵ ICF International research on the 10 selected countries.

⁴¹⁶ Internet:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302422/Careers_Statutory_Guidance_-_9_April_2014.pdf.

ANNEX 5: TABLES AND EXAMPLES FROM SECTION 5

Table A5. 1: Sectors with greatest share of employment (2011) and sectors offering apprenticeship/alternance scheme placements in the 10 selected countries

Country	Key sectors for employment	Sectors offering the highest number of apprenticeship/alternance placements in the national/regional economy
DE	Manufacturing; trade, including repair of motor vehicles and motorcycles; Human health and social work activities.	Industry and trade: 60.3 %; crafts sector: 26.7 %.
FR	Human health and social work activities; Manufacturing; Wholesale and retail trade (incl. repair of motor vehicles and motorcycles).	Construction; retail trade (incl. repair and maintenance of vehicles); hotel and restaurant sector.
FI	Human health and social work activities; Manufacturing; Wholesale and retail trade, including repair of motor vehicles and motorcycles.	Technology and transport (33 %); social, health and sports (30 %).
NL	Human health and social work activities; Wholesale and retail trade, including repair of motor vehicles and motorcycles; Manufacturing.	Trade, technology (factories, laboratories etc.), health sector.
CZ	Manufacturing; Wholesale and retail trade, including repair of motor vehicles and motorcycles; Construction.	No information available
PL	Manufacturing; Wholesale and retail trade, including repair of motor vehicles and motorcycles; Agriculture.	Engineering (manufacturing), technology ⁴¹⁷ and services.
EL	Wholesale and retail trade, including repair of motor vehicles and motorcycles; Agriculture; Manufacturing.	Engineering/mechanics, touristic professions ⁴¹⁸ , and catering (cooks). ⁴¹⁹
IT	Manufacturing; Wholesale and retail trade, including repair of motor vehicles and motorcycles; Construction.	Industry, trade services and construction.
PT	Manufacturing; Wholesale and retail trade, incl. repair of motor vehicles and motorcycles; Construction.	The Institute for Employment and Vocational Training (IEFP) defines training priorities each year for the

⁴¹⁷ No publicly available data on the share of apprentices per sector. Information drawn from interview with the Ministry of Education.

⁴¹⁸ Tourism is one of the key sectors in economy and employment terms, permeating several other economic sectors, as identified by Eurostat.

⁴¹⁹ For OAED apprenticeships; no official data, information provided by OAED representative.

		institutions providing 'Apprenticeship-type courses'. ⁴²⁰
UK (England)	Non-financial services; manufacturing; construction.	Business, administration and law; Health, public services and care; Retail and commercial enterprise. ⁴²¹

Sources: Key sectors in employment for all countries but UK(England) come from Eurostat; LFS Survey; Information on sectors offering largest number of apprenticeships/alternance schemes comes from ICF International's research and interviews in the selected countries

Memoranda of understanding signed between Germany and Italy, Portugal and Spain

In Portugal, a bilateral agreement was signed in November 2012⁴²². The Portuguese and German Ministers of Education signed a Memorandum of Understanding for the cooperation in vocational education and training. It was agreed to put in place actions to bring together and compare the VET systems and structures in the two countries, promote information exchange on students' guidance, and endorse exchanges for students, education professionals and representatives of companies. It was recognised that mechanisms should be introduced to further assure the quality of work-based learning developed in companies. In this regard, the Portuguese Ministry of Education will survey the opinion of students, schools and companies on work-based learning. The survey will also help identifying the training needs of the in-company tutors/trainers⁴²³. The German Federal Institute for Vocational Education and Training (BIBB) is preparing the survey, based on data provided by the Portuguese Ministry of Education. A first draft of the surveys is expected in March 2014 and it is foreseen to run in a sample of schools and companies in April.

In the framework of this memorandum, several activities have been organised regarding mutual knowledge of VET systems in the two countries: there were meetings between specialists, visits to Germany of Portuguese VET schools' heads, and visits from BIBB to Portuguese schools. Furthermore, an analysis is being carried out to identify areas where there are needs of intervention and modernisation in VET in Portugal. For instance, one of the working areas is training for teachers and in-company tutors. Other programmed activities regard the mobility of Portuguese students to train in companies in Germany, and an external evaluation of the new 'Vocational Courses' by a German specialist. A meeting of the working groups will take place in Germany in March 2014 to assess the ongoing cooperation and discuss new activities to be developed.⁴²⁴

In June 2013, a bilateral working group meeting was also held in Lisbon. Discussion focused on increasing the share of workplace-based training in VET, enhancing the quality in IVET, providing in-company trainers with training and qualifications, developing and updating selected training profiles with the contribution of the social partners, improving vocational counselling and guidance and permeability in the education system. Both parties agreed to launch joint project in reference to these areas in the short term.⁴²⁵

⁴²⁰ Training priorities for 2013 are available at the IEFP website: Internet: http://www.iefp.pt/formacao/Documents/2013-0502_%C3%81reas%20e%20saidas%20priorit%C3%A1rias_%202013.pdf.

⁴²¹ Statistical First Release: Nov2013_Apprenticeship Starts. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/317484/learner-participation-outcomes-and-level-of-highest-qualification-release-march14-june-update.pdf.

⁴²² Internet: <http://www.portugal.gov.pt/pt/os-ministerios/ministerio-da-educacao-e-ciencia/mantenha-se-atualizado/20121105-mec-alemanha.aspx>.

⁴²³ Information provided by the representative of the Ministry of Education.

⁴²⁴ According to the Ministry of Education of Portugal.

⁴²⁵ Internet: <http://www.bibb.de/en/64456.htm>.

In Italy, the Ministry of Labour signed a memorandum of understanding with the German Ministries of Labour and Education to support transnational mobility and activate learning exchange activities on dual education within the EURES network. The Memorandum also included a plan for 2013-2014 on cooperation activities in the field of labour market policies.⁴²⁶

In July 2012, the Spanish and the German Ministers of Education signed a three-year-long memorandum of understanding⁴²⁷ on cooperation in the area of vocational education and training. As with Portugal, the Memorandum set the grounds for further collaboration on information and good practice exchange; support student exchange programmes regarding realising the in-company training in the other country; and endorse mobility of students overall as well as education professionals and companies representatives between the two countries. Bilateral working groups and other instruments support the Memorandum, such a Task Force that started working in late November 2012. Government representatives and social partners from both countries sit in the Task Force and have agreed on a work programme that will coordinate the collaboration between the two countries. One of the next action steps is the systematic collection of data regarding the Spanish vocational training system.⁴²⁸

The 2012 Berlin Memorandum

The influence of the Memorandum is significant, regarding the uptake of pilot projects/apprenticeship schemes in the participating countries: the new apprenticeship schemes that have been recently introduced in Greece and Spain follow the structure and characteristics of the German dual education. Both new apprenticeship schemes underline that their goal is to offer more possibilities to students interested in VET, increase the quality of students' training and facilitate the apprentices' transition into the labour market. For that reason, the Greek reform law explicitly introduces motives for employers if they officially hire their apprentices after the completion of the programme. Spain is about to introduce a new 'dual model' as well.

In Greece, after the signing of the Memorandum and before the latest reforming law, apprenticeships rose high in the agenda of social partners and other institutions, and relevant actions took place. A Steering Committee was put in place in the Ministry of Education, where BIBB, the Ministry of Employment and Social Insurance, the national PES (OAED) and social partners participate. BIBB provides consulting and technical support to the Greek government on the development and implementation of large pilot schemes, each of which will explore an element of apprenticeships (for example contracts; the way that apprenticeships will be implemented under the new law, etc.). The role of the social partners and especially trade unions is the focus of two workshops and discussions that have recently taken place between German and Greek trade unions. The first workshop explored the possibilities for collaboration and representatives of German trade unions and SMEs presented the way they are involved in apprenticeships; while the second focused on issues and areas of collaboration in specific sectors. According to experts, the workshops have stimulated the Greek trade unions interest in apprenticeships, and their role as collaborators with the government/Ministry. Next workshops are expected, where employers will also be invited. These workshops will be used as pilot activities for relevant meetings with social partners in the other participating countries of the Berlin Memorandum.

The Berlin Memorandum also triggered closer collaboration between the two countries regarding apprenticeships run by the national PES (OAED) VET schools. In December 2013,

⁴²⁶ Isfol (2012a).

⁴²⁷ Internet: http://www.bmbf.de/pubRD/absichtserklaerung_deutschland_spanien_berufliche_bildung_esp.pdf.

⁴²⁸ Internet: http://www.lamoncloa.gob.es/ServiciosdePrensa/NotasPrensa/MinisteriorEducacionCulturayDeporte/2012/12_0712_Wertgobiernoaleman.htm and <http://www.bibb.de/en/wik62776.htm>.

the Greek-German Chamber of Commerce and Industry coordinated a meeting between the Greek Ministry of Education, the Ministry of Tourism and OAED with the German Ministry of Education and Research. The meeting regarded the launch of a pilot School of Dual Education.⁴²⁹ The Greek-German Chamber, the Greek Ministry of Education and OAED collaborated towards the launch of two Experimental SEKs⁴³⁰ for three tourism specialisations. Tourism was selected as a key sector for the national economy. Based on the dual system, the Experimental SEKs will offer three-year studies to 90 18-20 year-olds who will at least be graduates of compulsory education. Each school year, students will attend in-school education for four months and an eight-month apprenticeship (60 % of learning time), mainly in private firms. The apprenticeships will take place during the touristic season.⁴³¹ Host employers (hotels) will cover apprentices' reimbursement (75 % of basic salary) and health insurance and the relative employers' contribution. A contract will be signed between the apprentice, OAED and the employer. The project of the Experimental SEKs will be funded and supported by the German Ministry of Education: curricula will be adjusted and trainers in companies will be trained by DEKRA Akademie.⁴³² Final examinations will be based on German standards and graduates will receive diplomas, certified both in Greece and Germany, with the possibility to continue their studies in under- or post-graduate programmes in Germany. It is interesting to note that employers offered more apprenticeship placements than the agreed number of apprentices.⁴³³

Under the Berlin Memorandum, pilot projects to stimulate apprenticeships and work-place learning in VET have also been agreed between Germany and Italy.⁴³⁴ The Ministries of Labour and Education of the two countries have agreed on a series of actions to be taken, in order to promote the employability of youth.⁴³⁵

⁴²⁹ Information from the German-Greek Chamber, provided by experts.

⁴³⁰ The Vocational Training Schools (Sholes Epaggmatikhhs Katartishs-SEKs) were introduced by the 2013 reforming law (see Section 4).

⁴³¹ Internet: http://www.oaed.gr/index.php?option=com_content&view=article&id=1747:2013-12-12-15-51-20&catid=122&Itemid=897&lang=el (in EL).

⁴³² Internet: <http://www.dekra-akademie.de/live/navigation/live.php>.

⁴³³ Information from the German-Greek Chamber, as provided by experts.

⁴³⁴ Internet: <http://www.disal.it/Objects/Pagina.asp?ID=17308>.

⁴³⁵ Internet: <http://www.bmbf.de/en/17127.php>.

ANNEX 6: TABLES AND EXAMPLES FROM SECTION 6

Table A6. 1: Financial motives provided to employers and/or students during apprenticeships/alternance programmes

Country	Financial motives provided to employers and/or students during apprenticeships/alternance programmes
AT	Several public subsidies are provided to employers (basic support, quality enhancement, training alliances, etc.) that mainly fund the company-based part of apprenticeships. The Federal Government and the Public Employment Service are the main providers of these subsidies, but the Apprenticeship Offices (Lehrlingsstellen) of the Economic Chambers are responsible for their administration. Employers also receive benefits concerning non-wage labour costs to support the funding of some insurance contributions. The subsidies are decided by the Board for Subsidies, where members of the Chamber of Commerce, Labour Unions, the Ministry of Economy and the Ministry of Labour and Social Affairs sit.
BE	Companies cover the practical training in apprenticeships and the apprentices' monthly allowance. These companies enjoy significant reduction in their social security contributions. For all three apprenticeship schemes available in the country, the federal government may provide employers with an apprenticeship bonus, which ranges between EUR 500-700, depending on the year of studies. Employers may claim an additional allowance of 20 % of the remuneration paid to apprentices for whom the employer receives a taxable training bonus.
CY	Under the Subsidy Scheme for the Promotion of Employment & In-Company Training of Apprenticeship System Students, employers receive subsidies for each apprenticeship placement they offer. Subsidies are equal to 10 % of the monthly salary of the company trainer (up to EUR 171 per month) 15 % or EUR 257 maximum is provided for each of the additional apprentice placements offered. Employers are also subsidised for their contribution to social security costs of the apprentice. ⁴³⁶
CZ	On January 1st 2014, the Czech Government allowed, by amending the Act 586/1992 on revenue taxation tax write-offs for employers that will offer workplace training placements to VET students. The write-offs will vary depending on the number of students accepted in the company and the equipment used for the purpose of the workplace training.

⁴³⁶ Internet: <http://www.eurosc.eu/site-menu-153-gr.php>, in EL; cited 3/2/2014

DE	<p>Companies receive grants usually only for hiring specific target groups of apprentices, such as young people with disabilities or long-term applicants. Grants may also be provided to small companies that jointly form and run training facilities. Grants are also available if companies offer places under the 'Entrance qualification scheme'⁴³⁷ which is offered to students in the transition sector.</p> <p>VET students that cannot be financially supported by their parents or another person can apply for grants. This type of financial support aims at controlling for drop-out rates.</p>
DK	<p>All public and private employers, regardless if they offer training/apprenticeship places are obliged to contribute to the Employers' Reimbursement Scheme (Arbejdsgivernes Elevrefusion, AER). The Scheme finances both upper secondary VET and adult education. Additionally, all employers have to pay annually a pre-set amount (DKK 2 921 -EUR 393) per full-time employee. The accumulated funds are distributed to places where apprenticeships are realised. The employers that offer apprenticeship placements also receive wage reimbursement for the time that apprentices spend in colleges/schools.</p>
EE	<p>In the case of the apprenticeship programme, it is also supported by the state according to the 'study places scheme'. In this case, the school pays also the salary for the supervisor in the enterprise. In any case, there can be other arrangements to fund the programme. Additionally, apprentices receive a wage during enterprise training and study allowance during theoretical studies in school. If the apprentice has a valid work contract, he/she does not get an extra wage for being in the programme.</p> <p>On the other hand, several municipalities support their students with different financial subsidies. There are also good examples of grants implemented by the private sector for VET students in their sector.</p>
EL	<p>If an apprentice in the OAED apprenticeship scheme chooses a specialisation not available at his/her residence, s/he can realise the apprentice in another location anywhere in the country. The apprentice receives housing allowance and subsistence.</p>
ES	<p>Although students may not be reimbursed while participating in the Workplace Training Module (Formación en Centros de Trabajo, FCT), some Autonomous Communities provide financial incentives to companies. These incentives are very small in amount and are not regarded as motivational, as many companies offer it to students.</p>

⁴³⁷ Internet:
<http://www.arbeitsagentur.de/zentraler-Content/Veroeffentlichungen/Vermittlung/EQ-Arbeitgeber.pdf>.

FI	Employers that offer apprenticeships receive training compensation from the State, given that the apprentice is paid a salary during the time at the workplace. The amount of payment depends on the profile and background of the learner and is agreed separately for each apprenticeship contract and before the contract is approved. Employers' compensation is typically EUR 250 per month, although it can be up to EUR 800 per month if the young person is one classified as a priority group with the national Youth Guarantee or up to EUR 960 if the apprentice is an unemployed job seeker.
FR	Employers can receive several types of financial support from public authorities when hiring apprentices ⁴³⁸ . They can benefit from a reduction in social contributions (partial or even total depending on the size and type of enterprise), a bonus for enterprises of more than 250 employees employing more than 4 % of staff under alternance contracts, fiscal reductions in addition to flat-rate grants from regions starting from EUR 1 000 per year. Tax reductions are available for employers – typically, 600 EUR per apprentice and SMEs are exempt from any social contribution on wages they pay to apprentices.
HU	Companies that fund practical training can then attribute the relevant costs to their expenses of the vocational training contribution. Expenses that cannot be covered by the vocational training contribution can apply for reimbursement to the training sub-fund of the Labour Market Fund.
IT	Companies with less than nine employees that offer apprenticeships are exempted from social security contributions and other small companies pay up to 10 % of these contributions.
LU	The State supports companies offering apprenticeships by allowing them to claim and get reimbursed for 27 % of the apprenticeship allowance they have paid. Companies may also be refunded for the amount they paid for the social security contribution on the apprenticeship allowance. The State also encourages apprentices who have been successful in their apprenticeship year and the final examinations with financial aid.
NL	Before 2014, companies that employed apprentices benefited from a tax deduction per student per year (max. EUR 2 500). Since January 2014, the tax deduction has been replaced by a national subsidy available per student per year.

⁴³⁸ Website of the Ministry of Employment, Labour, Vocational Training and Social Dialogue. Internet: <http://www.emploi.gouv.fr/dispositif/contrat-apprentissage>.

PL	<p>Students that realise practical vocational training are reimbursed by their schools for their travel costs. Schools also cover accommodation and subsistence expenses.</p> <p>Companies offering practical vocational training instructors are reimbursed by the Labour Fund for the wage/salary of the instructor. Companies also receive an educational subsidy if they set up a vocational school. They can also receive bonus and educational subsidies for vocational placement coordinators, and reimbursement for other costs, such as for the work clothing of the student. Employer contributions, state and EU funds are used to offer subsidies to employers that offer vocational education of young workers.</p>
PT	<p>Students that participate in 'Apprenticeship courses', held by the Ministry of Solidarity, Employment and Social Security, receive state grants for attending alternance schemes of up to EUR 42 per month (2012). Since these courses are available to all young people 15-25 years old, no financial support is offered to participants who are unemployed and already receive state aid. Allowances are also available depending on criteria, such as hours of training (food allowances), socio-economic criteria (allowances for books), and distance of students' residence from training facilities (transport allowance).</p>
SE	<p>Students can benefit from financial assistance from the State; for example study grants and loans.</p>
SI	<p>Companies' cost of payments for apprentices and students/trainees that realise compulsory practical work as part of their curriculum is exempt from personal income tax and social security contributions up to a specific limit.</p>
UK (England)	<p>The Apprenticeship Grant for Employers (AGE) provides up to 40 000 grants of GBP 1 500 to encourage and support employers taking on a young apprentice aged 16 to 24. Following feedback from employers, the Government is refining the AGE scheme to make it simpler to use and expand access to the scheme. The grant will be made in a single payment instead of two instalments and employers will be allowed to claim grants to support up to ten new apprentices. Eligibility restrictions will be revised, opening the scheme to employers that have not employed an apprentice in the previous 12 months.</p> <p>In addition, medium sized firms will continue to be eligible to claim the grant if they expand beyond 250 employees, as the scheme will now be open to employers with up to 1 000 employees. However, SMEs remain a key priority for the scheme and sufficient funding is available to ensure that all eligible SMEs will be able to claim the grant.</p> <p>Large companies are offered incentives to offer apprentices: Government funding to cover the cost of apprentice training is only paid directly to the employer if the company has 5 000 employees or more.</p> <p>The state financially supports the engagement of young people in apprenticeships based on their age: so, 16-18 year olds that attend any level of apprenticeship (intermediate, advanced, higher), are fully funded from the state. State co-funding is available for older apprentices (19-23 year olds).</p>

Sources: European Commission- DG Employment (2012c); Refernet country reports (2012); European Commission (2013e); Torres C. (2012), Taxes and Investment in Skills; Steedman H. (2010), The state of apprenticeship in 2010: International Comparisons; ICF International research.

Table A6. 2: Apprenticeships co-funded by the ESF in EU countries

Country/ Name of programme	EU/ ESF
Belgium	
Part-time Employment Contract for Alternating Training	2009-2010: EUR 1 393 234.06 2010-2011: EUR 1 226 651.75 2011-2012: EUR 1 349 278.55
Industrial Apprenticeship Contract (Federal Programme)	Co-financed
Bulgaria	
Framework Programme C for Vocational Education (FWP-C)	Possibility to use ESF co-funding through a number of programmes
Cyprus	
New Modern Apprenticeship (NMA)	EUR 16 434 406 (85 %)
France	
Apprenticeship contract (Contrat d'apprentissage)	Committed EUR 98.338 million to apprenticeship measures in 2011
Greece	
Apprenticeship Programmes in Vocational Schools of the national PES (OAED EPAS)	EUR 46 595 985 (91.86 % on average) (total programme budget)
Ireland	
FAS Apprenticeship	All FAS training activity (including apprenticeship) is part funded from the European Social Fund: average of EUR 25m per year to be drawn-down under the Human Capital Investment Operational Programmes 2007-2013
Latvia	
Support for Improvement of Quality and Implementation of Initial Vocational Education Programmes	Total amount of approved eligible costs in the first project call (2009) was LVL 4,417,085 (EUR 6 284 946) of which ESF funding was LVL 3 818 908 (EUR 5 433 817) Total amount of approved eligible costs in the second project call (2010) was LVL 7 647 547 (EUR 10 881 479) of which the ESF funding was LVL 6 735 780 (EUR 9 584 151)

The Netherlands	
Work-Based Senior Secondary Vocational Education – Level 2 – Basic Vocational Education (BBL: beroepsbegeleidende leerweg – MBO niveau 1,2,3,4)	Employers can apply for ESF funding for personnel taking part in BBL training e.g. EUR 1 400 per candidate per year in passenger transport
United Kingdom	
Government Apprenticeship Programme (ISCED 3 & 5B)	GBP 181 million through Skills Funding Agency (2011-2013)
Apprenticeship Grant for Employers (AGE)	ESF funding delivered through Skills Funding Agency Apprenticeships receive GBP 181 million through Skills Funding Agency (2011-2013)

Source: European Commission (2013d). IMPORTANT NOTE: The table includes information for apprenticeship schemes that comply with the definition and the scope of this study, as selected by ICF International from the source. Amounts of funding per scheme and/or country are available for different years and are thus not comparable.

Table A6. 3: Direct and indirect costs per type of VET

	School-based VET	Workplace training
Individual	Student fees; Charges for material/equipment	Accept lower wages; Opportunity costs (forgone earnings as unskilled worker)
Employer	Paid time off for staff/trainees; Financial support for staff/trainees;	Pay wages (and labour costs) higher than productivity; Indirect wages (compensation for food, travel costs, living expenses); Mistakes by inexperienced trainees, resources and time of experienced workers spent in instructing learners/apprentices (supervision cost); In-house training courses (material/learning software/videos, special clothing, teacher salary, administration); Cost for infrastructure (machinery/appliances for apprentices at the workplace; rent for premises necessary for apprenticeship training, cost of premises and infrastructure for company training centres; Other costs: fees (e.g. exams), capital costs for recruitment/administration related to apprenticeship training, costs of external courses, duties and taxes to third parties
State	Funding of education institutions; Scholarships, vouchers, grants and loans	Subsidies to training firms; Financial concessions to employers (tax allowances)

Sources: Hoeckel K. (2008), Costs and Benefits in Vocational Education and Training and Muehlemann S. and Wolter S.C. (2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses

Table A6. 4: Short-term and long-term benefits from VET programmes / apprenticeships

	Individual	Employer	Society
Short-term benefits	Employment chances; Earning levels; Work satisfaction; Drop out less likely from vocational than general course	Higher productivity from well-trained workforce; Saved costs from recruiting external skilled workers (including time for integration and risk of hiring a person not known to the company)	Saved expenses for social benefits (unemployment as consequence of failed transition from education to work)
Long-term benefits	Flexibility and mobility; Lifelong learning (more likely to receive training and upgrade skills later in life)	Supply benefit (e.g. image improvement); Less turnover (no need for re-training of new workers)	Externalities from productivity gain due to better education; Increase in tax income from higher earnings

Sources: Hoeckel K. (2008), Costs and Benefits in Vocational Education and Training and Muehlemann S. and Wolter S.C.(2013), Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses

Table A6. 5: Remuneration of apprentices in the selected EU countries

Country	Remuneration of apprentices	Comments
Finland	<ul style="list-style-type: none"> About 80 % of a skilled worker's salary. Calculated based on latest sectoral collective agreement. 	Slight variations between different sectors.
France	<ul style="list-style-type: none"> Minimum wage, percentage of the minimum wage. Depends on apprentices' age. Increases per year 	For example, an under-aged (below 18 years old) apprentice will receive 25 % of the minimum wage in the 1 st year, reaching 53 % in the 3 rd year. The range for apprentices 18-21 years old is 41 % to 65 %; whereas for older apprentices (>21 years old) the starting wage is 53 % of the minimum wage, almost reaching 80 % in the final year.
Germany	Increases every year; ca. 30 % of starting wage of a skilled worker (based on national tariff agreements), estimated at ca. EUR 740 gross per month (East: EUR 708 EUR, West EUR 767)	Nationally regulated; Varies according to qualifications (e.g. trainees with upper secondary degree who aim at becoming a mechatronic specialist get higher wages than trainees who have a lower secondary or no school degree and aim to become a sales clerk or a hairdresser); Significant differences between West and East Germany: for example, an apprentice hairdresser in receives EUR 469 wage in the West, and only EUR 269 in the East ⁴³⁹
Greece	EUR 17.12 (75 % of lower wage of an unskilled worker) ⁴⁴⁰	OAED Apprenticeship scheme
Italy	No fixed percentage	Depends on national and sectoral agreements
The Netherlands	(Full) minimum wage; Nationally regulated, differs according to student's age	Bbl students
Poland	Percentage of the average national salary; Increasing annually	1 st year: min. 4 % of average national salary; 2 nd year: min. 5 % of average salary; 3 rd year: min. 6 % of average salary.

⁴³⁹ Internet: http://www.bibb.de/dokumente/pdf/a21_dav_internet-fachbeitrag_azubiverguetungen-2013.pdf.

⁴⁴⁰ Levels of remuneration of apprentices under the new reform are not yet known.

UK(England)	Apprentice National Minimum Wage (NMW) is GBP 2.68 per hour. ⁴⁴¹ This rate is for apprentices aged 16 to 18 and those aged 19 or over who are in their first year. All other apprentices are entitled to the National Minimum Wage for their age.	The NMW is paid directly to apprentices from the employer. Apprentices under 19 years old or in the first year of a level 2 or 3 apprenticeship get an apprentice rate. All other apprentices are entitled to the National Minimum Wage for their age. Employers often pay more than the relevant minimum wage. ⁴⁴²
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Sources: Detailed fiches on 10 selected countries; 2012 Refernet national reports; European Commission (2013d)

⁴⁴¹ Although there are currently three levels of apprenticeships in the UK, the NMW has not been allocated per level as such but rather on the basis of age/level. So as per the government website (Internet: <https://www.gov.uk/apprenticeships-guide>), apprentices under 19 or in the first year of a level 2 or 3 apprenticeship get an apprentice rate. All other apprentices are entitled to the National Minimum Wage for their age.

⁴⁴² BIS (2012) National Minimum Wage: Interim Government evidence to the Low Pay Commission 2012.

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