



Skills Governance in the EU Member States

Synthesis Report for the EEPO

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Skills Governance in the EU Member States

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Table of Contents

Executive Summary	1
Production of labour market and skills intelligence	1
Transmission and use of labour market and skills intelligence	2
Steering the education and training provision	3
1 Introduction	4
2 Definition of Skills Governance	5
3 Production of labour market and skills intelligence	8
3.1 Mature and developing forecasting and intelligence	9
3.2 From fragmented to collaborative approaches to forecasting and intelligence 12	
3.3 Challenges and success factors for skills forecasting	16
3.4 ESF funding to support forecasting practices	20
4 Transmission and use of labour market and skills intelligence	23
4.1 Transmission of skills intelligence	23
4.2 Use of skills intelligence	28
5 Steering the education and training provision	35
5.1 Policies and Strategies	35
5.2 Financial and non-financial incentives	43
5.3 Stakeholder involvement, including social partners	48
6 Conclusions	57
Annex 1 - ESF support for Skills Governance in the EU Member States	Error!

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Executive Summary

This Synthesis Report explores Skills Governance and how it is operationalised in the 28 EU Member States (MS). It is based on a review of country fiches on skills governance prepared for the European Employment Policy Observatory (EEPO). The report looks at the systems and instruments used across the EU MS to produce labour market skills and intelligence; the transmission and use of labour market and skills intelligence; and how EU MS are steering the provision of education and training in their countries to meet the demand for skills in the labour market.

There is no internationally agreed definition of skills governance. It is a concept which is multi-faceted and complex. Based on a review of the 28 fiches, an understanding of the concept of skills governance has been formulated for the purposes of this report, as follows:

Skills governance is seen as a system aimed at balancing supply and demand of skills and to provide a good skills basis for further economic development. Stakeholders from the public, private and third sector are involved in implementing and using the skills governance system. It includes planning and controlling – to different degrees – the national, regional and local offer of education and training and designing mechanisms for assuring the quality of training. It seeks to build on and optimise the individual competences of the (future) workforce. It comprises a negotiation perspective, which represents the needs of employers', (future) employees' and the education system goals, from a short-term, medium-term and long-term perspective, covering:

- *Skills needs at the entry point into the labour market;*
- *Future skills needs to support the transformation of the labour market and the employability of the workforce in a life cycle perspective;*
- *The labour market destination of graduates and migrants.*

There could be value in conducting a further exercise in the future to review this understanding of the concept of skills governance, with a view to establishing a more robust definition.

Production of labour market and skills intelligence

The production of labour market and skills intelligence has a key role in skills governance. Countries use a range of different types of forecasting tools and instruments, which vary according to the data they produce, the regularity of updates and the timeframe which they cover. Types of forecasts may also differ in relation to the model of education and training (planned or market). The stakeholders involved in commissioning and producing skills intelligence also vary. The information produced may therefore be national in scope, or may relate to a specific sub-sector of the labour market or sub-system of education and training.

The multi-faceted nature of intelligence systems and the context in which they are situated therefore makes it a complex task to put forward possible characteristics in order to group countries in clusters. Most countries have a number of forecasting instruments / tools in place which operate at different levels, are commissioned and/or used by different actors and are relevant to different sectors of the labour market and / or education and training system. Furthermore, the governance structures in place within the countries, in particular for education and training, are also varied and this can affect how skills intelligence is used.

A number of countries could be characterised as 'mature', because they have one or more key forecasting and intelligence tools in place which have been used for at least a decade. These tools appear to be meeting the needs of the stakeholders commissioning and receiving/using the outputs. They may co-exist alongside more ad hoc efforts taken at sectoral level.

There are also a number of countries with forecasting and intelligence infrastructure which is 'in development'. These countries are in the process of designing a new infrastructure, or have recently implemented a new tool or system. Again, this new infrastructure may be emerging alongside other activities which may take place on an ad hoc or irregular basis, but the planned or recently introduced infrastructure is intended to become an important source of intelligence for the country. A number of countries which could be considered to fall in this category are being supported in the development of the new tools / infrastructure by European funding, including ESF.

Forecasting and labour market intelligence systems tend to be 'fragmented', but in a number of countries interesting practices have evolved to make the systems more cooperative and 'joined-up'. Examples of both fragmented and 'joined-up or collaborative' approaches to skills forecasting are identified in the report, which also acknowledges the benefits of ad hoc or sectoral initiatives.

Challenges identified in relation to the production of intelligence range from the limitations of the data or methods used, to the lack of integration between data sources or a lack of cooperation between the actors involved. Success factors include effective statistical infrastructure; complementarity of the forecasts in place; a mature approach to cooperation; clear policy intent and strategy at national level; and an effective dissemination (or 'transmission') policy.

Annex 1 of this report brings together the initiatives identified as being funded by ESF in the country fiches. It is not intended to provide a comprehensive overview of ESF funding for skills governance across the EU Member States but provides a starting point for further review. The country fiches show that in addition to supporting the development of new tools and infrastructure, ESF funding has been used to improve existing tools and to fund smaller-scale regional or local projects.

Transmission and use of labour market and skills intelligence

There are many target audiences for skills intelligence. Ministries (typically Labour/Employment and Education), education and training providers, public employment services and social partners seem to form the focus of transmission activities. Methods of transmission include online publication (the most common); holding events and training; institutional mechanisms to transmit skills intelligence; and multi-faceted strategies for transmission (which are relatively uncommon). Across many countries, the central weakness of transmission is that it fails to be systematic or coordinated. Strengths in the transmission of skills intelligence include the integration of end-users into the design and production of forecasts and ensuring that information is targeted and accessible to a range of different audiences.

One of the potential benefits of skills intelligence is that it supports evidence-based career guidance. Again, the most common method of transmitting intelligence to guidance services and jobseekers is through online tools. Other means include specific stakeholder forums to ensure that guidance is based upon labour market needs and the provision of training and resources for guidance practitioners. Despite these activities, it is relatively difficult to assess how far the career guidance services in these countries actually make use of skills forecasts when developing guidance and advising jobseekers on possible courses and occupations, or there is insufficient information to judge.

A range of actors use labour market and skills intelligence in a variety of ways, including to formulate strategies and policies; to plan and design education and training provision; to inform the provision of guidance and to inform the design and delivery of ALMPs. The use of information can be systematic or ad hoc. There are also some countries where, according to the country fiches, there is very limited use of intelligence altogether. The level of use of intelligence can also differ within countries; in different sub-systems of education and training (e.g. HE or VET) or different regions / localities.

Steering the education and training provision

Countries pursue various policies and strategies to adapt the supply of the educational offer in HE and VET to the demand for skills in the labour market. Most of these measures focus in one way or another on the content of the education and training offer (adjusting the curriculum, promoting specific courses, ensuring consistency and quality) or its format (moving towards or increasing provision of existing work-based learning and apprenticeships). There are also measures to create better links between employers and educational institutions. In addition, PES programmes and ALMPs can help to address skills imbalances and career guidance can be used to steer jobseekers and students towards professions in demand. Again, the different sub-systems of education and training within each country take different policies and strategies.

Governments have introduced financial, non-financial and other incentive measures in an effort to steer education and training provision in their countries. These incentives may be directed at employers, education and training providers, or the learners themselves. Their aims are to increase the training offer (in certain subjects), encourage learners to take up training (in specific subjects) and to encourage flexibility/mobility.

Governments are increasingly involving key stakeholders in mechanisms to design and steer the educational offer. The range of stakeholders involved differs within countries depending on the sector of education and training concerned, as well as on the way in which the country allocates responsibility for steering education and training (centralised or decentralised). For instance, HE tends to give more autonomy to individual institutions, whereas vocational provision can be more collaborative. Stakeholders can be involved through national or regional/ local platforms and committees, through consultations, or through participation in the governance of individual HE institutions. What is important is to ensure that their involvement improves the alignment of skills supply and demand, rather than imposing further constraints.

When reviewing the information contained within the country fiches, we found a lack of evaluative information on the effectiveness of stakeholder involvement. There are other gaps in information relating to each of the aspects covered in this Synthesis Report, suggesting that there is scope for further work in this area in the future to increase the knowledge and evidence base on this topic.

1 Introduction

This final Synthesis Report is submitted to the Directorate-General Employment, Social Affairs and Inclusion under the service contract European Employment Policy Observatory, EEPO (VT/2015/0502). It is based on a review of 28 country fiches on skills governance prepared for the EEPO (covering the 28 EU Member States). Six of these fiches (covering Bulgaria, Denmark, Finland, France, Italy and Poland) were produced as part of a small scale research exercise carried out for the EEPO in 2014, which resulted in the production of a Final Report entitled 'Skills Governance in Europe'. The remaining 22 fiches were prepared in 2015, using a slightly revised template.

It is intended that this synthesis report should build on and complement the Final Report prepared in 2014 (referred to as the '2014 Report' from this point onwards) by exploring Skills Governance and how it is operationalised in all 28 Member States. However it does not take forward the work carried out in 2014 to develop a model to assess the effectiveness of skills governance systems.

It is important to highlight **the limitations of this Synthesis Report** from the outset. It was part of the remit of this report to put forward relevant characteristics for clustering countries. However, as explained in more detail in Sections 3 and 4, the **multi-faceted nature of the concept of skills governance makes it difficult to 'label' or group countries**. Instead, we have identified some interesting characteristics, approaches or developments which are described in the country fiches and present examples of countries which exemplify these, in the hope that these will provide interesting learning opportunities for the readers of this report.

Given the complexity of the subject and the need to evaluate the outcomes of the different training subsystems and the education and training system as a whole, to link outcomes to the skills governance structure would call for intensive research, based on a solid evaluation methodology. This could not be done in the scope of the country fiches, which are more descriptive in nature. Thus **whilst it was suggested that six 'good practices' should be highlighted in the report, instead interesting practices from the country fiches are presented in boxes, on the basis of broad assessments of what seems to be working**. Other, less detailed, examples from countries are used throughout the report as well.

The remainder of the report is structured as follows.

- Section 2 sets out the understanding of the term 'skills governance' which has been used for the purposes of this report, since there is no internationally agreed definition of this concept.
- Section 3 discusses the systems and instruments used across the EU MS to produce labour market skills and intelligence.
- Section 4 looks at the transmission and use of labour market and skills intelligence.
- Section 5 gives an overview of how EU MS are steering the provision of education and training in their countries to meet the demand for skills in the labour market. It includes three separate sub-sections looking at policies and strategies, financial and non-financial incentives, and stakeholder involvement.
- Section 6 draws overall conclusions from this study.

2 Definition of Skills Governance

As explained in the 2014 Report, there is no internationally agreed definition of skills governance. It is a concept which is multi-faceted and complex. A proxy definition, based on the findings from the six study countries was devised for that report. We have found that the proxy definition does not encompass all aspects of skills governance identified in the 28 country fiches. Thus, based on a review of the 28 fiches, we have developed an extended understanding of the concept of skills governance for the purposes of this report.

The report has therefore been written based on the following understanding of skills governance:

Skills governance is seen as a system aimed at balancing supply and demand of skills and to provide a good skills basis for further economic development. Stakeholders from the public, private and third sector are involved in implementing and using the skills governance system. It includes planning and controlling – to different degrees – the national, regional and local offer of education and training and designing mechanisms for assuring the quality of training. It seeks to build on and optimise the individual competences of the (future) workforce. It comprises a negotiation perspective, which represents the needs of employers', (future) employees' and the education system goals, from a short-term, medium-term and long-term perspective, covering:

- *Skills needs at the entry point into the labour market;*
- *Future skills needs to support the transformation of the labour market and the employability of the workforce in a life cycle perspective;*
- *The labour market destination of graduates and migrants.*

Across Europe, countries are seeking to develop and improve their skills governance systems. Driving factors for this are the incidence of skills shortages, skills mismatch, unemployment, over- and under-qualification and migration. The performance of the labour market and skills matching are key factors for economic development.

Employers demand skills, determined by product market development and technological development. Workers supply skills, their own competencies and preferences and expected demand for the skills and thus expected income. At the same time, employers adapt their demand for skills to the supply and adapt the use of available skill if possible, or react by outsourcing tasks abroad or by developing technological solutions to substitute for labour. Thus, the labour market and the educational and training market/system are interrelated. The key question is how the education and training system is governed in order to achieve an equilibrium at the labour market.

Skills are 'produced' by vocational education and training institutions, employers and trainers at the workplace, the worker themselves (through self-directed on-the-job learning) and tertiary education institutions. Thus, they can be produced within the labour market, in the education and training market or a combination of both (as is the case for the dual vocational training system). The traditional (formal) learning phases after leaving school throughout the life cycle have been: initial vocational education and training (VET) and/or higher education (HE), and further vocational training courses. Three sub-systems of skills have thus evolved. Informal learning with non-certified skills plays a role in all the subsystems.

These sub-systems have grown historically and may be governed by different logics, even within the same MS. In the extreme case they may be ruled by a market logic, where the outcome of the skills system is ruled by supply and demand and a planned system, where public stakeholders (in partnership with private stakeholders) seek to match supply and demand. Various approaches are possible, such as a voucher system in order to create quasi-markets (in particular in the further training system),

incentivising employers and employees (as there are positive externalities related to training and education or to direct supply towards areas where there is a skills need), providing guidance (improving the information base in skills demand and training offers) and setting the number of training and education places.

A further dimension is the degree of centralisation of the sub-system, with the market model as the most decentralised system, up to a centralised system which plans skills supply. The planning of skills supply can be done at national level, regional level or local level, depending on the federal structure of the countries and responsibilities in this area.

In the context of increased need for labour market flexibility, skills adaptation, re-skilling and up-skilling against a background of technological change, the boundaries between the sub-systems become blurred: the VET system and the tertiary education system, which traditionally provided initial education and training, may become involved in further training and the pathways between the VET and the higher education system may need to become more flexible. The capacity of the system to adapt skills to changing demand or to correct for market failure is therefore an important element of the skills governance system. The need for transparency and portability of skills have led to different approaches on validation of non-formal and informal learning¹.

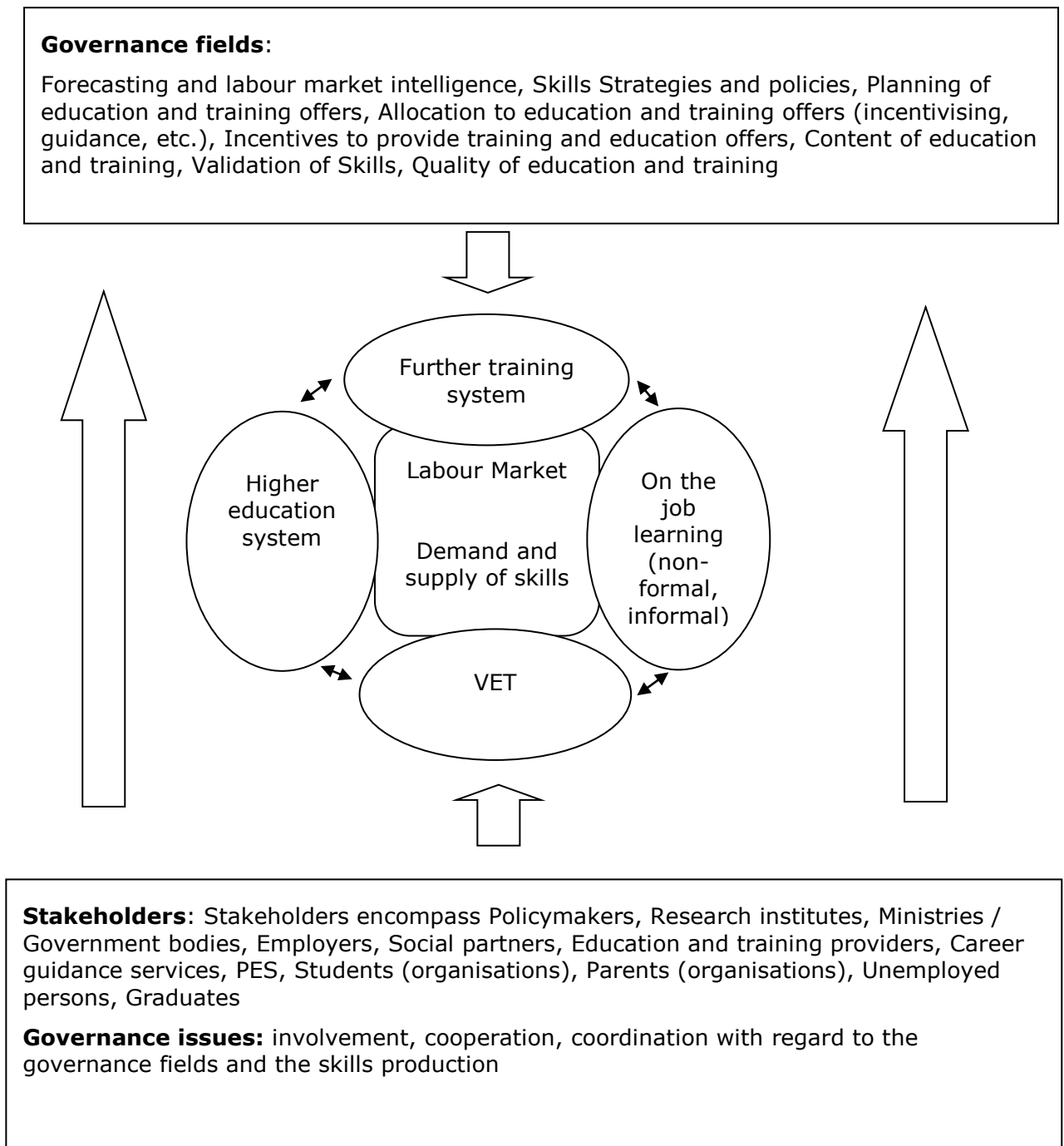
Thus, the shape of governance of the system as whole and the relationships between the sub-systems can take various forms and undergoes itself changes.

The complexity of skills governance is also reflected in the different roles stakeholders can take. Stakeholders encompass policy makers, research institutes, Ministries / Government bodies, employers, social partners, education and training providers, career guidance services, public employment services (PES), students (organisations), parents (organisations), unemployed persons, graduates. Their role will vary between the different skills sub-systems. In principle they can be involved in: providing information and research (labour market intelligence) and assessing demand for skills, planning the training offers, planning the education training content, controlling the quality of education and training, certification rules for validating informal and non-formal learning and formulating skills strategy and policies.

Figure 1, below, aims to encapsulate the concept of Skills Governance. It is intended as a starting point for discussion, rather than providing a definitive framework.

¹ BIBB (2014) Villalba-Garcia, Ernesto et al. The 2014 European Inventory on validation of non-formal and informal learning. BWP 5/2014.

Figure 1: Skills governance system



We would suggest that there could be value in conducting a further exercise in the future to review this understanding of the concept of skills governance and the Framework put forward in Figure 1, with a view to establishing a more precise definition.

3 Production of labour market and skills intelligence

This section will discuss systems and instruments for the production of labour market and skills intelligence.

The production of labour market and skills intelligence has a key role in skills governance. In 'planned' systems of education and training, the planning process in itself requires forecasting / planning tools. These can be made publicly available to increase transparency of skills planning and also to serve other actors, including those in 'market' education and training systems², thus fulfilling a role as a 'public good'.

Countries use a range of different types of forecasting tools and instruments, which vary according to the data they produce (e.g. looking at current labour market supply and demand, identifying skills shortages, predicting future demand and skills needs, providing in-depth analysis of a specific sector, etc.), the regularity of updates (e.g. annual or every few years, whilst some may not be updated but simply be produced on an ad hoc basis in response to an identified demand) and the timeframe which they cover (short-, medium- or long-term). Types of forecasts may also differ in relation to whether skills supply is provided through a publicly planned system or via a market model, or a mixed system.

The stakeholders involved in commissioning and producing skills intelligence also vary. In some instances labour market and skills intelligence may be prepared on a regular basis by a central institution such as a Ministry or the Public Employment Service (PES) whereas in other cases it is employers, social partners or education and training providers which choose to commission, or produce their own, information in response to an identified problem. The information produced may therefore be national in scope, or may relate to a specific sub-sector of the labour market or sub-system of education and training.

The multi-faceted nature of intelligence systems and the context in which they are situated therefore makes it a complex task to put forward possible characteristics in order to group countries in clusters. Most countries have a number of forecasting instruments / tools in place which operate at different levels, are commissioned and/or used by different actors and are relevant to different sectors of the labour market and / or education and training system. Many have national systems but there are also sectoral initiatives taking place alongside these, often on an ad hoc basis in response to an identified need. This makes it difficult to group countries according to where responsibility lies for forecasting.

Furthermore, the governance structures in place within the countries, in particular for education and training, are also varied and this can affect how skills intelligence is used. For instance, where education / training governance is devolved to regional (or local) level, it is difficult to 'label' the country according to a particular cluster, as the approach taken in one locality may differ from another. Similarly, the different sub-systems of education may have different approaches to skills governance: higher education tends to involve more autonomy for individual institutions for instance, whilst, as mentioned above, a 'market system' is often the case in the context of further vocational training.

As mentioned previously, **within the scope of this study and on the basis of the information provided in the country fiches, it is not possible to conduct a fully**

² A market model is mostly the case for further training, apprenticeship places in the context of the dual vocational training system

comprehensive clustering exercise, grouping all 28 countries according to how skills intelligence is produced and used. The country fiches were comprehensive in describing the skills governance structures in their countries but different characteristics which could have been used for clustering, and different contextual factors which would need to be taken into account when clustering, were not always systematically addressed (for each forecasting tool, different levels of detail are given, making it difficult to make comparisons). It is important to **bear these limitations in mind when reading Sections 3.1 and 3.2, as well as Section 4.2** which presents different approaches to the use of skills intelligence.

Sections 3.1 and 3.2 present two interesting aspects of skills intelligence and forecasting and identify examples of countries under each of these. In Section 3.3, challenges and success factors relating to skills intelligence and forecasting are also discussed.

3.1 Mature and developing forecasting and intelligence

We have found that a number of countries could be characterised as ‘**mature**’, because they have one or more key forecasting and intelligence tools in place which have been used for at least a decade. These tools appear to be meeting the needs of the stakeholders commissioning and receiving/using the outputs. They may co-exist alongside more ad hoc efforts taken at sectoral level. Examples of countries which could be characterised as ‘mature’ include Denmark, Lithuania and Sweden. These examples are discussed below in more detail. Denmark is presented first, as it is considered to be a country with a highly developed and well-functioning system of skills governance, as identified in the 2014 Report.

Example: Denmark

Denmark has a well-founded tradition for quantitative skills forecasting; macro-econometric models were introduced in the 1970s and there are also qualitative skills forecasts. This long-term tradition of forecasting capabilities relies on tools based on sectoral forecasting and a decentralised skills governance system.

At national level, the Ministry of Education produces statistics on education, the labour market and labour supply, including forecasts on the educational behaviour of each cohort, which are used to set policy targets. The Ministry of Finance produces quantitative forecasts specifically on labour demand and supply in the public sector. Trade unions produce long-term forecasts on labour supply and labour market imbalances using data provided by Statistics Denmark, the Ministry of Education and Ministry of Employment.

At regional level, the Regional Growth Fora assess future education and skills needs in each region; these committees bring together regional authorities, business communities, labour market actors and education organisations.

Alongside the forecasting instruments, a clear policy framework exists where goals, objectives and working methods are defined for the education system, the forecasting infrastructure, the labour market and all stakeholders involved. This is coupled with a well-developed tradition of social dialogue where actors are accustomed to cooperating on skills development issues and well-functioning mechanisms (e.g. cooperation mechanisms between educational providers and social partners).

These systems have developed during the years into a mature environment where clear and transparent cooperation mechanisms between educational institutions and labour market actors have been developed.

Source: EEPO Country Fiche

Another country with mature forecasting / intelligence instruments is **Lithuania**, where the Labour Exchange (LLE) produces annual national forecasts of labour force employment for the next year, based mainly on employer interviews (by the Territorial Labour Exchanges) and indicator analysis. These forecasts have been produced by the LLE on an annual basis since 1995. The purpose of forecasting labour force employment is to plan the activities of the labour exchanges; to seek a match between labour supply and demand; and to assess the need for labour market vocational training. The forecasts, whilst having certain limitations connected to the fact that their main source is employer interviews (see Section 3.3 below for a more detailed discussion of this issue), are quite widely used by representatives of education policy, vocational education and training institutions, and individuals seeking to obtain certain skills.

In **Sweden**, there are three main national-level sources of skills forecasts: Statistics Sweden (SCB), the PES and the National Institute of Economic Research (NIER). SCB has produced 'Trends and forecasts' (*Trender och prognoser*) since 1972, which focuses on the long term and makes demographic as well as educational and labour market forecasts for the coming 20 years. SCB has also published the annual Labour Market Tendency Survey (*Arbetskraftsbarometern*) since 1959. The main report by the PES presenting regular short-term forecasts on a national level is called 'Where are the jobs?' (*Var finns jobben?*). In addition, its six-monthly report series 'Labour market outlooks' (*Arbetsmarknadsutsikterna*) presents a global overview situation of the labour market. The NIER performs analyses and forecasts of the Swedish and international economy and conducts related research. A Government inquiry in 2007³ concluded that the three agencies' forecasts complement each other fairly well, in terms of frequency and detail. Some are suited to short-term planning for the PES of labour market training, whilst others can be used for individual career planning and long-term assessment for the supply and orientation of education, forthcoming supply and demand of skills and occupations.

We have also identified a number of countries with forecasting and intelligence infrastructure which is '**in development**'. These countries are in the process of designing a new infrastructure, or have recently implemented a new tool or system. Again, this new infrastructure may be emerging alongside other activities which may take place on an ad hoc or irregular basis, but the planned or recently introduced infrastructure is intended to become an important source of intelligence for the country. A number of countries which could be considered to fall in this category are being supported in the development of the new tools / infrastructure by European funding, including ESF, as discussed in Section 3.4. Examples of countries with 'emerging' tools or infrastructure include Bulgaria, Greece, Poland, Romania, Croatia, Portugal (with regard to VET), Hungary and Estonia. Developments in Bulgaria, Estonia and Romania are discussed in more detail below.

The **Bulgarian** labour market intelligence system is in a developmental stage. The ESF 2009-2013 funds provided a major input towards the development of a coherent national strategy and forecast tools, by providing funding for the establishment of a National Network for Competence Assessment (NNCA). Alongside this, the National Strategy for the Development of HE 2014-2020 envisages the creation of an inter-institutional structure to support forecasts specifically for the HE sector. The NNCA was introduced in 2010 and has a well-developed organisational infrastructure (the National Reference Network) with the objectives of producing forecasts, establishing a competence assessment network and system, as well as improving the coordination

³ SOU (2007), Arbetsmarknadsutbildning för bristyrken och insatser för arbetslösa ungdomar, Statens offentliga utredningar 2007:18. Internet: <http://www.regeringen.se/contentassets/a721d1f064bc4b2f820f58151598d1fb/arbetsmarknadsutbildning-for-bristyrken-och-insatser-for-arbetslosa-ungdomar-sou-200718>

and exchange between government institutions and employers at all levels. In addition, the Ministry of Labour and Social Policy is developing a forecasting system with the aim of producing labour market information to inform the design of sectoral policies, define the admission criteria for HE and VET. Additionally the Employment Agency is developing forecasts and analysis on the basis of information produced by local agencies. The underpinning features supporting the development of the Bulgarian skills governance approach include comprehensive organisational infrastructure, active involvement of key stakeholders (policy makers, educational organisations and social partners), cooperation and dialogue between stakeholders, active involvement of enterprises, as well as formal mechanisms for transparency and the use of information (described in more detail in Section 4).

Another example of a country with 'emerging' forecasting and intelligence infrastructure is **Estonia**, where the Lifelong Learning Strategy 2020 foresees the development of a regular and well-ordered system for the forecasting, monitoring, and feedback of labour market needs (the 'OSKA' system)¹⁵ in cooperation with the Ministry of Education and Research, the Ministry of Economic Affairs and Communications, and the Ministry of Social Affairs as well as with employers and representatives from other ministries. Within the framework of this programme, the developmental potential and labour requirements of different economic sectors in Estonia will be analysed, using quantitative as well as qualitative methods. The results of this analysis and projections will form the basis for establishing qualifications and a career counselling service, for the curriculum development work of educational institutions, as well as for different authorities that finance learning activities. The prerequisite for this approach is the active and content-driven participation of employers in the creation of the system.

In **Romania**, there are existing forecasting capacities which are both permanent and ad hoc in nature. Governance of the existing systems remains in the hands of the state or state-related stakeholders, whilst the involvement of stakeholders such as business, social partners or NGOs remains rather limited. In addition, a system of labour market and skills forecasting is currently under development, with co-financing from the SOP HRD (to be finalised and rendered operational by the end of 2015), by a partnership between the National Agency for Employment (NAE) and the National Labour Institute (the INCSMPS). This system, which combines an econometric type approach with an investigative type approach (stakeholders' surveys to be carried on a regular basis at local and national level), aims ultimately to equip the NAE with a permanently operational instrument, capable of producing short- and medium-term forecasting type outputs. The NAE aims to equip itself with a full array of tools allowing it to plan, implement and monitor its provisions in a cost-effective way.

It is worth noting here that there are also a small number of countries where there is relatively **little activity** in the area of skills and labour market forecasting / intelligence. In the **Czech Republic** for instance, there is no reliable systematic effort to forecast skill needs. The Ministry of Labour has for some time been interested in building a stable national system and there were plans to do so under the country's National Reform Programme. These plans have however been subject to delay and since the project must be concluded by the end of 2015 (as it is being financed from the previous OP programming period), it is unlikely to generate a usable national system. Similarly **Slovakia** does not have a functional system of labour market and skills anticipation to date. Plans to develop a coherent system of monitoring and forecasting instruments are not new to the policy agenda, but progress has been limited over the past decade. In **Luxembourg**, the government has put in place a large array of instruments to foster skills provision but skills anticipation lags behind – there are limited available studies, monitoring or anticipation instruments.

3.2 From fragmented to collaborative approaches to forecasting and intelligence

Forecasting and labour market intelligence systems tend to be fragmented, but in a number of countries interesting practices have evolved to make the systems more cooperative and joined-up. This section presents examples of both fragmented and joined-up or 'collaborative' approaches to skills forecasting, as well discussing the benefits of ad hoc or sectoral initiatives.

Fragmentation may occur for a number of reasons. As discussed previously, the way the different forecasts are produced and used for the different skills sub-systems can differ between countries. Another reason for fragmentation may be the level of decentralisation of competencies (which again may differ in the different sub-systems). The question is then whether there are mechanisms to ensure that the different tools and outcomes are debated or even somehow coordinated, both potentially between producers and most importantly between users, because the involvement of a broader range of actors can help to achieve a better coordinated forecasting and intelligence system.

In countries with a more **fragmented approach**, forecasts / intelligence are likely to be produced by different actors but these are not brought together to form a coherent national system. In these countries, the actors planning the forecasting may differ from those planning the skills offer. The examples Italy, Malta and Slovakia are presented below.

In **Italy** the decentralisation of responsibilities and governance system led to the development of a variety of useful tools and initiatives, which however operates in a context without clear policy strategies, well-defined national objectives and operational mechanisms. A variety of forecasting tools have been developed by different actors. The Union of the Chambers of Commerce runs an annual survey of business needs; the recently established Information System of Professions (promoted by the Ministry of Labour and implemented by the Institute for the Development of Vocational Training of Workers (ISFOL)) produced the first national survey of occupational profiles and the first audit of skills needs; Almalaurea (a consortium of Universities) produces annual studies on employment outcomes of young graduates at short and medium term; ISTAT (the Italian National Institute of Statistics) produces transition-to-work statistics using an annual survey of young graduates of upper secondary school, university and PhD graduates. Other forecasting tools and observatories exist at regional level under the responsibility of local actors and / or regional governments.

In **Malta**, there is no particular institutional mechanism dedicated specifically to the anticipation of skills needs and no coherent labour market and skills forecasting system is in place. A number of institutions produce and disseminate statistics indicating trends in education and work. The National Statistics Office (NSO) regularly publishes data about education and labour market trends, using different methodologies including surveys based on international methodologies and criteria, and administrative data derived from entities such as the Employment and Training Corporation (ETC, Malta's public employment service organisation), and educational institutions. The ETC also gathers data about job vacancies which is not published. The National Commission for Further and Higher Education (NCFHE) produces statistics about students in post-secondary and tertiary education. The Student Services Department within the Ministry for Education and Employment publishes annual tracer study reports about the education and work choices of young persons after finishing compulsory education. Few forecasting mechanisms of labour market or skills needs exist in Malta. The Central Bank (CBM) publishes 'Quarterly Reviews' about the economy which include general labour market forecasts based on business and consumer surveys carried out regularly among organisations in the private sector (derived from the European Commission). The CBM also publishes longer term macro-

economic projections. The forecasting of labour market and skills intelligence in 2015 continues to be carried out mostly through uncoordinated ad hoc one-off studies.

In **Slovakia**, as mentioned above, progress towards developing a coherent system of monitoring and forecasting instruments has been rather limited over the past decade. For the time being, the 'system' encompasses a small number of national-level activities, which are mostly one-off exercises, disconnected from each other, and producing data with disputable reliability and relevance for the policy making process. A number of potentially useful efforts are in a development or planning stage, the future of which is however uncertain.

Sectoral forecasts and ad hoc initiatives are often produced 'on demand', so are more likely to be put to use. Furthermore, these can produce more precise information. It is important however to avoid isolating the sector concerned from development in other sectors. The country fiches for Romania and Estonia recognise the benefits of ad hoc and sectoral forecasts, as described below.

Example: Estonia

Several sectoral studies have been published in Estonia, which have been procured by the stakeholders and end-users themselves. These offer greater detail and are able to answer a wider range of research questions regarding future skill needs than addressed in the forecasting model of the Ministry of Economic Affairs and Communications. The sectoral studies usually experience more discussion and are put into a considerably larger focus due to being procured directly by the stakeholders and end-users themselves. They also go into more depth, allowing more precise conclusions to be drawn, and can therefore more easily be used in the relevant policy processes. An example given in the country fiche is the maritime sector forecast, which will give direct input to an educational institution in shaping the number of future study places and helping to improve the curricula.

Source: EEPO Country Fiche

In **Romania**, forecasting instruments are developed by various think-tanks and research institutes, chiefly amongst them the ones built by the National Labour Research Institute (INCSMPS) and which make use of an econometric, time-series based approach, generally complemented by some sort of enterprise investigation. Methodologies are consolidated and allow, in most of the cases, for the production of short- and mid-term forecasting results disaggregated on levels of education, gender, branches of economic activity, occupational groups and even occupations, both at national and regional level. All of these initiatives may be counted as capacities ready for activation as and when needs arise. These capacities are also flexible enough in methodological terms to accommodate improvements and adaptations.

Nevertheless, it is worth bearing in mind that there are also limitations to ad hoc, sectoral studies. Again in **Estonia**, it is noted that their project-based approach means that they are carried out highly irregularly and the choice of sectors is inconsistent.

Mixing different approaches and methods and tools can be valuable, but only if results are discussed through cooperation with and involvement of stakeholders. Countries which take a **collaborative or joined-up approach** involve stakeholders in the process of forecasting / producing intelligence. This might be by asking stakeholders to 'validate' the forecasts produced, through the establishment of 'advisory boards' or similar bodies, or by actually identifying the skills gaps or training needs via a committee of relevant stakeholders, such as the Standing Committee for New Skills in

Austria, described below, or the Permanent Committee of Labour and Employment⁴ in Luxembourg, which has as a mission by law to analyse skills mismatches.

Examples of countries with a collaborative / joined-up approach include Denmark (see above) and Bulgaria, France, Belgium and Portugal, which are presented in turn below. Finally, the case of Austria is presented, which shows how countries can exhibit more than one characteristic due to the multi-layered nature of skills governance.

An example of cooperation can be found in **Bulgaria**, where in relation to the new System for forecasting workforce demand⁵ under the auspices of the Ministry of Labour and Social Policy, a formal 'Mechanism for including the results of forecasts of supply and demand of labour in developing and implementing government policies' has been adopted. The mechanism outlines which competent institutions should use the results of the forecasts and how. The mechanism underlines that its adoption sets clear and transparent guidelines of exchange of information and involvement of institutions. In particular, institutions are encouraged to provide their feedback and recommendations for the further development and fine-tuning of the forecasting instruments. To ensure the effective use of information, the competent institutions are required to submit annual reports on the use of the forecasting results in policy formulation and implementation. Based on the individual reports, a Synthesis Report on the use of the information by competent authorities will be developed by the Ministry of Labour and Social Policy, which will feed into the review of the forecasting instruments.

France has been identified as having a comprehensive set of forecasting tools. Different actors implement instruments and mechanisms to respond to niche needs (sectoral observatories) and / or specific local needs (regional observatories). Nevertheless, this collaborative approach does have some limitations, as explained in the box below.

Example: France

In Cedefop's 2008 report on Systems for anticipation of skills needs in the EU Member States, France was praised for having one of the most comprehensive sets of forecasting tools in Europe⁶. A wide range of stakeholders participate in anticipating skills needs are involved at all levels (local, regional and national) via three main instruments⁷.

Firstly, at the national level, two research institutions regularly publish reports and studies aimed at forecasting needs in terms of occupations and skills: the Centre for Strategic Analysis (*Centre d'Analyse Stratégique*)⁸ and the Centre for Research on Qualifications' (Centre D'Etudes et de Recherches sur les Qualifications - Céreq).

Secondly, France has a wide network of both Sectoral and Regional Observatories in occupational forecasting whose studies combine macro-economic projections and

⁴Law of 21 December 2007 on the creation of a Permanent Committee of Labour and Employment, Mémorial A, Number 249, 31 December 2007.

⁵ <http://umispublic.government.bg/srchProjectInfo.aspx?id=56676>

⁶ Cedefop 2008, Systems for anticipation of skills needs in the EU Member States, Working Paper No 1

⁷ European Employment Observatory 2008, Improving the capacity to anticipate EU-wide labour market skills requirements France, contribution to the EEO Review: Autumn 2008, by Sandrine Gineste.

⁸ Established by decree on 6 March 2006, the Centre's mission is to advise the Government in the creation and application of economic, social, environmental and cultural policy. It was the successor to the long-lasting Plan Commission (Commissariat général du Plan). See http://www.strategie.gouv.fr/presentation_du_CGSP

quantitative surveys with qualitative information.

Finally, policy instruments are the third element of France's forecasting framework, which include both legal obligations and incentives. For example, all companies with more than 300 employees are required to have a GPEC (Prospective Management of Jobs and Skills — Gestion Prévisionnelle des Emplois et des Compétences), which is an agreement between social partners at enterprise level to anticipate the impact of external and internal changes on their future skill needs, typically leading to a three-to-five year strategy aimed at meeting the company's needs in terms of employment and skills.

This three-pronged institutional framework – research institutes, observatories and policy instruments – enables all main labour market actors to be included in the process of anticipating skill needs (national and local authorities, social partners, company heads, and the public employment services). This multi-actor landscape forms an inclusive framework that ensures a reliable anticipation of skill needs based on a shared diagnosis.

Nevertheless, it also comprises a number of difficulties or challenges for the user. Indeed, the diversity of actors, methodological approaches, and research outputs hinders the emergence of a coherent policy line and makes the comparability of results more difficult.

In order to improve coherence and accessibility, in 2014, a new French Employment and Skills Network (Réseau Emplois Compétences) was set up by France Stratégie. Moreover, France Stratégie has produced with Cereq and other stakeholders (sectoral and regional observatories) methodological guidelines to implement forecasting studies. These recent initiatives aim to enhance cooperation between national, regional and sectoral actors in order to improve coherence and complementarity in their work as well as improve accessibility of their outputs.

Source: EEPO Country Fiche

Belgium does not have a forecasting model of skill needs. The Federal Planning Bureau and the regional statistical institutes conduct employment projections per sector but these are not specifically aimed at forecasting future skill needs. However, Belgium has developed many instruments to identify skill needs. For instance, the models of identification of the 'demand occupations'⁹ are mainly developed by the regional public employment services (PES): Actiris, VDAB, Forem and ADG. Based on various methodologies, these services identify labour shortages, but also promising occupations and jobs for the future. To identify labour shortages, the methodology used by the PES is generally based on a statistical analysis complemented by consultations with stakeholders in the field. The statistical analysis consists of screening job offers and selecting a list of occupations on the basis of certain criteria (minimum number of job offers received during the year, satisfaction rate, median time required to satisfy the offer, etc.). Then this list is subject to internal PES services and other stakeholders (employers' federations, training centers, etc.) that validate or modify it according to field reality.

In **Portugal**, the Anticipation System of Skills Needs (*Sistema de Antecipação de Necessidades de Qualificações*, SANQ) is the main forecasting instrument of the National Agency for Qualification and Vocational Education (ANQEP). The SANQ is monitored by a "Coordinating Council" that validates the procedures of application of the system and analyses the results. This body is composed by representatives of three public institutions, the social partners and an international tripartite structure. On the basis of the criteria and priorities produced by the SANQ the Directorate-General of School Establishments (DGEstE), within the Ministry of Education and

⁹ The 'demand occupations' are defined here as the group of occupations composed of the current labour shortages and the 'occupations for the future'

Science, elaborates the final and binding map for the training supply network on mainland Portugal, determining the number of Professional courses classes in each profession and region. In addition, the Module for Regional Consolidation of the SANQ (which exists until now in four of 25 Inter-Municipal Communities (CIMs) and is going to be extended) consists of negotiations about the implementation of the results produced by the SANQ with the local stakeholders in each CIM. The involvement of stakeholders at all levels of the SANQ (central, sectoral and local) with concrete tasks / competences and also at ANQEP itself can be seen as a strategy for 'building capacity and partnerships for evidence-based skills policy' as suggested by the OECD (2015, p. 15). However, the effectiveness of this cooperation will have to be assessed in the future, because the early stage in the existence of the new system does not allow conclusions at this moment. (As noted above, Portugal is a country with forecasting / intelligence infrastructure which is 'in development'.)

Finally, there is said to be a lack of an overall coordination of the different forecast approaches in **Austria**. The various approaches are not linked and they use their own taxonomy which hinders comparability. The lack of overall coordination of the different forecast approaches in place is said to present an obstacle for efficient steering in education and training. This would suggest that forecasting and intelligence in the country is 'fragmented'. However, the country's Standing Committee for New Skills can be seen as a good practice example for including relevant stakeholders in identifying current and future skills requirements and designing relevant training curricula for some occupations. The Standing Committee for New Skills consists of representatives of the PES, social partners, business representatives, training institutions and VET experts. Working groups in specific sectors were tasked with drawing up curricula for target-oriented training programmes, based on the Committee's knowledge of short and medium term skill requirements, taking into account underlying trends in the labour market, such as greening, globalisation and new technologies. Since 2011, these curricula were considered in the training programme 'New Skills'. Yet the Standing Committee is a standalone measure and is not part of an integrated process including the whole VET system, which is why overall Austria is seen to have a more fragmented system.

3.3 Challenges and success factors for skills forecasting

In this section we present some of the **challenges and success factors** identified in the country fiches relating to forecasting and intelligence. The challenges range from issues regarding the quality of the data to the lack of integration of the systems in place. Some of the challenges and success factors are characteristics of the overall approaches highlighted in Sections 3.1 and 3.2. For instance, a mature approach to cooperation, enabling stakeholders to be an active part of the process, would be a characteristic expected in a country with a more 'collaborative/joined-up' system.

3.3.1 Challenges

Firstly, a number of countries identify the **limitations of the data or methods used** as a challenge. These limitations can mean that the data produced through the forecasting / intelligence instruments is not sufficiently robust or is not useful for the purposes of steering education / training provision. Furthermore, different users may find a short-, medium- or long-term approach more relevant. Therefore some institutions may find the forecasting available is of no use to them.

Of course all forecasts are simply that – a prediction of what might happen – and there is the risk that unanticipated developments or changes in policy might render the forecast inaccurate, or that the forecasts might just turn out to be wrong. For instance in **Bulgaria**, recent developments that are said to have unexpectedly changed the course of the labour market are the economic crisis, unexpected migratory inflows as well as other global developments which affect Bulgaria as a small open economy.

However in some countries additional concerns regarding the reliability of the data or methods of data collection are raised¹⁰. These concerns may be more general in nature (in **Slovenia** the small size of the labour market does not enable researchers to make more accurate analysis with statistically reliable results¹¹) or may relate to the data sources used for the production of intelligence / forecasting (e.g. in **Slovakia** Vantuch–Jelinkova¹² point out that any analysis focusing on registered unemployment data offers only a biased picture, until longer-term tracking of graduates is introduced). In **Estonia**, the concern relates to the limitations of the data to inform education / training policies/planning; the annual employment forecasts prepared by the Ministry of Economic Affairs and Communications can only give an indication of contracting or expanding sectors but cannot give any information about the weak points of current education and training curricula.

Many of the forecasting instruments and intelligence tools rely on collecting data from employers regarding their anticipated demand for skills. It is however highlighted in some country fiches that the use of such data has its limitations: employers often only identify needs in the short-term and where surveys rely on voluntary participation of employers, this can limit the data gathered through the forecasting exercise¹³. This issue was also previously identified by Cedefop¹⁴: *"Surveys of employers or other groups asking about skill deficiencies and skill gaps involve directly the user/customer but may be very subjective, short-term, inconsistent and can also easily focus on the margins (current needs, vacancies) rather than skill gaps within the current workforce"*.

For instance in **Hungary**, the employers' survey of the Public Employment System collects information on several details of the business plan and detailed information on the HR plan of firms, in order to prepare a labour market prognosis. However, even though intelligence based on employers' direct responses appears to be the most reliable of all at first, there is indication that this is not necessarily so. A follow-up survey showed that only half of the employers could correctly formulate expectations on a one-, and only 6% could do so on a five-year horizon¹⁵. Also in **Hungary**, the quarterly survey of human resource management is the largest own-produced survey of the Public Employment Service. It reaches 12,600 of the sampled 16,800 companies, providing a theoretically interesting source of short-term skills intelligence. Unfortunately the data collected are not weighted and as such "do not represent the

¹⁰ This is a concern raised in the country fiches for Austria, the Czech Republic, Estonia, Ireland, Hungary, Latvia, Malta, Portugal, Slovakia and Slovenia.

¹¹ For example, using the LFS data, occupational trends could be observed and analysed as statistically reliable only at the level of ten major occupational groups, whilst trends for particular occupations are less reliable

¹² Vantuch, Juraj – Jelinkova, Dagmar (2015): Slovakia: VET in Europe – Country report: 2014 (Draft). ReferNet country report, State Institute of Vocational Education/Slovak National Observatory of VET.
http://www.refernet.sk/images/news/files/2014_SK_CR.pdf

¹³ Country fiches which mentioned the limitations associated with using data from employers included Lithuania, Slovenia, Sweden, Luxembourg, Hungary and the United Kingdom.

¹⁴ Cedefop (2008), Systems for the anticipation of skill needs in the EU Member States. Internet: <http://www.cedefop.europa.eu/en/publications-and-resources/publications/wp01>

¹⁵ Czibik, Ágnes, Mihály Fazekas, Nándor Németh, András Semjén, and István János Tóth. 2012. "Labour Demand Forecasting Based on Business Expectations - Lessons Learnt from Two Consecutive Enterprise Surveys." Budapest: MTA KRTK KTI.

composition of companies by neither location, nor sector of operation or categories of the number of employees”¹⁶.

Countries have a number of different data sources. A problem identified in some fiches is the **lack of integration between these data sources or a lack of cooperation between the actors involved**, as discussed above in Section 3.2. This issue was referred to in the 2014 Report and highlighted in several of the second batch of country fiches¹⁷. For instance, in **Germany**, multiple skills forecasting instruments are in use, covering the short-, medium- and long term, as well as issues of supply and demand. There are also different forecasts at regional and local level, as well as sectoral forecasts, on top of those produced nationally. The use of multiple instruments has the ability to provide many perspectives and the different methodologies and assumptions they use bring about different results, adding to the discussion base for future development and policies. Nevertheless, the existence of multiple sources can lead to excessive and sometimes conflicting information, due to the use of different methodologies and assumptions. Furthermore, it is suggested that the amount and assessment of information might overstrain political and economic actors.

As mentioned above, **Belgium** does not have a national forecasting model of skills, since the competences for education and employment are regional. Where this is the case, the use of common definitions and compatible/standardised data could enable the information to be useful across regions and countries. This could also favour labour mobility.

One final challenge mentioned in the country fiches for Cyprus, Greece and Slovenia is the aforementioned problem of the **economic crisis** taking attention and / or resources away from forecasting / intelligence activities, hindering the future development of the country's system. For example in **Greece**, although there is an institution at national level with responsibility for forecasting – the National Institute of Labour and Human Resources (NILHR) and plans to develop a permanent and adequate mechanism for providing forecasts – the economic crisis meant that forecasting retracted as a priority issue and the NILHR became increasingly engaged in implementing EU programmes concerning employment and vocational training, and in studying the changes in the institutional framework surrounding the labour market.

3.3.2 Success Factors

Firstly, it goes without saying that for forecasts and intelligence to be robust, they need to be based on **effective statistical infrastructure**. This is identified for example as one of the strengths of the **Irish** system: the technology underpinning the SLMRU occupational forecasts is said to be in line with international best practise in the area. Another example is the Austrian PES Skills Barometer, described in the box below.

Example: Austria

In **Austria**, the 'PES Skills Barometer' (AMS Qualifikationsbarometer) was launched by the PES in 2002 to provide comprehensive information on labour market trends and skills demand. It aimed to exploit and merge information already available in a synoptical way.

The barometer uses quantitative analyses of job adverts over the past two years, a PES survey among Austrian companies, studies on skills demand, surveys among

¹⁶ NGM. 2015. "Main Results of the Quarterly Human Resource Management Survey." Budapest: Nemzetgazdasági Minisztérium [Ministry of National Economy]. http://internet.afsz.hu/engine.aspx?page=afsz_negyedevess_munkaerogazd_felmeres.

¹⁷ Austria, Belgium, Czech Republic, France (see above), Hungary, Malta, Slovakia, Germany and Slovenia

experts and additional ad-hoc studies on skills demand. All information given by the PES Skills Barometer follows a hierarchical structure, outlined along a concept of the labour market distinguishing (on level 1) 24 'occupational areas' (Berufsbereiche) and (on level 2) 95 (smaller) 'occupational fields' (Berufsfelder). Each occupational field contains several job titles (level 3) with about 560 occupational profiles.

The PES Skills Barometer also undertakes the attempt to pay more detailed attention to skills and competencies than usual in more traditional labour market information systems. Thus a comprehensive classification of skills and competencies (summarised as qualifications) has been designed and implemented. The PES Skills Barometer does not only inform about domain specific skills for every occupational field, but also about personal skills, the need for particular professional experiences, or additional skills in demand. Tables for every occupational field display relevant qualifications taken from this ontology and rate their present importance at the workplace and future significance.

A positive aspect of the PES Skills Barometer is that various data and information sources are processed and integrated into a single skill needs forecast tool. But, as noted above, it has to be considered that the demand identified by the PES Skills barometer only reflects a part of the total labour market demand.

Source: EEPO Country Fiche

As noted previously, most countries have a number of different forecasting and intelligence outputs. Where these **different forecasts are able to complement each other**, they can be used for different types of planning (e.g. planning ALMPs versus planning individual careers). Examples of this can be found in Belgium, the Netherlands (described below), Slovakia and Sweden (described below) and as discussed in more detail in Section 4.2.1, in Finland the process of translating the VATTAGE forecasts into educational provisions uses and comments on the long-term qualitative information of VATTAGE but also other sources, both qualitative and quantitative.

In the **Netherlands**, whereas national-level data contains valuable information, the regional economies seem to become more and more a key player in developing skills, matching skills and demand, as well as developing future visions on the regional economy. The Dutch PES has realised this and has started to provide thorough regional analyses. Also some regional employers' associations have started to develop more coherent views on keeping and developing skills within the region and sector.

In **Sweden**, as noted above, a Government inquiry in 2007¹⁸ concluded that the three agencies' forecasts complement each other fairly well, in terms of frequency and detail. The Business Tendency Survey by the NIER has its great advantage in its frequent updates, and detailed information about above all industrial industries, but lacks information about demand and supply of various occupations. The Labour Market Tendency Survey by the SCB provides the most detailed picture by separating each educational group between level of training and work experience. On the other hand, it leaves major occupational groups with lower educational requirements outside the analysis. The PES provides the most comprehensive picture regarding specific occupations and information on regional variations. (One potential drawback is that the PES 'shortage indices' may also be considered as too technical and should be complemented by information on geographical and regional variations.)

¹⁸ SOU (2007), Arbetsmarknadsutbildning för bristyrken och insatser för arbetslösa ungdomar, Statens offentliga utredningar 2007:18. Internet: <http://www.regeringen.se/contentassets/a721d1f064bc4b2f820f58151598d1fb/arbetsmarknadsutbildning-for-bristyrken-och-insatser-for-arbetslosa-ungdomar-sou-200718>

Countries which take a collaborative / joined-up approach are presented in Section 3.2. As noted in the 2014 Report, a **mature approach to cooperation** allows social partners, educational providers and policy makers to be actively part of the process (from policy design to final use of forecasts). This is evidenced for instance in Bulgaria (see Section 3.2 above), Denmark, Finland and Spain. The Finnish VATTAGE example in particular shows how cooperation can ensure that the forecasts can be translated into adjustments to and targets for educational provision. It is described in more detail in Section 4.2.1.

The 2014 Report emphasised that a **clear policy intent and strategy at national level** are required to create an integrated system and statistical infrastructure. A clear policy intent was identified in **Denmark**, together with procedures to ensure that the production of labour market intelligence informs education and training provision. Other examples of countries where this policy intent is evident include **Ireland**, where it is the role of the Expert Group on Future Skills Needs (EGFSN) to provide detailed advice to governments based on the most up-to-date labour market intelligence and occupational forecasting data available; and **France**, where the growth the number of different actors implementing instruments and mechanisms is increasingly channelled and organised by clear policy strategies and strong national governance. In **Romania**, information and intelligence from the National Institute for Statistics is used to inform policy-making at national level and forms the backbone for major decision-making at all levels of government (national and local).

Finally, an **effective dissemination (or 'transmission') policy** is essential to ensure that the impact of the forecasts on public policy is as wide ranging as possible. This will be discussed in more detail in Section 4 of this report.

3.4 ESF funding to support forecasting practices

An overview of the information provided in the country fiches on ESF support for skills governance is provided in the Table in Annex 1. This Section of the report provides a commentary on the information collated in the Table referring specifically to ESF support for forecasting practices. Neither are intended to be a comprehensive overview of ESF support for skills governance activities across the EU, but should act as a starting basis for further work in the future.

ESF-funded skills governance activities were mentioned in all but two of the country fiches (Luxembourg and the United Kingdom). Both the 2007-2013 and the 2014 - 2020 funding periods were mentioned in the country fiches (the Table in Annex 1 separates the information per funding period). Relevant ESF-funded activities were mentioned as taking place in both periods in 14 of the country fiches¹⁹, in the first period only in seven countries²⁰ and in the second period only in five (Czech Republic, Ireland, Spain, Croatia, Sweden) of the 28 countries examined. Information on ESF-funded activities related to the production of labour market and skills intelligence was present in 17 country fiches²¹ – it is this material that is synthesised in the following section.

Some countries already have systems in place supported by ESF funds, including Latvia, France, Hungary, Sweden and Slovakia. The activities supported by ESF in these countries are described below.

In **Latvia** in 2007, the Dynamic Optimisation Model, developed over the period 2005 – 2007, was presented within a study 'Long Term Forecasting System of Labour Market Demand and Analysis of Improvement Opportunities' which was 75 % co-funded by

¹⁹ Bulgaria, Germany, Estonia, Greece, Italy, Latvia, Lithuania, Hungary, Malta, the Netherlands, Portugal, Romania, Slovenia, Finland

²⁰ Belgium, Denmark, France, Cyprus, Austria, Poland, Slovakia

²¹ Bulgaria, Denmark, Germany, Greece, France, Italy, Latvia, Hungary, Malta, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden

the ESF. The Dynamic Optimisation Model is based on five modules: public, economic, environment and resources, technological and labour market. ESF supported the project 'State Employment Agency's labour market forecasting and monitoring system development', which led to the use of an econometric forecasting model by the State Employment Agency. As part of the ESF programme, a new project 'Development of Labour Market Demand Medium Term and Long Term Forecasting System' was carried out over the period 2010-2013 in order to improve the existing system and quality of the forecasts.

In **Hungary** ESF funds have been used to develop both forecasting tools and also procedures for using the results, yielding a number of instruments. In 2010, a project was launched with ESF funding²² to establish a model framework and an associated databank to support a medium-term forecast of demand and supply on the labour market. The main aims set by the Ministry for Social Affairs and Labour, the project was delivered by the Institute of Economics, Hungarian Academy of Sciences. The aim was to improve upon existing developments in this area by introducing a modular modelling structure to improve transparency and consistency and by using data that spans both demand and supply at the micro level as well as by delivering highlights of the results to the general public in an innovative way. In addition, as of 2013, the Integrated HE Graduate Tracking Database (IHGTD) was put in place using ESF funding²³.

In **France**, ESF funds have also been used to fund projects related to the production of labour market intelligence. The French national ESF Operational Programme (OP) for 2007-2013 (where the first priority was helping workers and enterprises adapt to economic change) included a number of actions aimed at enhancing the anticipation of labour market and future skills needs. Indeed, the OP states *"the intervention of the ESF should help improve anticipatory measures and lead to better management of economic change in France through social dialogue and by networking all the different stakeholders working in the field"*²⁴ Among the actions implemented to attain these objectives, ESF funds supported the development of diagnostic analysis carried out together with the social partners, in order:

- to improve knowledge of jobs and the qualifications required in order to identify obsolete skills;
- to define the jobs and qualifications required in the medium term; and,
- to propose action plans to adapt skills and protect the jobs of the most vulnerable workers.

While the **Swedish** ESF Council²⁵ does not provide direct assessment or forecasting on skill and occupational needs, it finances various projects at the regional level that may improve the matching process in the labour markets. The Swedish social fund usually supports projects that aim at enhancing the employability of individuals across the life course through competence development. Some of the funded projects listed in the Swedish ESF Council home page²⁶ aim to identify skill needs for a particular occupation, industry or region. In each of the eight regions included in the Swedish ESF, there is a partnership consisting of local actors and representatives of the labour-market organisations. The regional partnerships participate in the set-up of the

²² Project 2.3.2-09/1-2009-0001 of the Social Renewal Operational Programme. See more including reports at <http://elorejelzes.mtakti.hu>.

²³ Project 4.1.3-11/1-2011-0001 of the Social Renewal Operational Programme.

²⁴ 'Regional competitiveness and employment', National Operational Programme ESF France, February 2007

²⁵ The Swedish ESF Council is the authority responsible for the implementation of the Social Fund (2007-2013) in Sweden

²⁶ <http://www.esf.se/Resultat/Projektartiklar/Kompetensutveckling/>

regional plans, which contain some political assessment about skill and competence needs at the regional level.

Projects to develop labour market and skills intelligence in **Slovakia** have been funded by the ESF aimed at optimising specific areas of learning, i.e. secondary schooling and lifelong learning and career guidance. In 2014 the Central Labour Office launched a new ESF-funded national project 'Forecasting labour market developments' and commissioned private agency Trexima to develop a comprehensive skills anticipation system that would serve to optimise the secondary school network and adjust the offer of study and training programmes. The ESF-supported (2013-2015) project run by the National Lifelong Learning Institute involves, inter alia, the creation and implementation of a monitoring and forecasting system of educational needs for lifelong learning and career guidance.

Greece and Estonia are in the process of developing labour market and skills intelligence tools with support from ESF. The **Greek** labour market authorities are currently discussing a plan to develop a permanent and adequate mechanism for providing forecasts, within the frame of the OP 'Human Resources Development 2014-2020'. The mechanism is expected to provide information on labour supply and demand at the levels of sectors, occupations, qualifications, competences and skills, both on regional and local bases. The creation of a network of key stakeholders is foreseen (ministries, social partners, regional and local authorities, research centres), under the scientific supervision of the National Institute of Labour and Human Resources (NILHR). The mechanism is expected to deliver its first outputs, based on the analysis of secondary data, before the end of 2015. In **Estonia**, the OSKA system mentioned above (Section 3.1) is being developed with support from ESF funding.

It would appear that ESF funds have been widely used to support the development of the infrastructure for forecasts and intelligence. However, issues arise concerning the overall impact and usefulness of the funds. These include issues in relation to the amount of funding, the continuity of funding, and the limitations of projects which are not part of an integrated strategy. For example, while the ESF contributed to the strengthening of labour market intelligence in **France**, the size of ESF funding in this area remains relatively small when compared to national funding; thus ESF provided a supportive rather than a directional/critical role in this field.

In **Hungary**, ESF funds are used for initial developments, but continued development (which is often necessary to ensure the developments can be of use) is not always guaranteed. In **Austria**, ESF funds have been used only to a limited extent for the production of labour market intelligence. Very occasionally, projects in some regions were implemented. Apart from research projects with the aim of identifying training needs of certain disadvantaged groups, few projects were carried out with a focus on regional employment perspectives²⁷. The main objective is to identify skills demands of regional companies and to develop relevant training programmes. These projects are isolated and not an integrated part of a regional skills governance strategy.

Several ESF funded anticipation projects have been carried out in **Finland**. The role of these instruments is not less important in practice, but they do not form such a coherent structure as the key forecast tools VATTAGE and MITENNA (VATTAGE (steered by the consortium of key ministries and MITENNA by the Ministry of Education and Culture, see Section 4.2.1 for a more detailed overview). Small-scale – often regional or local – projects have also been supported by ESF in Denmark and Germany.

Some countries have made attempts to use ESF funding to produce a more integrated anticipation system and to use the funds more strategically. For example in **Poland** in 2011, a process towards a more integrated anticipation system was initiated by

²⁷ E.g.: <http://www.newskills.info/>; <http://www.rmooe.at/projekte/regionale-koordination-des-pakts-f%C3%BCr-arbeit-und-qualifizierung-o%C3%B6-paq>

launching the ESF-funded project Task 2: Elaboration of integrated prognostic and information system. This project was jointly run by the Centre for Human Resources Development (leader) and the Institute of Labour and Social Studies (partner) and aimed to implement an integrated system of employment forecasts in Poland by 2014. However, the extent to which this target has been achieved is unclear. The Study of Human Capital in Poland (Bilans Kapitału Ludzkiego BKL) is the main forecasting tool at the moment. The results of the BKL have been used to inform/steer the disbursement of ESF funds in the National Operational Programme (2007-2013). For example, following the results of the study which showed training needs in the areas of team work, project work, and general competences the local agency in charge of the ESF funds (Marshal Agency) in the province of Malopolska allocated funds specifically for training on these areas.

4 Transmission and use of labour market and skills intelligence

4.1 Transmission of skills intelligence

The following sub-sections present the different methods of transmission used across the 28 Member States, followed by a discussion of their strengths and weaknesses. A final sub-section looks specifically at the transmission and use of skills intelligence in relation to career guidance.

Using the country fiches, some issues were encountered when identifying the target audiences for skills intelligence. Many country fiches do not explicitly state the country's transmission methods or target audiences, instead choosing to highlight how different actors can use/benefit from labour market and skills intelligence. Also, many countries highlight that they make forecasts publicly available – whilst failing to identify the exact audiences and/or consider whether their target audiences are referring to the forecasts in practice. Even when specific actors are stated explicitly as target audiences, they may not actually be targeted through specific communication activities, or this information may be missing from the fiches. At times, the language within the fiches is imprecise (e.g. 'all the relevant stakeholders', etc.) and it can be hard to judge whether the transmission activities are ad hoc or systematic. Finally, it appears that some of the authors may be somewhat 'over-optimistic', for example listing all possible stakeholders when stating who uses the forecasts, without providing supporting evidence. These limitations should be taken into account when reading the following section.

4.1.1 Target audiences

There are many target audiences for the transmission of skills intelligence, including Ministries and government agencies, social partners, education and training providers, career guidance services, regional authorities, companies/employers, qualification organisations and even jobseekers, students and graduates. According to an analysis of the 28 country fiches, it is most common for Ministries (typically Labour/Employment and Education), education and training providers, public employment services and social partners to form the focus of transmission activities. By comparison, it appears relatively rare for jobseekers and career guidance services to be targeted.

4.1.2 Methods of transmission

- **Online publication**

Publishing forecasts online or in the media is the most common method for transmitting skills intelligence, reported by a majority of Member States²⁸. However,

²⁸ Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Germany, Denmark, Estonia, Ireland, Italy, Lithuania, Luxembourg, Latvia, Malta, the Netherlands, Poland, Portugal, Sweden, Slovakia, the United Kingdom

there are differences as regards the type and accessibility of the information.

In some cases (Belgium, Bulgaria, Denmark, Lithuania, Latvia), the information online is published with specific tools to support wider use. For instance, in **Latvia**, short-term forecasts are available through the State Employment Agency, through an electronic visualisation tool that allows users to view the information in a detailed and graphically comprehensible way. **Denmark** has a long tradition of policy accountability and transparency; therefore data is readily available, with tools to inform the wider public on career opportunities, the availability of training courses and content. In other cases (Czech Republic, Germany, Malta, Sweden, the United Kingdom), data are included in public research publications – such as in **Germany**, where the Federal Ministry of Education and Training releases the *Berufsbildungsbericht*²⁹ (Report on vocational Education and Training) and *Bildungsbericht* (Education Report).

Unusually, in **Ireland**, skills forecasts are available through a central web platform, specifically in place to provide data and recommendations in this area. Ireland's Careers Portal site was officially launched by the Minister for Education and Science in 2008, as a direct response to a report of the Expert Group on Future Skills Needs (EGFSN), which recommended that *a single careers portal website be developed to provide information to a range of different user groups each with different guidance requirements*. The web portal provides a wide range of labour market information across all sectors and occupations. For example, when viewing information on the Social and Caring Professions, the EGFSN's output on employment trends, sample occupations and occupations in demand are embedded as information tabs in the portal. The Portal has significant support and boasts a user base of over 2.3 million page impressions a month.

Similarly, in **Portugal**, the Anticipation System of Skills Needs (Sistema de Antecipação de Necessidades de Qualificações, SANQ) publishes all of its products on its website (effectively serving as another specialised platform).

In theory, the benefit of publishing forecasts online is that the information are available to a variety of stakeholders, including policy-makers, PES and career guidance services. However (as discussed above), without efforts to present the information in an understandable format, to promote the services or to monitor the user base (as occurs in Ireland), publication on websites does not necessarily guarantee effective transmission (i.e. that intended users will actually access the website). For instance, in **Malta**, the expert warned that some reports are difficult to find, such as the skills reports of the public sector. This suggests that, despite being available, the forecasts are not easily accessible.

In the **United Kingdom** country fiche, it is recognised that an important point in encouraging use of the information is its accessibility and here the main providers are said to perform well. Firstly, all the reports and data are readily available on the Internet at no charge to users. Secondly, the information is usually available in a range of reports that will appeal to different user groups. For example, the UKCES produces Working Futures reports that range from summaries, through to a full analytical report with associated technical annexes for those needing this level of detail. There are also press releases and points of contact for questions arising from the information. Much of this is all about increasing the reach of the information and a good recent example of this is the issuing of a report aimed squarely at young people (and their advisers) making future career choices.

- **Holding events and offering training to disseminate the findings**

The next common method of transmitting skills intelligence is through events/seminars, as reported in a quarter of Member States³⁰. In most of these cases

²⁹ <http://www.bmbf.de/de/berufsbildungsbericht.php>

³⁰ Cyprus, Denmark, Estonia, Spain, Lithuania, Poland, Sweden

(Cyprus, Spain, Lithuania, Poland, Sweden), the events have the specific purpose of spreading this information, and are targeted to particular audiences.

For instance, in **Lithuania**, the forecasts of the Lithuanian Labour Exchange are presented during the sittings of the Tripartite Council, as well as at ministerial events. There are also regular sessions held for employers, students and school graduates. In **Sweden**, a seminar event took place in December 2014, jointly organised by Statistics Sweden (SCB) and the PES, during the release of 'Trends and forecasts'. This involved the presentation of forecasts about employment and unemployment for various educational and skill levels. Furthermore, SCB often participates in other seminars and congresses about labour market and educational issues, and can design special (training) packages upon request from end users.

Offering seminars, conferences and ad-hoc courses represents a useful approach to spreading skills intelligence, although they need to be well-targeted to the audience, and may require significant human and financial resources.

- ***Institutional mechanisms to transmit skills intelligence***

Representing a less typical approach, in some Member States (Germany, France, Finland), there are specific committees or agencies with responsibility for relaying skills intelligence to relevant audiences. As mentioned above, in **Finland** the national and sector-specific Education and Training Committees have responsibility for transmitting the findings of the forecasts of the Government Institute for Economic Research (the 'VATTAGE' model), in order to inform the design of educational provision. Finland's regional agency Centre for Employment, Transport and Environment is responsible for analysing, interpreting and transmitting the labour market intelligence, in order to support the development of local policy strategies and further elaborate regional estimates. In **Germany**, the advisory boards in the Leibniz-Institutes serve a similar function of transmitting skills intelligence. In **Austria**, workshops of the aforementioned Standing Committee on New Skills cluster meetings are summarised, conclusions are drawn and respective recommendations are given to various addressees, such as policy-makers and the education system, PES, continuing education and training (CET) providers.

Likewise, in **France**, institutional transmission mechanisms are in place to ensure cooperation between policy makers, training and education providers and social partners. For example, the sectoral observatories have close ties with social partners' bodies responsible for designing and delivering sector specific vocational qualification certificates. However, despite the existence of transmission mechanisms at national, sectoral and regional level, bottlenecks in the dissemination of information have been identified. Specifically, while well-developed mechanisms exist in the VET system, this is not the case for higher education. Amongst other things, this has been put down to the fragmented nature of the production of skills intelligence in HE. It reflects the degree to which institutional mechanisms require well-functioning and clearly designated organisations, as well as a high level of internal cooperation.

- ***Multi-faceted strategies for transmission***

Although some Member States adopt more than one method of transmission, it is relatively unusual for there to be overarching strategies for transmitting skills intelligence, with the notable exceptions of Poland and Ireland. The main tool for forecasting in **Poland** – the Study of Human Capital (Bilans Kapitału Ludzkiego BKL) – includes a clear dissemination strategy, with structured steps and mechanisms for disseminating information, with a specific budget line. Dissemination initiatives include annual reports on the BKL website; cycles of national conferences; and regional seminars targeting regional labour market actors, employers' representatives and HR managers, training and education providers (including HE providers), policy makers and local administrations. Furthermore, it is envisaged that BKL experts will participate in an advisory role in important employment committees (e.g. the

Committee of Scientific Policy) and the PES have been actively involved as stakeholders in the BKL analysis of labour supply.

The key strength of the Irish approach is said to lie in the dissemination policy of the Skills and Labour Market Research Unit (SLMRU), as explained in the box below.

Example: Ireland

In **Ireland**, the bulk of labour market intelligence is produced by SLMRU, based in Solas (the Further Education and Training – FET - Authority). The key strength of the Irish approach is said to lie in the dissemination policy undertaken by the SLMRU in order to ensure that the impact of the forecasts on public policy is as wide ranging as possible. According to the dissemination strategy, occupational forecasts are transmitted directly to all government departments, universities and Education and Training Boards (ETBs). The occupational forecasts are a central element in the activities of the Expert Group on Future Skills Needs (EGFSN), which provides most of the analysis on future skills needs for central government, educational institutions and representative bodies and exerts a substantial influence on government policy. Furthermore, the EGFSN's publications and associated press releases enjoy substantial media attention in Ireland. It is reasonable to conclude that, on the basis of the strategy, the most relevant bodies and organisations are adequately informed with respect to the occupational forecasts at a senior management level.

Source: EEPO Country Fiche

- **Other methods**

Individual Member States pursue some other, less common methods of transmission. In **Portugal**, forecasting data occupies a central role in stakeholder negotiations; regional stakeholders in the SANQ Coordinating Council need to refer to the SANQ forecasts, in order to influence the VET offer in their area. In the **United Kingdom**, recommendations are disseminated on the basis of skills data. In **Germany**, there is significant public relations work with stakeholder associations, as well as interpellations in the Bundestag or Länder parliaments. Finally in **Luxembourg**, it can be assumed that the small size of the country as well as the strong culture of negotiation, discussion and partnership contributes to less formal transmission strategies.

4.1.3 Strengths and weaknesses of transmission methods

Across many countries, the central weakness of transmission is that it fails to be systematic or coordinated. As shown, it is rare for countries to have dissemination strategies in place, even if they have developed forecasting systems. For instance, in **Latvia**, there are few channels for transmitting medium-/long-term forecasts³¹. Furthermore, Latvia's situation attests to the difficulties of transmitting skills intelligence to multiple stakeholders working in the same area. There are more than twenty different councils, committees and working groups dealing with education and labour market issues specifically. The lack of mutual coordination and a common interpretation undermines the impact of forecasts on policy-making decisions. Similarly, in **France**, as mentioned above, the diversity of tools, outputs, actors and levels concerned, as well as the absence of machinery for producing a comprehensive overview, may prevent the emergence of a coherent policy line that public authorities should follow to promote the match of supply and demand in the labour market in the future. The recent introduction of a French Employment and Skills Network (Réseau Emplois Compétences) and the development of methodological guidelines to

³¹ In future, the Ministry of Economics plans to develop a web-based labour market forecast analysis and career planning tool in order to improve the dissemination system of medium and long term forecasts.

implement forecasting studies are both aimed to improve coherence and complementarity.

In **Spain**, reaching small business is still one of the most pressing challenges, when it comes to gauging training needs and provision. In **Estonia**, forecasts are published on the website of the Ministry of Economic Affairs and Communications website and presented on an ad-hoc basis in work-groups, seminars etc., but generally transmission is not thought to be coordinated/coherent.

At the same time, many countries demonstrate strengths in the transmission of skills intelligence. The integration of the end-users (e.g. social partners, educational providers, PES) into the design and production of forecasts, as noted in countries with a 'joined-up' or 'collaborative' approach, is likely to be the most effective method of transmission. In some cases there is a clear policy intention to ensure that users are involved throughout the process (e.g. Denmark). Likewise, as noted previously, ad hoc studies commissioned by end-users may offer particular benefits in that they are likely to receive attention and to offer more detailed information to support policy-making (as is the case in Estonia). Some countries (such as the United Kingdom) go to particular lengths to ensure that information is targeted and accessible to a range of different audiences (for example, offering a range of reports to appeal to different user groups, including one specifically to guide young people on career choices, as mentioned above). Such an approach is likely to enhance the impact of communications.

4.1.4 Transmission and use of skills intelligence in relation to careers guidance

One of the potential benefits of skills intelligence is that it supports evidence-based career guidance, which takes into account the opportunities and demands of the labour market (at present and in future projections). Just over a third of Member States reported activities specifically relevant to jobseekers and / or guidance practitioners. In this section we discuss the transmission of skills intelligence to career guidance practitioners and their use of the data. Later, in Section 5.1.7, we present some developments in the use of career guidance to steer education and training provision.

As above, the most common method of transmitting this intelligence to guidance services and jobseekers is through online tools (Cyprus, Ireland, Croatia, Lithuania, Sweden, the United Kingdom). In **Ireland**, the EGFSN disseminates its analysis to students, jobseekers and guidance counsellors through websites and newsletters. In the **United Kingdom**, online careers services use the main national projections (UKCES data, Working Futures) to provide some indication of labour market demand in 2020. In **Lithuania**, the main national web portal, AIKOS, is an open information, guidance and counselling system for students, employees, employers, guidance and counselling personnel. It provides information on education and training programmes, providers and qualifications, as well as on education and employment statistics (vacancies, unemployed persons) and descriptions of occupations. In **Croatia**, the Lifelong Career Guidance Centre (CISOK) has IT tools that provide information on labour market needs; the Labour Market Information System includes information on employment, unemployment and salaries (at national and regional level), according to sectors of economic activity, gender, age, education level, etc. The internet portal enables a more efficient job search for job seekers, and employee search for employers.

In some cases (Luxembourg, Estonia), there are specific stakeholder forums to ensure that guidance is based upon labour market needs. In **Estonia**, the National Career Guidance Forum, in place since 2010, unites many stakeholders, including policy makers from relevant ministries (Ministry of Social Affairs, Ministry of Education and Research, Ministry of Economic Affairs and Communications), practitioners and other target groups. The Forum aims to ensure that lifelong guidance services are provided

in a cooperative and coordinated manner. Luxembourg is currently in the process of legislating for an Orientation Forum, which is part of a larger reform of orientation in the education system, and which aims to design a national strategy of information and orientation for students. The Forum is composed of representatives from various ministries, student associations, as well as representatives from the business associations.

There have been some (limited) attempts to provide training and resources for guidance practitioners in Latvia, Ireland, Spain and Croatia. In **Latvia**, career counsellors in the State Employment Agency have received information since 2012 about labour needs in different sectors. In **Croatia**, experts and the Agency for Vocational Education and Training and Adult Education have worked together to create 'sectoral profiles' for public employment services and counsellors.

Despite these activities, it is relatively difficult to assess how far the career guidance services in these countries actually make use of skills forecasts when developing guidance and advising jobseekers on possible courses and occupations. In other countries, there is insufficient information to judge. For instance, in **Slovenia**, there are many career guidance services available through schools, the Employment service of Slovenia (ESS), adult-education guidance centres (ISIOs) and VET institutions. However, it is unclear how precisely they use labour market information and skills forecasts. In **Austria** and **Slovakia**, there is not enough information to judge the quality and scope of careers guidance in relation to labour market and skills needs.

In other countries, there are clear signs that the integration of skills intelligence into guidance is limited. For instance, in **Sweden**, there is no central organisation coordinating or governing guidance activities, which implies that skills forecasting mechanisms are not taken into account at a national level. In principle, the local municipal authorities plan their services of guidance and counselling separately, in line with appropriate documents and school curricula. Consequently, it is uncertain to what extent the skill forecasts influences the guidance at local levels. Furthermore, the provision of university-level guidance appears to be decentralised.

Even in countries where services appear to base their advice on skills intelligence, this does not apply to all types of guidance available. For instance, in **Portugal**, Centres for Qualification and Vocational Education (CQEP) of the ANQEP must take into account the SANQ skills forecasts, but this does not apply to Job and Training Centres controlled by the IEFP (PES). Also, the Psychology and Guidance Services (SPO) at secondary schools tend to focus on everyday issues, with less focus on skills forecasts and careers guidance. In **Latvia**, the career guidance system in the secondary and tertiary education remains fragmented, with particular weaknesses in VET institutions. There is little information on 'in-demand' skills and occupations of the future. In **Germany**, the career and vocational guidance provided by the Federal Employment Agency is based on short-term indicators, rather than on long-term skills forecasts.

4.2 Use of skills intelligence

The 2014 synthesis report found that to ensure that the information produced informs the policy making process and steers the educational offer, clear institutional mechanisms need to be in place and cooperation between stakeholders is paramount. The report also found that it is inappropriate to look into whether and how the labour market information produced in a country feeds into the steering of the education supply without an understanding of the national educational context.

This section discusses the actors that use labour market and skills intelligence once it has been transmitted and the way that they use it. To avoid overlap with Section 5 on Steering the Education and Training Provision, this section will focus on the overall approach of countries to using labour market and skills intelligence; whereas Section 5 will present the specific measures and tools that are in place to steer provision.

This section shows that a range of actors use intelligence, including Ministries, education and training authorities, qualifications bodies, schools, further education colleges, universities, VET institutions, employers, worker associations, PES, jobseekers, students and industrial sector bodies. The way that intelligence is used by different actors is also wide-ranging and includes: to inform national or regional strategies and policies, including education and training reform, and economic policy and development strategies; design of courses at schools and further and higher education and training institutions; design of work-based learning and apprenticeship opportunities; design of programmes for the unemployed; development of occupational standards and qualifications; and informing careers advisors as well as students and jobseekers about professions and skills that are in demand.

The following sub-sections identify different approaches countries use to take labour market and skills intelligence into account in shaping their education and training systems. The first sub-section looks at countries where intelligence is used systematically. The second looks at countries where the use of intelligence is more ad hoc. Finally, countries are identified where, according to the fiches, there is very limited use of intelligence altogether. Three notable examples have been presented in boxes.

The **different approaches to the use of skills intelligence are not mutually exclusive** and some countries may take more than one approach. This is because **different parts of the system (e.g. HE or VET) or different regions of a country function in different ways.**

4.2.1 A systematic approach to the use of labour market and skills intelligence

Based on our review of the country fiches, the first approach we have identified is countries that use labour market and skills intelligence **systematically**. This means that they do so as part of a coherent system (at least at some levels and/or for some actors), meaning that there are clear mechanisms in place whereby actors take account of intelligence.

The systematic use of labour market and skills intelligence can be split into four areas:

- To formulate strategies and policies;
- To plan and design education and training provision;
- To inform the provision of guidance (discussed in Section 4.1.4, above);
- To inform the design and delivery of ALMPs.

Examples of countries using labour market intelligence and forecasting will be discussed according to each of these four areas in turn.

- *To formulate strategies and policies*

Relevant ministries and stakeholders use medium- and long-term forecasts to formulate strategies and policies, reforming or consolidating the education and training system. Intelligence feeds into strategic policy-making in Poland and Germany for example.

In **Poland**, results from the BKL project have been used to support changes of recent legislation (e.g. the Act on the employment and labour market, the HE Act). Regional Operational Programmes have taken into account results of the BKL in the strategic allocation of funds to training activities in areas where skills needs had been found (i.e. team work, project work and general competences). In **Germany**, forecasts are carried out on behalf of national and regional German ministries or governments as well as municipal bodies, and these actors use the forecasts for their own strategic planning and to broaden the knowledge base for other actors. The Federal Employment Agency or the *Kultusministerkonferenz* (Standing Conference of the

Ministers of Education and Cultural Affairs) commissions and also uses intelligence reports. The short skill analysis (*Engpassanalyse*) of the Federal Employment Agency impacts on the positive list of immigration that determines immigration promotion into specific occupational groups. Intelligence is also used in parts of the VET system and higher education system. For example, the *Kultusministerkonferenz* is in charge of forecasting first-year student numbers (until 2020)³². This data is also available on the regional level, e.g. for Bavaria³³. According to the Federal Government, this forecast provides planning security for the Federal State and the Länder³⁴.

In other countries, intelligence is used for economic policy and development strategies. This is the case in **the Netherlands** where data is used to inform sectoral plans (see box) and Spain.

Example: the Netherlands

In the Netherlands, some regions have data on the types of vacancies per municipality, as well as the education level of jobseekers per municipality (see e.g. the province of Gelderland's public database on its website: <http://ammgelderland.databank.nl/>). Such data is often combined with economic ambitions and programmes. The province of Gelderland for example wishes to develop its innovative clusters in the Food Valley and Health Valley, as well as support the upcoming energy and environmental protection technology. Such ambitions may be translated into the types of employees that are needed to make such businesses into a success. With this in mind, the province facilitates cooperation between businesses, education institutes, and knowledge centres. It has further developed the regional labour market policy, for instance by actively supporting the Platforms Education / Labour Market (Platforms Onderwijs Arbeidsmarkt). An evaluation showed that such platforms are vital to improve the cooperation between education, employers, and government.

Source: EEPO Country Fiche

In **Spain**, the information derived from the PES, the State Foundation for Training for Employment, and the Observatory of Professions (sectoral reports, occupational trends, etc.) is public and is used by different agents as well as the different Public Administration levels in order to carry out their sectoral plans (tourism, energy, automotive sectors, among others). For instance, around 5 000 education and labour guidance staff regularly receives information and the PES periodically carries out visits to education centres, job fairs, forums, etc.

- *To plan and design education and training provision*

Intelligence and forecasts are used by public and private stakeholders at local, regional and national levels in the areas of VET, higher education and further training. Countries where education and training bodies use intelligence to plan and design provision include Finland, Bulgaria, Cyprus and Sweden.

This is a key feature in **Finland**, where regional governments are compelled to take into account national and regional forecasts in planning their educational provision. A formalised institutional process also ensures that national and local forecasts are used by policy makers to set educational targets and by providers to define their offer (see Box).

Example: Finland

³² http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2005/2005_10_01-Studienanfaenger-Absolventen-2020.pdf

³³ www.km.bayern.de/download/6848_regionalisierte_schueler_und_absolventenprognose_2014.pdf

³⁴ https://www.bundestag.de/presse/hib/2015_02/-/360582

In **Finland**, VATTAGE (steered by the consortium of key ministries) and MITENNA (the Ministry of Education and Culture) are two key forecast tools used to steer education.

Sector-specific long-term forecasts from VATTAGE form the basis for education design. The MITENNA system translates the results of VATTAGE scenarios (sector-specific labour needs) into educational provisions. These provisions are discussed by Councils at different levels (national, regional and local) in order to make adjustments to provisions according to stakeholder views. The educational estimations are then made into proposals for future occupations.

A dialogue process is used to develop proposals for the future educational targets. The working group consists of representatives of the Ministry of Education and Culture (MEC), the National Board of Education (FNBE), education research, provincial government, Regional Councils, the Finnish Association of Local Government and Ministry of Employment and Economy (MEE). Also the main trade unions contribute to the process. This work has two main goals: to promote the availability of skilled labour according to sectorial and occupational structure development, and to ensure vocational education for all young people. The whole process uses and comments on the long-term qualitative information of VATTAGE, and also other sources, both qualitative and quantitative. An advantage of the VATTAGE data is that it sets a common framework for stakeholder cooperation and a sustainable anticipation procedure, which further enhances its reliability and accountability.

The different regions are obliged to take into account national and regional forecasts in planning their future strategies and activities. There are different levels in which the forecasting data is being simultaneously used or supplemented:

- The Centre for Employment, Transport and Environment - the main regional agency responsible for digesting and using different sources of quantitative and qualitative data to support regional and local forecasts and actions.
- The National and sector-specific Education and Training Committees – this is a tripartite body which supports the design of educational provision and every three years prepares proposals for improving the contents of upper secondary VET and higher education. There are 26 Committees, one for each occupational field, at work. In the process of forecasting and making plans, the local level players (municipalities, educational institutions, PES, and others) also have possibilities to influence the educational anticipation and make propositions. Also the government programmes and educational policy are learning from the anticipation cycles.

The long tradition of consensual policy making, and high usage of collective agreement and acceptance of forecasts results have been identified as key elements to ensure that forecasts are widely used.

Source: EEPO Country fiche

In **Bulgaria** under the aforementioned 'Mechanisms for including the results of forecasts of supply and demand of labour in developing and implementing government policies', the approval criteria for national admission plans for VET and HE take into account the information produced by the main forecast instrument to assess whether the VET and HE provisions are in alignment with the labour market needs. In **Cyprus**, data from the Human Resource Development Authority (HRDA) is used by government units to adjust their programmes. In **Sweden**, as a sign of the impact of the skill intelligence information used, the forecasts in 'Trends and forecasts' are often mentioned as a reference material when educational providers decide about new educational programmes. However, as mentioned in the Swedish country fiche, it is worth noting that a possible issue is that actual decisions among educational providers are taken on a regional or local level and there is no guarantee or control that these

decisions take into account all relevant aspects of the skill forecasts that are produced by the national government agencies.

In some cases the intelligence is used mainly in relation to VET. This is the case for example in Latvia, Portugal, Belgium, Denmark, Austria, Germany and Slovenia. The examples of Latvia, Portugal, Austria and Germany are given below

In **Latvia**, the Ministry of Education and Science plans the VET offer, including the number of potential students and types of programmes, based on the proposals from the Council of Sectoral Experts and the Ministry of Economics' medium- and long-term forecasts of labour supply and demand.

In **Portugal**, the aforementioned Anticipation System of Skills Needs (SANQ) has an impact on the design/provision of VET Professional courses (60 % of total). The Directorate-General of School Establishments (DGEstE) (at the Ministry of Education) uses it to elaborate the final and binding map for the training supply network on mainland Portugal, determining the number of classes in each profession and region. Intelligence is used for the determination of the VET-supply network in all Inter-Municipal Communities. The SANQ's margins for the minimum-maximum number of Professional courses by profession and region are legally binding. On the other hand, the SANQ has no direct binding impact on the planning of other types of VET-supply managed by the DGEstE (e.g. VET in secondary schools) and by the national PES (IEFP). Furthermore, the SANQ covers only courses up to qualification level 5 (post-secondary non-university courses), leaving out the largest part of higher education.

In **Austria**, in the apprenticeship sector, the Federal Advisory Board on Apprenticeships, which prepares the content of training regulations, is supported by Research institutions, taking into account results of surveys and research projects. In **Germany**, a similar approach is taken, where the Federal Institute for Vocational Education and Training (BiBB) carries out a great deal of research on occupations. Also in **Germany**, intelligence is used for work-based training programmes. According to the Confederation of German Employers' Associations (BDA), information provided by skills forecasts is used to formulate their positions. This is likewise the case also for other stakeholders.

- *To inform the design and delivery of ALMPs*

Intelligence can be used by PES and private training providers to inform the provision of guidance and training programmes in the context of active labour market programmes. Examples include Denmark, Austria, Latvia, Slovenia and Belgium (Wallonia), each of which is presented in turn below. In **Denmark**, PES make regular use of information on labour market intelligence to support the services for jobseekers. In **Austria**, the training offer by the PES is designed to take into account skills shortages. In **Latvia**, the State Employment Agency uses the short term forecasts for planning training and other activities, assessment of activities and overall operations as well as career consultations. At the Employment service of **Slovenia**, the official records and surveys on current demand (from the Employment Forecast survey) are used for different purposes – from offering information on job vacancies to unemployed persons, preparing and implementing the measures of Active Labour Market Policies to the implementation of Lifelong career orientation for unemployed as well as for pupils and students. In **Belgium (Wallonia)**, the PES uses REM (Répertoire Emploi Métier) intelligence to build a jobseeker profile based on an evaluation of skills for one or several specific occupations. The PES Training service and the PES Council services also develop a group of REM occupations within skills units. All modules, all training certificates and all certificates of validation and screening are referenced to the REM.

4.2.2 An ad hoc approach to the use of skills intelligence

Some countries make use of labour market and skills intelligence but this is **not systematic or is ad hoc**. For example some countries do not have clear mechanisms

in place through which actors take account of intelligence. The examples of Luxembourg, Slovakia and Hungary are presented in turn below.

In **Luxembourg**, it is not known how and to what extent data is used internally in the Permanent Committee of Work and Employment. Results from the FEDIL surveys are largely discussed in public and assessed in the various tripartite negotiations arenas, although it is not possible to evaluate the extent to which data is assessed and contributes to policy-making in terms of skills provision.

In **Slovakia**, there is no uniform mechanism or strategy of transmission and use of available labour market intelligence. A more systemic approach is currently being pursued within current ESF-supported projects. However, information about labour market and skills requirements is used mainly to inform policy makers and education and training providers (including PES) about recent and future labour market imbalances. One of the latest examples is the use of labour market forecasts³⁵ as one of the data sources to support decisions of self-governing units (founders of secondary schools) in regulating entry into first grades at secondary schools. Also, skills forecasts³⁶ are since 2014 used by the Ministry of Education, Science, Research and Sport to determine, in cooperation with other stakeholders, study and training programmes with an insufficient number of graduates and study/training programmes with a surplus of graduates with respect to labour market needs.

In **Hungary**, in the case of higher education, the Ministry uses data from the higher education career tracking system to support decisions. However, new forecast data does not have a direct influence on setting capacities for higher education institutions. Overall, the intelligence is available to all users within the government and a large part of the information is also accessible to the general public. These are used by some institutions only and coordination and sharing of information among governmental institutions is weak, meaning that not all information is likely to be available to the full range of actors. This is especially the case where there are differences in governance systems. For example vocational secondary and higher education differ in the way they acquire and use information on skills. Within vocational education, there are small differences between school-based and other training due to centralised production and use of information.

Where the use of skills intelligence is **ad hoc**, the common characteristic is that (for part of the system at least) there is no mechanism to ensure that intelligence is used. How the intelligence is used depends on the motivation of final users. This type of use follows more the logic of the 'market model', i.e. the market actors are free to use the information provided to them. It can be systematic, but there are no mechanisms to ensure it takes place. In these cases it is not certain that intelligence is used or how it is used. Examples of countries where the use of skills intelligence is ad hoc include Italy, Germany, the United Kingdom, the Netherlands, Belgium (Brussels), the Czech Republic, Austria and Poland. These examples are presented in turn below.

In **Italy**, there are no formal mechanisms to ensure national policies take into account the results of forecasts. However, universities which are part of the Almalaurea consortium are likely to use the information received to shape their educational offer, as described in the box below.

Example: Italy

In **Italy**, there are no formal mechanisms to ensure that the policy making process at

³⁵ "Qualified estimates of future labour market needs" prepared by Trexima agency within the ESF-funded project *Forecasting labour market developments*.

³⁶ Analyses and forecasts of labour market developments (COLSAF, Trexima), graduate unemployment statistics, regional education strategies, sectoral VET strategies, employer surveys.

national level takes into account the information produced by forecasts. At the regional level mechanisms to use the information produced and inform the policy making process could exist, but were not identified for the country fiche.

However, universities which are part of the Almalaurea consortium are likely to use the information received to shape their educational offer.

Almalaurea is the main labour market intermediary for young graduates in the Italian context; it is an interuniversity consortium of 64 universities and its activities cover 80% of Italian graduates. The consortium offers short- and medium-term forecasts on education-to-work transition to universities and provides a service of matching to businesses through a graduates and businesses' database. The forecasting instrument includes a panel survey of young graduates which collects information immediately after graduation; one, three and five years after graduation. Providing a matching services by those that produce the forecast, could be identified as a good practice since it ensures the most effective use of the forecasts as well as an informed matching service.

The rationale behind the implementation of the Almalaurea observatory relates to the need to provide timely data to universities on graduates and their employment conditions. Over the years the consortium built a database of young graduates and offers matching services to businesses and employers' organisations. Additionally, the consortium offers career guidance services to young people before enrolling to university and after graduation.

Source: EEPO Country Fiche

Likewise in **Germany**, in general, it is up to the interested stakeholders to provide themselves with information on skills demand and skills supply. That means that the end user is mostly on his/her own in interpreting the information produced. This requires a sound knowledge about the German labour market and research methodology. This is even more the case when interpreting information provided by interest groups, e.g. stakeholder associations, and for studies where the research methodology is not explained in detail. The different forecasting approaches and models could, therefore, be better connected and a platform for a discussion of different forecast results would allow easier interpretation. In the **United Kingdom** also, there is no compulsion on organisations to use the information. It is up to the individual organisations what information they use and how they use it and this will inevitably vary.

Employer associations are one type of actor that may be interested in intelligence and may decide to use it. In the **Netherlands**, there are sector-level organisations, such as employers' associations, that use data to report trends to their members so as to inform them where labour market shortages or surpluses might occur. The more active employers' association also host workshops where views, information and best practices are shared.

Jobseekers and advisors may also decide if and how they use the information. In **Belgium (Brussels)**, the PES has made a website dedicated to providing information about the Brussels labour market and through which it is possible to search for jobs by selecting only the 'critical occupations' or the 'occupations in high demand'. This list of 'demand occupations' is actively used both by PES and by training operators, public authorities and citizens. In the **Czech Republic**, the Information System on the Situation of Graduates in the Labour Market (ISA) helps to inform student choices.

In other cases, education and training providers are the target audience but there is no guarantee that they will use the intelligence. In **Austria**, the results of skills forecasting are published in media and the research network but it is not clear how they are used to adapt education and training systems. The steering mechanisms to adapt education and training vary by educational sector. In HE for instance, an evidence-based, systematic process of considering skills forecasts is not in place. In

Poland, the BKL informs the so called 'ordered speciality' i.e. courses entirely subsidised by the Ministry of Science and Higher Education in subject areas where shortages have been identified. However, the use of the BKL results to steer the HE offer is patchy, some universities and / or individual departments use research and analyses to shape their offer (e.g. courses in applied linguistics have been introduced on the basis of identified gaps in the labour market).

4.2.3 Limited use of skills intelligence

In some countries there is limited or no use of intelligence, perhaps because of lack of institutional capacity. For example, in **Greece**, there is little evidence that since the start of the crisis, employment and education planners have taken on board the findings of the various forecasting studies. The main reason for this is probably the economic crisis and the record level unemployment. With vacancies diminishing, the discussion on labour shortages and skills gaps retracted to the background. It is also possible that the issue of skills gaps was not taken in account by educational and training planners, because the relevant information was not collected, analysed and disseminated by a single agency on a more or less, permanent basis. This situation is expected to change in the coming years. In the **Czech Republic**, there is no reliable systematic effort to forecast skill needs, as mentioned above. Hence, there are essentially no usable skill forecasts to be transmitted and employed in policy making decisions. A national system is to be developed, its users are to be informed and trained, and its effects are to be evaluated.

5 Steering the education and training provision

5.1 Policies and Strategies

This section discusses the policies and strategies used to adapt the supply of the educational offer in HE and VET to the demand of skills in the labour market, highlighting the main mechanisms to ensure alignment between the skills demand and supply. It is organised by the following key themes.

- Section 5.1.1 looks at countries where steering occurs by curriculum development and support for specific subjects and courses.
- Section 5.1.2 highlights the issue of approval/accreditation and the role this plays in steering provision.
- Section 5.1.3 identifies countries where work-based learning and apprenticeships are an important feature in aligning demand and supply of skills.
- Section 5.1.4 discusses better links between employers and educational institutions.
- Section 5.1.5 notes the role of qualifications frameworks and systems and / or occupation lists or profiles as ways of steering provision.
- Section 5.1.6 looks at the role of PES programmes and ALMPs.
- Section 5.1.7 discusses the use of career guidance as a strategy for steering jobseekers and students towards in-demand professions.

It is important to note that some of the themes only apply to particular sub-sectors of the education and training system or to particular regions within the country concerned. For example, in **Germany** the dual vocational training system is highly regulated and has strong involvement of key partners but the higher education system is characterised by more autonomy at the regional level and the level of institutions. In Denmark and Austria, curricula are set at central level but there is autonomy to take account of regional economic requirements

5.1.1 Curriculum development and support for selected subjects and courses

Several countries have seen curriculum development / reform as a means of steering education and training provision, including Cyprus, the Netherlands, Estonia, Lithuania, Poland and Austria. Most of these reforms seem to be taking place in relation to VET or work-based learning routes. Some examples are presented in turn below (Estonia, Poland and Lithuania).

When the **Estonian** OSKA system is set up, the plan is to reorganise the curricula for post-basic and post-secondary studies. This process will be managed jointly by the state and sector skills councils. As a result it is expected that educational institutions will develop their curricula taking into account the needs of the labour market as well as the professional qualification system; and relevant stakeholders will be involved in curricula development.

In **Poland**, in regard to VET, implemented since September 2012, the core curriculum for vocational education is aimed at improving the link between vocational education and the training offer and labour market needs. It has been developed as a result of the project implemented by the National Centre for Supporting Vocational and Continuing Education (KOWEŻiU) 'Improvement of core curricula as the key for modernisation of vocational education'. Under this project, broad consultations were carried out with representatives of employers' organisations, representatives of the world of science, experts, employers' representatives of the Central Examination Board and regional examination boards, and vocational school teachers. The core curriculum defines the standards of both general and vocational education. This is a mandatory set of learning objectives and content described in the form of the expected learning outcomes: knowledge, professional skills and personal and social competencies necessary for occupations or qualifications.

Lithuania has seen the development of professional standards and upgrades to VET programmes by converting them into modular programmes. In order to upgrade VET contents, a large-scale national project has been launched for the development of *qualifications and creation of a modular vocational training system* (2010-15). The main project deliverables are 10 professional standards and 60 modular vocational training programmes. Professional standards are drawn up for certain economic sectors by describing the most important sector-specific qualification levels. Development of the standards involves qualitative research (analysis of the sector's field of research, analysis of documents, company-level analysis of professional activities). The professional standards will be used to design VET contents and to assess whether person's learning outcomes satisfy the requirements set for a certain qualification.

In other countries the emphasis is more upon supporting specific subjects or courses. This is the case in Germany, Latvia, Lithuania, Slovenia, Poland (discussed in Section 5.2.2), Slovakia, and Belgium (Brussels and Wallonia).

In **Germany**, the tertiary education pact 2020 (*Hochschulpakt*) established in December 2014 addressed shortages of skilled workers and increasing tertiary training participation. One focus point of the *Hochschulpakt* 2020 is the promotion of MINT (mathematics, engineering, natural science, technical occupations) university courses, e.g. by reducing the high share of university dropouts in this field. Also in Germany, in regard to vocational training within the dual training system, several sectoral programmes are aimed at increasing the labour supply in occupations that are threatened by skilled workers shortage, which also includes the promotion of MINT-Occupations.

In **Latvia**, each year, free study places are offered in particular higher education programmes, in order to influence students' choices towards the programmes with the best labour market prospects. The Ministry of Education's proposals for free study places are formed on the basis of labour market forecasts (from Ministry of Economics), consultation with HEIs, social partners (for example, Council of Sectoral

Experts). These proposals are then discussed/finalised by the Study Direction Advisory Council (set up by Ministry of Education and Science), following negotiation with HEIs and taking into account employer views. In **Lithuania** too, target funds are allocated in the HE sector for professions that are necessary for the state but not popular among entrants. Courses for which target funding is allocated receive a certain, guaranteed number of student 'baskets' (state-funded studies). To receive the target funding, higher education institutions submit applications to the Ministry of Education and Science with a justification of the long-term need for graduates of certain study programmes (courses). Likewise in **Slovenia** the scholarship policy (2015 – 2019) defines shortage occupations eligible for scholarships (EUR 100 monthly) - the purpose of the scholarships is to promote youth education in those occupations where a gap between the current and future supply and demand is detected.

In **Slovakia**, one of the recent initiatives to introduce a more systemic approach in linking HE to labour market needs is the ESF-funded national project 'Universities as engines of the development of a knowledge society' (2013-2015). The project aims to assess the effectiveness of study programmes with regard to labour market needs. Some of the outputs have already been published, including a forecast of supply and demand for high skilled labour until 2023 and rankings of cooperation between HE institutions and businesses. Also, in the secondary VET system, school founders (self-governing regions) are required to prepare so-called school performance plans, which should annually specify numbers of classes to be opened for first grades in individual study and training programmes. The decisions are based on a set of indicators including target figures provided by employers, graduate unemployment rates monitored by PES and qualified estimates of future labour market needs (currently produced by Trexima agency).

In **Belgium (Brussels and Wallonia)**, Advanced Technology Centres in secondary schools are developed in priority for promising professional sectors in order to provide training offers to address skills shortages.

5.1.2 Approval/accreditation of providers and/or courses

Many countries have policies and strategies that involve systems of approval or accreditation of education and training providers and/or courses. These can be used to ensure that provision is focused on the needs of the labour market.

This is the case in regard to upper secondary school in **Ireland**. The Post Leaving Certificate (PLC) represents the cornerstone of Further Education and Training (FET) in Ireland. PLC providers must provide a labour market justification for all new courses before they can be approved (National Development Plan 2007-2013). Among other things, providers must demonstrate how the course aligns with Government policy and addresses skills gaps at either the local or national level.

It is the case in relation to VET in Sweden, Spain, Poland, Portugal and Denmark. For example in **Sweden**, in non-academic tertiary VET (*Yrkeshögskolan*), local or regional educational providers draw up educational plans and submit an application to the Swedish National Agency for Higher Vocational Education (*Myndigheten för yrkeshögskolan*, NAHVE). The application includes information about the organisations that have actively participated in developing the education and educational plans. The NAHVE then analyses the labour market needs for competence in different industries and regions. This information, together with the educational providers' application and education plan, is used as a basis for assessing which programmes will be part of higher vocational education. The skills demands of employers and industries are thus used as a base for determining which study programmes are selected.

Another example can be found in **Poland**, where the project 'Modernisation of vocational training in Malopolska', involved boards of 33 vocational training providers with the aim of supporting the development of programmes through industry-focused consulting teams. In Poland employment councils approve the occupations included in the VET offer and are responsible for ensuring relevance of the offer to the local labour

market needs. The final decision on which occupations are included in the offer of a VET school is made by the school principal in agreement with the local authorities (*poviat government*). To ensure adequacy to the labour market needs, the principals need the approval of the local (*poviat*) and / or regional (*voivodeship*) employment councils which are responsible for ensuring relevance with the regional labour market needs. The employment councils are advisory bodies to local or regional labour offices.

Mechanisms can be found relating to the HE sector in Denmark (described below), France, Germany, Italy, Lithuania and Austria (described below).

Since 2007, the **Danish** Accreditation Institute has accredited both educational institutions and individual educational programmes in HE. The accreditation of programmes includes the assessment of processes and results. Thus the institutes are required to demonstrate that the design of the programme was based on a sound analysis of: the labour market needs, whether an additional programme was really needed, analysis of similar programmes to avoid overlaps and demonstrate employment rates, and finally demonstrate the involvement of the Advisory Board in the development of the programme.

In **Austria**, in the Universities of Applied Sciences sector, needs and acceptance studies constitute an integral and important part of the accreditation process for new study programmes. In the evaluation process consultants (including a person with relevant vocational experience) examine amongst others the economic needs and acceptance, which has to be detailed in the application, as well as the developed training and qualification profile. In other universities, the introduction of new studies and curricula is also not specifically connected to the demand of skills in the labour market.

5.1.3 Promotion of work-based learning and apprenticeships

Several countries are steering education and training to meet the needs of the labour market through their systems of work-based learning and apprenticeships. These include Germany, where dual vocational training is the central VET model (described below), Luxembourg, Slovakia (where a dual vocational training system is being set up, described below), Estonia and Romania (described below). The challenge is to motivate and incentivise employers to offer placements and apprenticeship places – the use of incentives to do so is discussed further in Section 5.2.2.

In **Germany**, in order to increase the supply of apprenticeship training places, the Alliance for training and further training (*Allianz für Aus- und Weiterbildung*) was implemented. Stakeholders involved are employers' organisations, employees' organisations, *Länder* representatives, and the Federal Government. The main goal of the initiative is to match vocational training and further training demand and supply. As the apprenticeship places in the dual vocational training systems depend on the will of employers to offer these opportunities, this type of Alliance is a key steering mechanism. In **Slovakia**, a recent reform of VET legislation and the introduction (as of school year 2015/2016) of dual education as a system where students are trained for the performance of a profession directly in an employer's workplace and take theoretical lessons in VET schools, should help to address existing skills mismatches on a larger scale. In **Romania**, apprenticeships have been recently strengthened as employers engaging in it now have the possibility of complementing subsidies from national funds with incentives from ESF co-financed projects. Since its inclusion as a part of the Youth Guarantee initiative, apprenticeship has received an important stimulus with the number of contracts concluded strongly on the rise.

5.1.4 Creating better links between employers and educational institutions

One area of importance in improving the relationship between and the relevance of the educational offer and the needs of the labour market is increasing the

communication between employers and educational institutions.³⁷ There are different ways that cooperation between employers and institutions takes place and can be seen in various initiatives in Denmark, Poland, Bulgaria, the United Kingdom, and France.

An important aspect in the accreditation process for an educational programme in **Denmark** are Advisory Boards. Improvement in the links between the education offer and the labour market is incentivised via the need to demonstrate in applying to have an educational programme accredited, that Advisory Boards have been involved in its development. Advisory Boards consist of employer representatives who will for instance respond to whether graduates have the necessary skills. These boards have been a legal requirement since 2007 and are aimed at creating a link between universities and businesses as well as ensuring alignments between education and labour market needs³⁸; they can act at an institutional, faculty or institute level. The framework for Advisory Boards and their specific function are quite wide, and can be adjusted to the respective educational institutions and programmes³⁹.

In **Bulgaria**, an example of HE cooperation with employers is the project 'Business for education' (also with reference to the VET system). Firms collaborate with selected universities, both at national and local level, on the basis of ad-hoc contracts, agreements, individual requests from universities and students. Forms of cooperation include:

- Practice and internships programmes, which enables students to gain experience and develop skills;
- Provision of materials for the implementation of theses;
- Scholarship programme and competitions for the best theses;
- Training and mentoring programmes for talented graduates in selected fields of education.
- Lectures and seminars conducted at universities/colleges on practical business issues/knowledge.

In **Poland**, VET providers were not compelled to monitor the labour market and align their offer to employers' needs and so the VET offer was not always aligned with the needs of the labour market, specifically the local labour market⁴⁰. Now, however, measures have been implemented at local level, to ensure better alignment. For example, the *Modernization of initial vocational education in Malopolska* (implemented under the Human Capital Operational Programme, Action 9.2.), was implemented on the basis of an action strategy providing comprehensive support to vocational education. The project involved boards of 33 vocational public and private schools, as well as vocational training centres. The main objectives of the project were: to improve the quality of the vocational training offer, strengthen the links between the educational offer and the labour market needs and to improve public perception of vocational education. Within this project students participated in activities aimed at strengthening competences in demand (e.g. mathematics and natural sciences, the use of ICT, foreign languages etc.); specialised professional courses and internships.

³⁷ Hays Global Skills Index 2012. Internet: <http://www.hays-index.com/archive/>

³⁸ Internet: <http://akkr.dk/wp-content/uploads/akkr/Universitetsuddannelser-udfordret-p%C3%A5-relevansen.pdf>

³⁹ Internet:

http://dkuni.dk/Politik/~media/Files/Publikationer/Aftagerpaneler_endelig.ashx

⁴⁰ Jeruszka U. (red.), Drogosz-Zabłocka E., Gruza M., Kabaj M., Kwiatkowski S. M., Mirosław J., Nowosad J., Stępnikowski A., Symela K., *Unowocześnienie metod i form kształcenia zawodowego w Polsce*, Instytut Pracy i Spraw Socjalnych, Warszawa 2012

Schools participating in this project implemented a new system to support the development of programmes through the creation of industry-focused consulting teams. These teams included representatives of employers' organisations, representatives of vocational schools, headmasters and teachers of training providers. The aim of the industry consulting teams was to support the cooperation between enterprises and the vocational school. The project was implemented in partnership with the bodies leading the vocational schools, which are the counties (district) of Malopolska.

In the **United Kingdom**, at a local level, any planning of vocational education and training comes within the remit of the Local Enterprise Partnerships (LEP)⁴¹. Their remit in addressing skills needs in their operational areas includes the development of labour market information to identify skills gaps and shortages. Local providers (particularly the FE colleges) would consult LEPs when developing their plans for future provision so that funding through the Skills Funding Agency (SFA)⁴² was more aligned with local needs. Furthermore, EUR 69 million (GBP 50 million) per annum was set aside for setting up a Growth and Innovation Fund (GIF)⁴³ to encourage employer-led initiatives within sectors.

The 2007 Law on Universities in **France** also introduced the participation of two representatives of the local stakeholders in the governing body of each university (conseil d'administration).

Other measures exist to ensure relevancy in the educational offer and the needs of the labour market, for example, through improving learning outcome descriptions (France), or monitoring and evaluation boards and systems (Denmark).

In recent years, **France's** tertiary education system has witnessed a move to close the gap between HE and the world of work. Specifically, the 2007 Loi relative aux libertés et responsabilités des universités requires universities to improve their learning outcome descriptions (both for employers and students). These outcome descriptions now form the basis on which higher education qualifications are approved by the CNCP, a process which is renewed every four years. The use of a learning outcomes-based perspective has served to make universities aware of the importance of designing their HE qualifications in line with labour market needs and to reflect on the (transferrable and sector specific) skills that young people are acquiring by obtaining a particular qualification. This is undoubtedly a step in the right direction in closing the skills gap between young persons' qualifications and the competences demanded by employers. However, further measures could be taken to ensure the mandatory use of skill projections analysis (which offers a view of possible skill gaps to come) in the design of HE qualifications.

Monitoring and evaluating relevance in HE is an important tool used by the **Danish** government to encourage improvements in the links between the education offer and the labour market. To monitor relevance of educational programmes in HE the Ministry of Higher Education and Science publishes statistics and reports on graduates' employment⁴⁴. The Economic Council of the Labour Movement (ECLM) produces statistics on unemployment rates of graduates and their labour market status six and twelve months after graduation. The Agency for Higher Education (under the Ministry

⁴¹ A list and map of the LEPs is available at: Internet: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/229400/121115_Enterprise_Zones_map.pdf

⁴² The SFA is an executive agency of BIS and supports over 1,000 colleges, private training organisations and employers with GBP 4bn of funding each year in England.

⁴³ The GIF has been operational since 2011 and further information is available at: Internet: <https://www.gov.uk/government/publications/growth-and-innovation-fund>

⁴⁴ Internet: <http://ufm.dk/uddannelse-og-institutioner/statistik-og-analyser/faerdiguddannede>

for Higher Education and Science) monitors and enters dialogues with Danish universities in general to support improvements. Monitoring also ensures that universities are aware of societal challenges with regard to education⁴⁵. The Ministry of Higher Education and Science has commissioned an independent evaluation of the cooperation between HE and businesses. As part of the evaluation the online public debate 'Knowledge Partnerships under scrutiny' (*Vidensamarbejde under lup*) invites people to make their comments and contributions via the Ministry's website; these will act as inspiration for the evaluation⁴⁶.

5.1.5 Qualifications frameworks and systems / Occupation lists or profiles

Education and training provision is partly steered by the use of qualifications frameworks, registers and systems and / or occupation lists or profiles. These are a means of standardising qualifications and moving towards systems based on learning outcomes, which can be linked to the skills required to fulfil different occupations. Some examples are given here: Hungary, Poland, Spain and Croatia.

In **Hungary**, the education and training system is based on the National Qualifications Register, a list and definition of professions and all associated requirements to access them. Until 2015, this and the required number of VET graduates in particular jobs compiled by the Development Committees served as a basis for alignment with labour market needs for vocational schools. Research has shown that these schools largely failed to follow such directions, particularly if these indicated the downscaling of certain programmes.

In **Poland**, VET qualifications are shaped by the Classification of Occupations for Vocational Education (COVE) - the COVE includes a list of 200 occupations and VET schools are compelled to provide qualifications within this given frame of occupations. Each occupation can have more than one qualification covering different sets of learning outcomes (e.g. more than one qualification is needed to complete the qualification path for the given occupation). In 2012 the COVE was updated to ensure coherence with the Polish Classification of Occupations and Specialisations (COZ). The COZ was developed on the basis of ISCO-88 and is the coding system used by the Central Statistical Office and the PES. The coherence between the COVE and the COZ will ensure consistency between the VET qualifications and the occupations required by the labour market.

In **Spain**, the National System for Qualifications and VET (*Sistema Nacional de Cualificaciones y Formación Profesional - SNCFP*) is the mechanism created in 2002 to promote the integration and coordination of the VET offer as well as to evaluate and accredit the skills of the professional qualifications. A qualification is defined, in this context, as a set of skills which can be acquired through VET as well as through work experience. The SNCFP is aimed, among other objectives, at adapting the professional training to the qualification demands of businesses. In this framework, the Spanish National Catalogue of Professional Qualifications (CNCP) is the instrument of the SNCFP which articulates the professional qualifications according to the most appropriate skills for the development of an occupation. The INCUAL is responsible for defining, updating and adapting the CNCP to the evolution of the labour market. Qualifications are grouped in 26 professional families and five levels according to the professional skills required for each economic activity. The CNCP constitutes the basis upon which the training offer is developed, aiming to obtain the VET Diplomas and the Certificates of Professional Standards, among others.

⁴⁵ Internet: <http://ufm.dk/uddannelse-og-institutioner/videregaende-uddannelse/universiteter/styring-og-ansvar/tilsyn>

⁴⁶ Internet: <http://ufm.dk/forskning-og-innovation/samspil-mellem-viden-og-innovation/debat-vidensamarbejde-underlup/disclaimer-for-debat-vidensamarbejde-under-lup>

In regards to the alignment of HE and VET with labour market demand, the **Croatian Qualifications Framework (CROQF)** represents an essential reform instrument for regulating the system of qualifications at all levels in the Republic of Croatia through qualifications standards based on learning outcomes and following the needs of the labour market, individuals and the society. Under the CROQF, responsible institutions will monitor and validate the impact of the Framework and respective qualifications, and accordingly give recommendations on how to better adjust education and labour market needs; establish and develop a system of information collection about current and future labour market needs and required competences; collect data about changes in competences required for occupations and propose developments of qualifications standards and occupational standards according to labour market needs; and adopt guidelines for the development of regional labour markets.

5.1.6 PES programmes and active labour market policies (ALMPs)

Whilst the focus of this section has been on the VET and HE sectors, it is also important to note that training for the unemployed and ALMPs play a vital role in the skills governance of a country, by helping to match labour demand and supply. Forecasts and intelligence on the skills which are in demand on the labour market can therefore be used to inform the provision of training by the PES and / or for the unemployed. Two examples of training programmes for the unemployed which are informed by labour market intelligence are given here (Austria and Ireland). The role of incentives to increase training for the unemployed is also discussed below in Section 5.2.1.

In **Austria**, programmes of the PES always take into account actual skills shortages in the labour market more or less explicitly. In 2009, the Management Board of Austria's PES established a Standing Committee on New Skills, which consists of representatives of the PES, social partners, business representatives, training institutions and VET experts. Working groups in specific sectors (e.g. construction, electronics, energy and environment technologies etc.) were tasked with drawing up curricula for target-oriented training programmes, based on the Committee's knowledge of short and medium term skill requirements, taking into account underlying trends in the labour market, such as greening, globalisation and new technologies. Since 2011, these curricula were considered in the training programme 'New Skills'. In 2013 the programme 'professionals/skilled workers scholarships' (*Fachkräftestipendium*) has been introduced to reduce skills bottlenecks. It supports the training of low and medium skilled workers and jobseekers in occupations with labour demand. Also, the 'Skilled workers intensive training' (*Facharbeiterinnen-Intensivausbildung*, FIA) programme addresses registered jobseekers and gives them the opportunity to complete apprenticeship training in a shortened time. A specific objective of FIA is to qualify women for 'future jobs' (e.g. crafts and engineering, health).

In **Ireland**, skills demand informs programmes offered to the unemployed. The Momentum programme, which offers training to the long-term unemployed, appears to be closely related to labour market demand. It is clear that labour market intelligence and occupational forecasts are likely to have represented important inputs in the identification of growth sectors. With respect to the HE sector, the Springboard programme, also for the unemployed, is specifically orientated towards areas of perceived high labour demand based on existing labour market intelligence. The designated Springboard areas are established on the basis of advice from the EGFSN. The occupational forecast data and other labour market intelligence form substantial inputs into the EGFGN's decision making processes. It should be noted that Springboard represents a relatively small share of total HE courses and there is little evidence to show that the composition of the vast majority of HE, non-Springboard, provision is heavily influenced by labour market intelligence.

5.1.7 Career guidance

Career guidance can be a means of influencing the take-up of education and training. As explained in the 2014 Report, vocational and career guidance can improve the matching of skills supply and demand by reducing distortions linked to the asymmetry of information and increasing transparency within the system (e.g. by providing accurate information about occupations and educational providers, targeting occupations that are in demand etc.). Some examples of developments related to career guidance are listed below:

- In **Denmark** and **Finland** career guidance services are a key element of educational and labour market policies to ensure that students and unemployed people can have adequate information to make informed decisions.
- In **France** in 2008 the national government launched 'Active Guidance' establishing a career information and guidance service in all universities to provide specialised counselling to future students.
- In **Belgium**, on the basis of identified skills shortages, PES give support to different associations that help to orientate students. In Wallonia and Brussels, data published each year is mainly used by different organisations such as PMS and Siep, which are Student Guidance Centres. Both organisations provide information concerning studies and professions and therefore can guide students towards job shortages or 'jobs for the future'.
- In **Malta**, while careers practitioners are not supposed to channel students into specific educational or vocational routes, the government tries to steer young students towards specific subjects. The country fiche suggests that there needs to be a more cohesive approach to guidance, aided by better labour market and skills intelligence, so that high quality services are consistently provided to students.
- In the **Netherlands**, at ISCED levels 3 and 4, schools use information brochures to inform students about the labour market and apprenticeships prospects of the study they are about to choose, as well as the evaluation of the study by the education inspectorate, the inflow probability into higher education and the average salary of a school-leaver. Moreover the school tries to match labour market needs to also train pupils in work attitude, applying for jobs and it makes such training part of the curriculum. A best practice is the scheme *MBO solliciteert* (MBO applies for jobs) which especially has helped students in technology education, as having direct contact with employers increases the chances of job inflow.
- In **Sweden**, when it comes to specific measures aimed at steering career and vocational guidance towards specific occupations or training, the PES is a key player with their vocational and occupational guidance services, and job brokerage for unemployed. A central characteristic in the dissemination of information in Sweden is also the self-service tools for matching purposes via Internet facilities. In particular, the online forecast system (time horizon 10 years) gives valuable information to jobseekers regarding the actual and expected demand situation in more than 200 occupations in the various Swedish regions (*Yrkeskompassen*).

5.2 Financial and non-financial incentives

Governments have introduced financial, non-financial and other incentive measures in an effort to steer education and training provision in their countries. In this Section, examples of incentives illustrated in the country articles are categorised across the following types of measures as follows;

- Incentives to increase training for the unemployed (Section 5.2.1);

- Incentives to increase training provision by employers (Section 5.2.2);
- Incentives for educational institutions to increase provision of training in skill shortages areas, whilst assuring quality of the educational offer (Section 5.2.3);
- Financial incentives for students to enrol in specific courses (Section 5.2.4);
- Incentives to increase labour mobility and flexibility (Section 5.2.5).

5.2.1 Incentives to increase training for the unemployed

A number of countries, including Ireland, Belgium and Spain, have put in place fiscal or financial incentives to increase training provision for the unemployed. Some of the incentives cited in the country articles also try to influence training provision in specific skill shortage areas.

Different types of incentives in the provision of training for the unemployed are available in **Ireland** and **Belgium**. The Irish government's Momentum Programme (mentioned above in Section 5.1.6) provides free training courses for the unemployed, allowing trainees to retain their social welfare entitlements while undergoing training. The programme is supported through the Labour Market Training and Education Fund (LMTEF) and is now administered by SOLAS. The initiative is funded by the European Social Fund/European Structural Funds Programme 2014-2020. Momentum offers 6,500 training places to long-term unemployed claimants in areas that have been identified as having growth potential. Similarly, in **Belgium** the National Employment Office (NEO) exempts the unemployed from the requirement to seek employment in cases where they resume studies in areas associated with a labour shortage. In both cases, the needs of the labour market are linked to the training provided. In the **Irish** case, for the *Momentum* programme there is evidence of some usage of labour market intelligence in FET planning although this is not documented. Current growth areas for Momentum are ICT, digital media, healthcare and social services, the green economy, food processing and sales and marketing. At the same time in **Belgium** the NEO grants are linked to training in areas with a labour shortage. In **Spain** also, forecasting activities are used to elaborate the training calls which the Ministry of Employment implements through the Public Employment Service.

5.2.2 Incentives for employers to increase training

Measures in the form of subsidies, tax incentives and others are being used to increase training provision by employers. Some incentives in place have been introduced to encourage employers to increase training provision per se (e.g. Romania, Austria, Luxembourg), or a particular training approach (i.e. apprenticeships, internships, work experience) e.g. Austria, Malta. Some incentives exist for training provision in specific areas of skills shortage (e.g. Bulgaria). In Romania, in order to ensure the quality of provision in some measures mentioned, training provision must be certified.

Subsidies are given to employers for example in **Romania, Austria** and **Luxembourg** as a way of incentivising training provision. In **Romania**, under the Apprenticeship Act (law no.279/2005 with subsequent amendments) employers receive a subsidy calculated using the benchmark of the social reference indicator for each apprentice with which they conclude an apprenticeship contract. Subsidies may be topped up with ESF funding provided that the company engaging in the apprenticeship is a beneficiary or partner in such a scheme. The subsidy is provided for the entire period of the apprenticeship and since 2013, employers must provide vocational training to apprentices via a certified training provider so that the apprentice receives a nationally recognised qualification. Subsidies are also provided for employers engaging in the provision of professional stage training (according to law no.335/2014) for graduates of higher education, for training for the unemployed and for young people from low-income backgrounds to achieve the baccalaureate (if they have already acquired a qualification via the VET route).

In **Austria**, due to a lack of employers willing to train young people as apprentices, public subsidies are being used to incentivise this educational form, although specific skills needs are not explicitly taken into account. Subsidies to individual companies in support of apprenticeship training are processed by the Austrian Economic Chamber.

Both employers giving access to training and students engaging in the training are provided with financial support by the government in **Luxembourg** under an apprenticeship contract (*contrat d'apprentissage*) or an internship contract (*contrat de stage*). The employer is entitled to be reimbursed for 27 % of the apprenticeship (40 % if an apprentice heads for a *Certificat de capacité professionnelle* – Professional Capacity Certificate (CCP diploma), as well as the total reimbursement of social security contributions. Successful apprentices are given an apprenticeship award of both EUR 130 and EUR 150 per month of apprenticeship leading to a CATP (*Certificat d'Aptitude Technique et Professionnelle*), DAP (*Diplôme d'aptitude professionnelle*) or a DT (*Diplôme de technicien* – Technician Diploma).

In the **Czech Republic**, there are several incentive mechanisms in place to support the cooperation of employers and apprenticeship and vocational secondary programmes. A recent amendment to the School Act enhances the possibility for schools to finance instructors from companies, while ESF funding is used within ALMP, to support internships in companies for recent school graduates from apprenticeship programmes. In **Luxembourg**, the National Institute for the Development of Continuing Vocational Training (INFPC) co-finance the overall training plan offering a strong incentive to employers to provide training to employees. The INFPC co-finance expenditures related, for example, to salaries or daily allowances related to training: as available 2012 data underlines⁴⁷, the number of training by employees has increased since 2011 in all the business sectors, although that additional data is not disclosed.

Tax incentives are another way of incentivising the provision of training by employers, examples of which can be found in **Malta** and **Slovakia**. As a result of the introduction of taxation incentives in **Malta** in 2014, entrepreneurs are being encouraged to offer apprenticeship placements against a tax deduction of EUR 1 200 per placement (Ministry for Finance, 2015, Annex 2). In **Slovakia** employers offering practical training in their workplace shall be entitled to lower their income tax base by EUR 3 200 or EUR 1 600 per student and year, providing practical training was offered for more than 400 hours and/or 200 hours, respectively. In addition, companies may deduct the costs of material and financial provisions for students. Financing of VET was until recently detached from labour market development.

Some incentives may be linked to specific subjects/courses where shortages have been identified. Initiatives exist in **Bulgaria** whereby employers provide scholarships in particular subjects – e.g. architecture and engineering.

5.2.3 Incentives for educational institutions to increase provision of training in skill shortages areas

In some instances governments attempt to increase the provision of VET/HE training in educational institutions in areas of skills shortage through the use of fiscal incentives like subsidies to universities (**Poland, Estonia, Germany**). Other ways to influence training provision and the educational offer via fiscal measures is by linking performance of educational institutions to funding (**Estonia, Denmark, Ireland**).

The **Polish** labour market for example is characterised by a shortage of workers with technical skills (e.g. STEM subjects) coupled with an increasing demand for highly skilled workers. Within this context the Ministry of Science and Higher Education has taken measures to raise the popularity of subjects in areas of shortage (such as

⁴⁷Internet: <http://www.lifelong-learning.lu/View/Document-Etudes/formabref-acces-juin-2014/en>

mathematics, natural sciences and engineering) and has taken specific measures to steer the educational offer. One example of national mechanisms to steer the HE education offer and demand is the so called 'ordered specialty' (or 'contracted programmes'). The aim of this concept of contracted education is improving the attractiveness of university-level engineering, mathematical and natural science courses. The Ministry of Science and HE increases the educational offer and demand for specific subjects by subsidising universities which implement these courses and providing scholarships for students who choose these subjects. To enter the programme, universities have submitted projects under the Operational Programme Human Capital (OP HC, Sub-4.1.2). Projects funded include training and internships, cooperation with employers, motivational scholarships for the best students. One of the most significant outcomes of the programme was the development of various forms of cooperation between universities and employers. As a result, the students also gained practical skills needed in the labour market.

In 2014, the Polish 'contracted programmes' will be replaced with a new project called the Competency Development Programme. The new programme will be implemented over the period 2014-2020. The main difference is that the 2014-2020 programme will be based on skills across all courses of study as opposed to specific courses. The main objective is to strengthen entrepreneurship education, professional, interpersonal and analytical skills, without which it is difficult to succeed in the labour market.

Estonia provides scholarships in the field of smart specialisation to higher education students. The goal, on the one hand, is to support higher education institutions in finding motivated students and popularising higher education in the priority fields. On the other hand, it is also to prevent discontinuation of studies. The wider goal is to support economic growth as specialists are needed in the labour market in these specific fields (ICT, health technologies and services).

In **Germany**, the Germany scholarship⁴⁸ (Deutschlandstipendium) to promote tertiary training, was implemented in 2011. Students are funded with EUR 300 per month provided that EUR 150 are funded by a private sponsor. The remaining EUR 150 are funded by the Federal Government. Students in MINT courses are more likely to obtain a *Deutschlandstipendium*, as most companies⁴⁹ fund students enrolled in courses that will probably be affected by skilled workers shortage. About 22 500 students had a Deutschlandstipendium in 2014, representing 0.84 % of the total number of students in the winter semester 2014/2015.⁵⁰

As another way of influencing the link between the education offer and the labour market, examples of performance-related agreements between governments and VET/HE institutions can also be found in the Member States or are due to be made effective shortly, for example, in Estonia, Denmark, Ireland, and Slovakia.

Funding reform in HE in **Estonia** means that state funding is to be based on performance agreements between the Ministry and higher education institutions, which gives the latter more autonomy in deciding how many study places in different study fields they will open based on the needs of the labour market and in close cooperation with employers and related ministries. This new system is expected to link education much closer to the needs of the labour market, as the decisions will be made much closer to the labour market itself.

In **Denmark** labour market needs play a role in the funding to educational programmes in the HE sector. The mechanism for this is the *taximeter system*

⁴⁸ Internet: <http://www.deutschlandstipendium.de/>

⁴⁹ E.g. Deutsche Telekom: Internet: <https://www.telekom.com/karriere/studenten/deutschlandstipendium/81246>

⁵⁰ Internet: https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2015/05/PD15_193_21431.html

introduced in 1994 as part of the funding system of VET and HE education providers to increase efficiency, ensure increased transparency, and to promote competition between providers. In HE the funding is allocated on the basis of students activities, measured according to the number of exams passed by students in an academic year. National funds are provided as a lump sum and universities allocate the funds according to their priorities⁵¹. There are three rates which are granted according to the study programme; programmes within the sciences and technology typically receive the highest rates, whereas programmes within the humanities and social sciences receive the lowest grant. Rates are politically decided according to societal needs, characteristics of the programmes as well as the expenses of providing the subject. However, in VET the taximeter funding is based on the number of students at the VET institutions, which incentivises the retention of students. This supports the completion of VET and not its connection to the labour market⁵².

A revision of the VET law in **Slovakia**, effective since 2014, obliges the Ministry of Education to annually publish 'white' and 'black' lists of VET programmes, i.e. study and training programmes producing an insufficient number of graduates with respect to labour market needs and/or a surplus of graduates. The lists shall be taken into consideration in the normative financing of secondary VET schools as from 1 January 2016: programmes on the 'white' list shall be stimulated with a 10 % increase in per capita contributions, while programmes on the 'black' list are to be penalised with a 10 % reduction of contributions. A first pair of lists was published in December 2013, which raised heated debates about their credibility. The Ministry of Education undertook a revision of the methodology and issued a new directive in January 2015, according to which updated lists were prepared and published. However, controversy remains over the use of imperfect data for such crucial decisions. Gathered information shall also enable school founders to adjust numbers of classes and students (programmes on the 'white' list can have a lower minimum number of students, studies on the 'black' list cannot open more classes).

The **Irish** Further Education and Training Authority (SOLAS) has outlined plans in its five-year strategy document (SOLAS, 2014), to link funding with programme performance, which would suggest that providers will be required to give more attention to the labour market relevance of programmes in future.

5.2.4 Incentives offered to students to enrol in specific courses

Another measure governments have of trying to increase the supply of graduates in areas of skill shortage is by offering incentives to students themselves to enrol in specific courses/programmes. **Latvia** for example has measures directed at the supply-side via incentivising students to take particular courses/programmes by offering free places in priority HE courses /programmes – currently, science, technology, engineering and mathematics. Students in **Slovakia** enrolled in VET programmes targeting labour market needs (on the 'white' list mentioned above) are entitled to a motivational scholarship throughout their studies (equal to 25-65 % of the applicable minimum subsistence level, depending on learning results).

⁵¹ Further information are provided in, Ladefoged, S., (2010) The Danish Funding System Internet: <http://www.um.es/prinum/PLA/files/presentations/DK%20-%20Susanne%20Ladefoged%5B1%5D.pdf>; Buchvald Vind, T., (2008) The Danish taximeter system and its application for budgeting at University of Copenhagen Internet:

http://www.dzhw.eu/veranstaltung/dokumentation/Steuerung2/2_Buchvald_Vind.pdf

⁵² Further information on the taximeter system are provided in the following reports: Damvad (2011) the taximeter system, Executive summary . Internet: http://www.damvad.com/media/31738/taxameter_-_executive_summary.pdf;

5.2.5 Incentives to increase the flexibility/mobility of labour

Incentives to increase the flexibility and mobility of the labour market are addressed through, for example, improving immigration systems or providing incentives to enable increased geographical mobility (Austria and Germany).

There is a need to simplify, standardise and speed up the work visa processes for skilled workers⁵³. **Austria** has taken measures to address this issue by maintaining and updating on an annual basis a list of so-called shortage occupations, allowing for legal immigration of skilled workers for twelve months in the context of the 'Red-white-red-card' (Rot-Weiß-Rot-Karte, cf. www.migration.gv.at, Lechner/Wetzel 2014). In 2015, 12 occupations are listed in the field of skilled manual occupations and high-skilled occupations in the sector of construction and building and healthcare. In 2014 244 permits were issued, in the previous year 329.

Labour mobility within countries also needs to be considered. In **Germany** the Dual Training Grant⁵⁴ (*Berufsausbildungsbeihilfe*) is granted for apprentices in the dual training system that move away from home to take up training. This measure therefore helps to increase the mobility of apprentices. Funding is granted for state-approved training occupations only. This might help to mitigate the placement mismatches in the apprenticeship places market. With the further training scholarship⁵⁵ (*Weiterbildungsstipendium*), talented apprentices in the dual training system are able to apply for a scholarship.

5.3 Stakeholder involvement, including social partners

The 2014 Report found that Governments are increasingly involving key stakeholders in mechanisms to design and steer the educational offer. This final section discusses the stakeholders involved in shaping the education and training provision in line with labour market needs. A presentation of the ways in which the different stakeholders are involved is followed by brief discussions of employer and social partner involvement. **The focus of the section is on stakeholder involvement in steering education and training provision, not on their involvement in skills governance as a whole.**

There is a wide range of stakeholders involved in shaping the education and training provision in the 28 countries covered by this Synthesis Report. These range from Ministries and government bodies at national level to students and parents themselves. The range of stakeholders differs within countries depending on the sector of education and training concerned, as well as on the way in which the country allocates responsibility for steering education and training (centralised or decentralised).

For instance in **Austria**, different governance systems in VET and HE exist side by side, characterised by several steering mechanisms and based on different - and potentially - changing constellations of actors. So the nature of how stakeholders are involved depends on the respective educational field (e.g. school system, apprenticeship education etc.) and is said to have evolved over time without any concept of overall coordination and control.

Several countries highlight the distinction between the autonomous nature of HE and the more collaborative nature of VET provision. In **Belgium** for instance, there is no political will to ensure that the higher education programmes meet the needs of the labour market in terms of skills. Universities and higher schools are totally autonomous of political authorities to write their programmes in the name of academic

⁵³ Hays Global Skills Index 2012. Internet: <http://www.hays-index.com/archive/>

⁵⁴ Internet:

<http://www.arbeitsagentur.de/web/content/DE/BuergerinnenUndBuerger/Ausbildung/FinanzielleHilfen/Berufsausbildungsbeihilfe/index.htm>

⁵⁵ Internet: <https://www.sbb-stipendien.de/weiterbildungsstipendium.html>

freedom. In contrast, in general, the actors of adult education work closely with the public and private stakeholders of training in each region. In **Latvia**, although stakeholders are involved in designing higher education offer, much more emphasis is put on stakeholder cooperation which aims at improving vocational education.

When reviewing the information contained within the country fiches, we found a lack of evaluative information on the effectiveness of stakeholder involvement. This may be due to a lack of evaluation / review taking place in the Member States. For instance in the **Czech Republic**, there are a number of channels for employer involvement. However, there is no evaluation of how these channels help in making school- or field-specific policy choices.

The following section will describe a number of common ways in which stakeholders are involved in steering the education and training provision. These are:

- Platforms at national level (Section 5.3.1);
- Sector Skills Councils (Section 5.3.2);
- Regional-, or local-level platforms (Section 5.3.3);
- Consultations (Section 5.3.4);
- Playing a role in the governance of individual providers of education and training (Section 5.3.5).

The involvement of two key stakeholders is then discussed in more detail. First a short overview of the involvement of employers in steering education and training provision is presented (Section 5.3.6), followed by an overview of social partner involvement, looking at countries with notable examples of social partner engagement (Section 5.3.7).

5.3.1 National-level platforms

Platforms or committees at national level are used in a number of countries (or education sectors within countries) as a means of engaging stakeholders in the steering of education and training provision. These platforms are mainly involved in VET, except in Hungary (where the Higher Education Planning Body and the Dual Education Council act mainly as consultative fora) and Ireland (the aforementioned EGFSN has representatives from FET and HE). National-level platforms are in place or planned in Denmark (VET and adult learning), Germany (VET and HE), Estonia (planned), Ireland (cross-sector), Hungary (HE), Lithuania (VET), the Netherlands (VET), Portugal (VET), Slovakia (VET) and Sweden (VET). The main focus of their work is on providing strategic inputs to ensure that the education and training offer meets the needs of the labour market. Members of these groups are therefore predominantly social partners and representatives of education and training providers, working alongside Ministries and other state institutions. Some examples are described below.

In Lithuania and Slovakia for instance, national platforms have been established to ensure inputs to VET strategy from key actors at strategic level. In **Lithuania**, the Vocational Education and Training Council has been established to advise national education authorities on solving strategic VET issues. All major VET legal acts and the VET students' enrolment plan have to be agreed with the VET Council. The Council consists in equal parts of representatives of State governance (MES, Ministries of Economy and Social Security and Labour) and municipal institutions and organisations representing employers' and employees' interests. During its regular meetings a number of questions are addressed, including issues of education and training provision. In **Slovakia**, the National VET Council (an advisory body to the government) includes all key actors who negotiate strategic policy documents and make recommendations to the Ministry of Education on the structure of VET programmes.

In Estonia and Portugal, national committees have been established to support the work of the new forecasting systems. A high-level coordination committee⁵⁶ will be set up for the **Estonian** OSKA system. This is an expert committee, combining experts from the Ministry of Education and Research, Ministry of Economic Affairs and Communications, Ministry of Social Affairs, Unemployment Insurance Fund, Estonian Chamber of Commerce and Industry, Estonian Employers' Confederation, Estonian Trade Union Confederation and Estonian Employees' Unions Confederation. The committee is tasked with collecting information and expert knowledge on labour demand and supply as well as skills of the workforce; commissioning analyses and prognoses in occupational areas; determining the importance of occupational areas and study fields based on the strategic needs of the State and making recommendations on measures aimed to ensure that future labour needs are met; making recommendations to relevant institutions on state commissioned study places both in formal and informal training; and making recommendations to the Government to increase the adequacy and efficiency of expenditures on education. In **Portugal**, the ANQEP involves a broad range of stakeholders at its General Council, with representatives of several ministries (education, employment and social affairs, regional development), of the national PES and two bodies linked to the Ministry of Economy, of the peak level associations of employers and unions, of the national association of municipalities, of the association of polytechnic institutes and of the National Association of Vocational Schools (ANESPO).

In **Sweden**, both in upper secondary VET and non-academic tertiary VET, there are structured forms for cooperation between national authorities responsible for education, and representatives of social partners, industries and other authorities⁵⁷. Councils at national level (12 national programme councils for upper secondary level VET and the Labour Market Council, for Higher Vocational Education) have the task of improving the coherence between VET and the needs of the labour market. The PES also organises national and regional councils to adapt and strengthen measures on active labour market policies. However, a recent evaluation conducted by the Swedish Agency for Economic and Regional Growth (2015) (*Tillväxtverket*) identified limitations in the cooperation between stakeholders in Sweden⁵⁸.

Finally in **Germany**, tertiary study courses must be approved by the accrediting council, *Akkreditierungsrat*, which includes representatives of tertiary training institute representatives, Länder representatives, professional practice experts (e.g. employers' or employees' representatives), international education experts, and students. Council members are appointed by the Kultusministerkonferenz (Standing Conference of the Ministers of Education and Cultural Affairs) and Hochschulrektorenkonferenz (German Rectors' Conference).

5.3.2 Sector (Skills) Councils / Committees

Sector (skills) councils are in place at national level but focus on specific sectors of the economy. Their role is usually to give more practical inputs to steer education and training provision to meet the needs of the labour market. This might be for example by contributing to the development of occupational or qualification standards or

⁵⁶ Professions Act. <https://www.riigiteataja.ee/akt/12974050?leiaKehtiv> Accessed 30.06.2015.

⁵⁷ National Agency for Education (2013), Sweden VET in Europe – Country Report 2013, Cedefop ReferNet reports. Internet: https://cumulus.cedefop.europa.eu/files/vetelib/2013/2013_CR_SE.pdf

⁵⁸ Swedish Agency for Economic and Regional Growth (2015), Regionalt kompetensförsörjningsarbete, Systembild, utmaningar och möjligheter, Tillväxtverket, Rapport 0186. Internet: <http://www.tillvaxtverket.se/download/18.253f854414cf0eef05f189b3/1430221183010/Regionalt+kompetensf%C3%B6rs%C3%B6rjningsarbetet.pdf>

profiles. Sector (skills) councils can be found in Bulgaria, Croatia, Estonia, Lithuania (VET), Portugal, Slovakia, Spain and the United Kingdom. In Spain and the United Kingdom, the Sectoral Joint committees and SSCs respectively have been in place for some time whereas in Bulgaria, Croatia, Estonia, Portugal and Slovakia these are still in development or in their infancy.

In **Croatia** for example, sectoral councils are currently being established, with the first three of the planned 25 established in June 2015. These are advisory and professional bodies responsible for the development of human resources in line with labour market needs within individual sectors. Their main responsibilities will include evaluation of proposals of the learning outcomes, occupational standards and qualification standards; analysis of the existing and required competences within the sector; recommending on enrolment policy, quotas and public funding of qualifications to the National Council; providing recommendations to relevant ministries on required changes in qualification standards and national classification of occupations; providing recommendations on sector development to the National Council, as well as monitoring the implementation of recommendations provided to the National Council.

In **Lithuania**, the main advisory bodies in designing VET provision are sectoral professional committees (SPC). 17 SPC have been established at the Qualifications and VET Development Centre (KPMPC). Members of SPC represent employers, education and training providers, trade unions, public organisations in specific sectors. The main roles of these committees are: to advise the KPMPC on sectoral qualifications and competences needed to acquire them; set priorities for developing qualifications standards; endorse standards and analyse consistency of training programmes with the requirements prescribed in the standards. Thus they are consulted before preparing standards and programmes and they make the final decision regarding whether to endorse standards and programmes.

The evolution of the **Spanish** Sectoral Joint Committees presents an example of the possible constraints that can be associated with involving employers and social partners in planning training provision. Forecasting training needs have traditionally been developed in Spain within these Sectoral Joint Committees in the framework of the social dialogue between employers and workers' representatives. There were 87 Sectoral Joint Committees in 2014 that produced their training reference plans reflecting the main training needs of their correspondent economic activity. Until their reform under the 2012 labour market reform, the Royal Decree 4/2015 and the recent Law 30/2015 that endorses the Royal Decree, Sectoral Joint Committees were the source of 40 % of the training offer while the remaining 60 % referred to other priorities (training priority areas established by the PES). The functioning and the outcomes of the Committees have been questioned. One of the most questionable issues is linked to the prevalent role of workers' and employers' representatives in this process. The fact that these agents have been involved in the detection of training needs and have been, at the same time, providers of training actions, have raised some doubts about the efficacy and impact of the training offered. Their strong presence was based on the belief that they know in depth the training needs and the reality of the sector. Yet, the poor impact of the training developed and the low levels of competence associated to training provision led the Spanish authorities to change this process through the labour market reform (2012) and the law. According to the Law, the workers and employers' representatives are ascribed to training needs forecasting activities, monitoring and control but they can no longer provide training courses. This activity is now the exclusive competence of training centres, provided they are accredited by the regional employment service in the corresponding region.

5.3.3 Regional-, or local-level platforms or committees

Opportunities for stakeholders to be involved in steering education and training provision from a more local perspective can be found in the Czech Republic, Denmark (VET), Hungary (VET), Portugal, Slovakia (VET) and Sweden. Some examples are given below.

In the **Czech Republic**, regional governments involve employers in their Councils for HR development, which help these governments in administering their secondary schools.

In **Denmark**, local training committees (*lokale uddannelsesudvalg*) ensure close contact between VET colleges and the local business environment; they consist of representatives of college staff, management and students, as well as local employers and employees. The latter are appointed by the national trade committees. Local training committees also aim at adapting the development of VET skills to the regional development plans.

In **Hungary**, the list of supported qualifications (a subset of the NQR) is compiled by County-level Training and Development Committees, as well as by the Chamber of Commerce (Köpeczi-Bócz 2014) primarily based on information collected by the latter. This information is collected directly by the GVI (see subsection 2.1) through surveys and summarised in regular reports. Both of these institutions represent employers (the demand side) very strongly and allow for a substantial influence to what is perceived as requirement of the market.

5.3.4 Consultations

Consultation is another means of engaging stakeholders in the steering of education and training provision. This method is used Austria, Croatia, Estonia, Sweden, Denmark (see the Advisory Boards mentioned above in Section 5.1.4), France and Spain.

For example, in **Austria**, in the case of legislative approaches, the involvement of stakeholders is almost always secured by a consultation and review process of draft regulations. In **Croatia**, numerous institutions are being consulted (mostly by MSES) in the process of defining education and training provisions. In **Estonia**, the Ministry of Education collects opinions from other ministries (Ministry of Social Affairs, Ministry of Agriculture, Ministry of Economic Affairs and Communications), employers' and trade union organisations and professional organisations when defining the volumes of state-commissioned education across all study programmes.

In **Sweden**, consultation rounds and open consultation through meetings and websites are examples of methods used by the government agency to collect views and proposals regarding educational and vocational issues. Furthermore, in order to meet local or regional labour market needs the local educational providers have the possibility to deviate from the national vocational programme implying that VET programmes at the local level might differ somewhat from the nationally determined programme. Sweden has also undergone a consultative process to reform upper secondary school. A reform of the upper secondary school in 2011 was preceded by a public inquiry on upper secondary school. The commission drew up proposals on the structure for vocational programmes based on available statistics about students' subsequent outcome on the labour market, and also through consultation with industry representatives and social partners. The final steering documents regarding upper secondary VET, such as curricula, diploma goals and syllabi were then decided by the Swedish government and by the Swedish National Agency for Education (*Skolverket*), however in close collaboration with teachers and researchers, industry representatives and social partners.

In **France**, a number of bodies with consultative roles are involved in the design of the education and training offer. These include professional consultative committees (CPC), the Consultative Inter-professional Committee (CIC) and the Higher Council for Education (CSE). Since 2007 universities are required to include labour market relevance as part of the qualification descriptors to formulate their qualifications.

In **Spain**, the process is highly institutionalised, which can bring some problems of delay and rigidity. The Spanish General Council of VET (*Consejo General de la Formación Profesional* - GCVET) takes an active role in the design of the National

Catalogue of Professional Qualifications (CNCP) under the management of the INCUAL. The qualifications included in the CNCP (contents, denominations, schedules, etc.) must be periodically updated every five years, starting when they are included in the CNCP. However, the delay in the design of some of them and the slow nature of their update mechanism led to a reform in 2011 (RD 4/2011) involving a more simple and rapid method. According to the stakeholders interviewed, the CNCP system is still too rigid and the adaptation of the qualifications contents to the changing needs of the labour market it is still too intricate. In fact, the five year period to update professional qualifications has not been complied with in many cases, even in some of those which are considered as maximum priority. The tertiary education adaptation to the labour market also involves a highly bureaucratic process. Moreover, since the incorporation of the individuals into the labour market is only one of the goals of the university system among many others, the relationship between learning content and business needs is quite blurred.

In **Cyprus**, extensive consultations are seen as an advantage of the country's skills governance system but these can also act as a weakness. In general, institutional adaptation is slow and the individuals who are adversely affected become involved through unions and the political system to delay or stop change. This means that the ultimate goal of serving the needs of society at large is frequently overshadowed by the interests of those already employed in the pertinent areas.

5.3.5 Involvement in the governance of HE institutions

In Denmark, France and Lithuania, there is a legal requirement for higher education institutions to involve stakeholders in their governance bodies. In **France**, in 2007 a legal requirement was introduced for universities to include two representatives of local stakeholders in the governing body of each university. In **Denmark**, as mentioned above, Advisory Boards have been a legal requirement in the Higher Education sector since 2007 and are aimed at creating a link between universities and businesses; they can act at an institutional, faculty or institute level. Advisory Boards act as a tool in the decentralisation of the responsibility for providing relevant educational programmes.

In **Lithuania**, in 2009 the new version of the Law on Higher Education and Research provided for a bigger role of the councils of higher education and a greater influence of stakeholders in the councils (for instance, stakeholders should make up 40 % of the council members). The law also stipulated that a representative of employers/social partners must be included in the commissions for the defence of bachelor's/master's degree theses (employer's representative is often appointed as a chair of the commission).

5.3.6 Involving employers

Some countries have policies and strategies that promote significant involvement of employers in particular. France and the United Kingdom are examples of this, as well as Belgium (Wallonia), Latvia, Germany, Poland, Ireland and Lithuania.

In **France** the GPEC ('Prospective Management of Jobs and Skills') is a legal obligation for companies with more than 300 employees. These are required to anticipate the impact of internal and external changes on their skills needs. In the **United Kingdom (England)** Local Enterprise Partnerships (LEPs), which have strong employer involvement, develop labour market information that would identify skills gaps and shortages. Colleges would consult LEPs when developing their plans for future provision. Furthermore, GBP 50 million per annum was set aside for the establishment of a Growth and Innovation Fund (GIF)⁵⁹ to encourage employer-led initiatives within sectors. Also, most universities have a dedicated centre that collaborates with

⁵⁹ The GIF has been operational since 2011 and further information is available at: <https://www.gov.uk/government/publications/growth-and-innovation-fund>

business on such aspects as course content and relevance. In the **United Kingdom (Scotland)**, the funding of further education and higher education is under one agency (the Scottish Further and Higher Education Funding Council) and in its current strategic plan it has adopted an outcomes-based approach, part of which recognises the need to respond to the learning and skills needs of 'students and employers' developing plans to 'improve the supply of skills'.

In **Belgium (Wallonia)**, Skills Centres are training centres that focus on the skills needed by employers. They favour collaborations between the public and the private sector and always work in partnership with professional sectors and sectoral funds. There are also Sectoral Agreements between sectors and operators of training and employment. In **Latvia**, the offer is shaped by recommendations from the Council of Sectoral Experts, which includes experts from the Free Trade Union Confederation of Latvia, the Employers' Confederation of Latvia and the National Centre for Education of the Republic of Latvia). Also, short vocational programmes for young unemployed are available from State Education Development Agency, with programmes planned by Sectoral bodies and the Vocational Education and Employment Tripartite Cooperation Sub-council.

In **Germany**, companies have become more involved in the steering of tertiary training provision, e.g. by offering dual tertiary training (Duales Studium) and by co-operating with universities. In **Poland**, the Minister of Education, in cooperation with other ministries (e.g. economy, industry etc.) is responsible for the development of the classification of occupations for vocational education (COVE). In order to anticipate labour market needs and include them at the development stage, the COVE is compelled to carry out consultations with representatives of employers. Employers' organisations can independently submit applications to include a new occupation into the COVE. In **Ireland**, the Apprenticeship Implementation Plan (2014), which sets out the approach to developing new apprenticeships, recommends that proposals should be industry-led and that employer consortia should identify the occupations, which were considered by them to be suitable for apprenticeships. A certain proportion of FAS training programmes have also been shown to have close links with the labour market. In **Lithuania**, the main measure designed to adapt HE/VET to the labour market needs is the inclusion of employers and associated business entities into the development of training/study programmes, programme implementation and assessment of graduates' competences.

5.3.7 Social partner involvement

As is clear from the previous section, social partners are involved, alongside other stakeholders, across the EU Member States in the steering of education and training provision. This brings both benefits and also potential constraints. Some specific examples of social partner involvement identified in the country fiches will be highlighted here. These include both examples of social partner involvement by individual countries or by sectors of education within countries. It is not intended to be a comprehensive review of social partner involvement across the 28 Member States, rather presents some interesting examples identified in the country fiches.

In some countries, including France, Germany and Austria, the social partners play a vital role in determining the content of vocational training. In **Germany** for example, the implementation of practical training contents in companies is controlled by the responsible chambers. They monitor apprenticeship training, give advice to companies and apprentices, verify training personnel (those with a Meister or an equivalent university degree) and approve apprenticeship examinations. Attempts to assign this task to a government body were unsuccessful due to resistance from employers' associations.⁶⁰ The responsible chambers also form vocational training commissions

⁶⁰ Baethge 2015: p. 276-277. http://link.springer.com/chapter/10.1007%2F978-3-658-01238-0_11

(*Berufsbildungsausschuss*), which are organised both locally and nationally. They consist of six representatives of employers, employees (trade unions) and six advisory teachers from vocational schools. These are important channels through which practical experience with apprenticeship regulations is transferred.

In **France**, VET qualifications are produced by ministries on the basis of opinions by consultative bodies. In particular, the aforementioned Professional Consultative Committees (CPCs) are a key actor in the conception and quality assurance of VET qualifications. They bring together representatives of employers' organisations, workers' organisations, the government and qualified individuals⁶¹. While CPC working groups are fundamentally expert bodies that ministries heavily rely on when designing VET qualifications, they are also political arenas where different interests and positions are played out. The goal is to build consensus and elaborate a VET qualification that takes into account expert projections and political stances of how a specific profession should/will evolve in the future.

Another example from **France** are the *certificats de qualification professionnelle* (CQP), which are sector-specific vocational qualification certificates that enable employees, jobseekers, or young people who are still in initial education or training to acquire an operational qualification⁶². They can be obtained through lifelong learning programmes; training is usually provided by a body created and managed by the branch in question. The CQP is recognised by the collective or branch agreement it relates to; it is created and issued within an industry sector by a joint industry body, usually a sectoral Commission Paritaire Nationale Emploi Formation (CPNEF) (National Joint Committee for Employment and Training)⁶³ that is composed of the social partners. Nevertheless, in comparison to CPCs, CPNEFs are said to be rather non-transparent expert bodies, both in terms of their memberships, functioning and outputs. Consultative organs charged with the design of the content of a qualification's curriculum are also political arenas. As such, a certain level of transparency is desirable to ensure the voice of all concerned actors is heard and feeds into the decision-making process.

The possible constraints associated with pressure from the private sector are also noted in the country fiche for **Slovakia**. Seven Slovakian social partner organisations have a strong influence through their position in the National VET Council.⁶⁴ The fiche suggests that strong pressure from businesses may however involve also some unwanted effects, as the efforts to precisely regulate entries and volumes of graduates for individual occupations in all regions are not backed by reliable labour market intelligence.

In **Greece**, social partners provide their own training to members and also produce their own reports and studies on skills outlooks and occupational forecasting. In this frame, the main social partners in Greece, including the General Confederation of Labour (GSEE), the Hellenic Federation of Enterprises (SEV) and the General Confederation of Greek Small Businesses and Trades (GSEVEE) have all produced studies on skills in demand. Social partners have also been increasingly engaged in the design and running of vocational education and training actions funded by the European Social Fund (ESF) in Greece. These actions address sectoral or local/regional labour market needs and combine training with guidance and counseling services and work placements to provide on-the-job experience. Furthermore, in addition to

⁶¹ Cereq 2004 « Certifications Professionnelles: les partenaires sociaux impliqués dans la construction de l'offre », available at <http://www.cereq.fr/cereq/b208.pdf>

⁶² For a good definition of the CQP, <http://formation.cqp.free.fr/spip/spip.php?article3>

⁶³ The website of the CPNE : <http://www.cpne-fcd.org/cpne/mission.php>

⁶⁴ National Union of Employers, Federation of Employers' Associations of the Slovak Republic, Slovak Chamber of Commerce and Industry, Slovak Forestry Chamber, Slovak Mining Chamber, Slovak Agriculture and Food Chamber, Confederation of the Trade Unions of Slovak Republic.

implementing vocational training courses, the social partners are actively involved in providing employment support services.

Social partners can also play a role in influencing policy. For example, the aforementioned **Irish** EGFSN, which was established in 1997, constitutes a social partnership forum that provides direct advice to the Government on the future skills needs of the Irish economy. The expert skills group is made up of representatives from trade unions, employer's bodies, civil servants, semi-state bodies, voluntary organisations, representatives from HE, FET and careers guidance services. The EGFSN reports to the Minister for Jobs, Enterprise and Innovation and the Minister for Education and Skills. In delivering its advice to Government, the EGFSN draws heavily on the work of the Skills and Labour Market Research Unit (SLMRU), which provides the group with data and analysis from both the occupation forecasters and the National Skills Database. The main strength of the EGFSN is that it is a fully representative body that provides detailed advice to governments based on the most up-to-date labour market intelligence and occupational forecasting data available. The principal drawback of the approach, is the existing labour market intelligence infrastructure, while sufficient to give broad indicators of the general direction of future labour market demand, does not appear to have the support infrastructure that would enable it to ensure that specific courses and their content meet the demand of industry.

In **Cyprus**, the sense of tripartite involvement in changes to the education system is strong; the state as an employer and policy maker, other employers and their organisations, Members of the House of Representatives as legislators, various ministries and semi-governmental organisations as fountains of technocratic expertise but also as stakeholders, employees whose livelihoods may be at stake, trade unions as employee representatives, parents and their organisations, and students, all have a say in how educational change is shaped. However, according to the country fiche it is generally the case that future employability is not paramount when it comes to making decisions. Instead, philosophical positions on the optimal nature of education, nationalism, religion, self-interest, and a good deal of inertia all contribute to create a public system that responds slowly. Thus, whilst the strength of the education and training process is its inclusiveness and openness to consultation, these are also features that can perpetuate the status quo, protect established interests and forestall changes that would improve the quality of education and training and enhance employability.

In **Luxembourg**, the government mostly assumes a coordinating role, while professional business associations and private training providers are in charge of the provision and implementation of skills. Cooperation is reinforced through the dual professional training system. Furthermore the general context of how social relations are managed in Luxembourg with strong and consensus-seeking collective bargaining instruments has an impact on the level of cooperation - the small size of the country and its administrations contributes to networking and close relations between the actors.

In **Lithuania**, the onus is on providers in HE to engage with social partners. All HEIs are required to draw up Strategic Plans for their activity development indicating, inter alia, the forms and measures of cooperating with the social partners. For instance, the strategic activity plan of Vilnius University for 2014-16 contains a separate section dedicated to cooperation with the social partners, identifying the development of cooperation with the social partners as a prioritised activity.

6 Conclusions

To conclude, the following key messages can be drawn from this Synthesis Report.

- There is no internationally agreed definition of skills governance. It is a concept which is multi-faceted and complex. An understanding of skills governance has been formulated for the purposes of this report but there could be value in conducting a further review of the concept, with a view to establishing a more robust definition.
- Because of the multi-faceted nature of skills governance and the differences in approaches which can be found within countries (different sub-systems of education and training, different regional / local approaches), it is hard to group or 'label' countries. The different subsystems, notably VET, Higher Education and formal and informal further training, follow different governing logics, even within one and the same country. In the future, there is scope to do more work to look at the governance systems within the different education and training sub-systems, to try to shed light on how they are coordinated.
- Some countries have 'mature' forecasting and intelligence infrastructure, whereas in others forecasting and intelligence are 'in development'. A number of countries where forecasting /intelligence is considered to be 'in development' are being supported in the development of the new tools / infrastructure by European funding, including ESF.
- Forecasting and labour market intelligence systems tend to be fragmented, but in a number of countries interesting practices have evolved to make the systems more cooperative and joined-up.
- There are benefits to sectoral forecasts and ad hoc initiatives. These are often produced 'on demand', so are more likely to be put to use. They can also produce more precise information.
- Challenges identified in the country fiches relating to forecasting and intelligence range from issues regarding the quality of the data to the lack of integration of the systems in place. Another issue is the capacity of the user to understand to use this type of information (forecasts depend on assumptions and the user need to be clear about those).
- Success factors include effective statistical infrastructure; complementarity of the forecasts in place; a mature approach to cooperation; clear policy intent and strategy at national level; and an effective dissemination (or 'transmission') policy.
- A range of transmission methods are used. The central weakness of transmission is that it fails to be systematic or coordinated. Strengths include the integration of the end-users (e.g. social partners, educational providers, PES) into the design and production of forecasts.
- The use of labour market and skills intelligence can be systematic or ad hoc. There are also some countries where there is very limited use of intelligence.
- Various policies and strategies are used to steer education and training to meet the needs of the labour market, focusing on the content of the education and training offer or its format. There are also measures to create better links between employers and educational institutions.
- PES programmes and ALMPs can help to address skills imbalances and career guidance can be used to steer jobseekers and students towards professions in demand.
- Incentive measures to steer education and training provision may be directed at employers, education and training providers, or the learners themselves. Their

aims are to increase the training offer (in certain subjects) and / or ensure its quality, encourage learners to take up training (in specific subjects) and to encourage flexibility/mobility.

- Governments are increasingly involving key stakeholders in mechanisms to design and steer the educational offer, through national or regional/ local platforms and committees, consultations, or through participation in the governance of individual institutions. What is important is to ensure that their involvement improves the alignment of skills supply and demand, rather than imposing further constraints.

This Synthesis Report presents an initial overview of skills governance in Europe. Nevertheless, there are gaps in information on this topic, as highlighted the table in Annex 2, and there is scope for further work in this area to be taken forward in the future to fill these gaps.

Annex 1 - ESF support for Skills Governance in the EU Member States

Table 1, below, provides an overview of the information provided in the country fiches on ESF support for skills governance. It is not intended to be a comprehensive overview of ESF support for skills governance activities across the EU, but should act as a starting basis for further review and updating.

Table 1. *ESF support for Skills Governance*

Country	ESF support in 2007 – 2013	ESF support in 2014 - 2020
Belgium	Skills Centres are training centres that focus on the skills needed by employers. They favour collaborations between the public and the private sector and always work in partnership with professional sectors and sectoral funds. These partnerships are reflected in a mix of funding including: regional public authorities, PES, sectoral funds managed by the social partners and European Structural Funds (FEDER and ESF). The European Structural Funds have also permitted investment in education and lifelong learning. ESF grants have addressed several priority axes including employment creation and the development of human capital, knowledge, know-how and research. Moreover some projects focus only on job shortages.	
Bulgaria	The National Network for Competence Assessment (NNCA) has been developed under the project "Development of Workforce Competence Assessment System by Sectors and Regions" implemented by the Bulgarian Industrial Association in partnership with national trade unions ⁶⁵ , financed	An umbrella project of around 30 projects financed under the ESF is currently being implemented, which aims to facilitate the cooperation between higher schools⁶⁸ and employers' organisations in view of meeting the demand of the labour market.

⁶⁵ Confederation of Independent Trade Unions in Bulgaria (CITUB) and Confederation of Labour, Podkrepa"

	by the European Social Fund ⁶⁶ in the period 2009-2013. The overall project aim is defined as "enhancing labour market adaptability and effectiveness as well as striking a greater balance of labour market demand and supply by developing a system for workforce competence assessment by sectors and regions" ⁶⁷ .	
Czech Republic		The use of ESF funds to develop efforts in the area of labour market and skills intelligence is limited. ESF funding is used, within ALMP, to support internships in companies for recent school graduates from apprenticeship programmes. In August 2013, the MoS launched an OP call to support regions in their own efforts to support technical and science fields of education; final reports are not available yet. Several media campaigns were carried out during recent years promoting VET as a study choice (by the MoS or the Ministry of Industry and Trade). Typically, these campaigns have been co-financed from the ESF.
Denmark	The ESF-funded project 'Kvalinord' (2006-2007) focused on assessing future imbalances in the region of Jutland.	

⁶⁸ In the Bulgarian legislative and policy context, higher schools are all specialised schools, such as universities, colleges and other specialised schools that aim to prepare students for comprehensive, specialised, factual and theoretical knowledge within a field of work or study, corresponding to higher levels of the European Qualifications Framework (from level 5 above).

⁶⁶ The project is implemented in the period 2009-2013 by the Bulgarian Industrial Association in line with contract № BG051PO001-2.1.06/23.10.2009 under measure BG 051PO001-2.1.06 "Increasing the flexibility and effectiveness of the labour market through actions of the social partners" under Operational programme "Development of human resources" 2007-2013 co-financed by the European Union under the European Social Fund and the European Fund for Regional Development

⁶⁷ <http://en.competencemap.bg/>

Germany	There is a range of regional and local forecasting projects that have been co-financed by ESF. Examples are the skilled workers study Berlin-Brandenburg⁶⁹ (<i>Gemeinsame Fachkräftestudie Berlin-Brandenburg</i>), the EQUIB-project⁷⁰ (qualification demands in Bremen) or the Regio Pro project⁷¹ (qualification demand early warning system in Hesse).	Several ESF-funded projects aim at steering the education and training offer. For example, in December 2014 an ESF-funded project aimed at improving the skills of long-term unemployed persons was announced.⁷² Other national projects in this regard are, for example, Jobstarter Plus (a programme that supports SMEs that provide training) or Bildung integriert ('integrated education', a programme that supports municipalities to improve their local education offer).⁷³
Estonia	In 2008, the Ministry of Education and Research and Ministry of Social Affairs signed a contractual agreement to develop careers services. Based on the agreement, the ESF programme 'Development of Career Services' (2008-2014) was launched.	To support the development of careers services special ESF programmes were set up in both education and labour market structures ('Study and career counselling programme 2014-2018'⁷⁴ and 'Improvement of Accessibility of Career Counselling 2014-2020'⁷⁵).

⁶⁹ http://www.fachkraefte-in-berlin.de/blob/bfachkraefte/statistiken_und_umfragen/2251284/edf64751a456dea71a86a85d30c38e78/Prognos-Studie-Berlin---Brandenburg-data.pdf

⁷⁰ <http://www.iaw.uni-bremen.de/ccm/research/Projekte/equib---ermittlung-des-qualifikationsbedarfs-in-der-region-bremen;jsessionid=CFC12A05B3DF93A2C333DFB3EDDA44B1/>

⁷¹ https://www.esf-hessen.de/regio_pro___Etablierung_eines_Fruehwarnsystems_zur_Qualifikations__und_Beschaefigungsentwicklung_in_Hessen.esf

⁷² <https://www.bmwi.de/BMWi/Redaktion/PDF/M-O/nationales-reformprogramm-2015,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>

⁷³ http://www.bmbf.de/pubRD/uebersicht_forderperiode_ESF_2014-2020.pdf

⁷⁴ Ministry of Education and Research (2014). Study and career counselling programme (*Õppe ja karjäärinõustamise programm*) <http://www.innove.ee/UserFiles/Haridustugiteenused/Rajaleidja/%C3%95ppe-%20ja%20karj%C3%A4%C3%A4rin%C3%B5ustamise%20programm.pdf> Accessed 29.06.2015

⁷⁵ Ministry of Social Affairs (2014). Improvement of Accessibility of Career Counselling (*Karjäärinõustamise kättesaadavuse suurendamine*) <https://www.tootukassa.ee/sites/tootukassa.ee/files/Karjaarin%C3%B5ustamine%20TAT%202015-2020.pdf> Accessed 29.06.2015.

		The creation of the OSKA system is financed through the ESF programme, which was launched in April 2015 ⁷⁶ .
Ireland		The Momentum programme is funded by the European Social Fund/European Structural Funds Programme 2014-2020. Momentum offers 6,500 training places to long-term unemployed claimants in areas that have been identified as having growth potential. It is clear that labour market intelligence and occupational forecasts are likely to have represented important inputs in the identification of growth sectors (although this has not been specifically documented). Current growth areas for Momentum are ICT, digital media, healthcare and social services, the green economy, food processing and sales and marketing. The Springboard initiative, which aims to re-skill or upskill unemployed people into sustainable employment, i.e. areas of the labour market that have been highlighted as requiring skilled graduates, has been funded from the National Training Fund to date, however, it is to be included in the 2014 to 2020 ESF round.
Greece	A Mechanism of Forecasting the Needs of Enterprises in Occupations and Skills has been developed by the Hellenic Federation of Enterprises (SEV), with support from ESF, as part of the OP Human Resources Development 2007-2013. The mechanism aims at the better matching of labour demand and supply, through the identification of future occupations in demand, the examination of	In 2013, a National Action Plan for Youth Employment was announced by the Minister of Education and Religious Affairs, the Minister of Labour, Social Security and Welfare, and the Minister of Development and Competitiveness. The Action Plan is the first comprehensive and integrated effort of the State to support young people, incorporating into a single plan, all activities and projects of NSRF Operational

⁷⁶ Ministry of Education and Research (2015). Toetuse andmise tingimuste kehtestamine tegevuste „Tööjõuvajaduste seire- ja prognoosisüsteemi loomine“ elluviimiseks.

required skills and proposals to the authorities.	Programmes aimed at young people, funded by the European Social Fund (ESF) and the European Regional Development Fund (ERDF) (2013). The labour market authorities are currently discussing a plan to develop a permanent and adequate mechanism for providing forecasts, within the frame of the OP 'Human Resources Development 2014-2020'. The mechanism is expected to provide information on labour supply and demand at the levels of sectors, occupations, qualifications, competences and skills, both on regional and local bases. The creation of a network of key stakeholders is foreseen (ministries, social partners, regional and local authorities, research centres), under the scientific supervision of the National Institute of Labour and Human Resources (NILHR). The mechanism is expected to deliver its first outputs, based on the analysis of secondary data, before the end of 2015. The social partners have lately assumed an even larger role in planning and implementing vocational training actions funded by the ESF. These actions address sectoral or local/regional labour market needs and combine training with guidance and counseling services and work placements to provide on-the-job experience. These training programmes cover both technical skills, such as ICT, safety and quality, sales, energy and environment and general skills, such as communications, project management and teamwork (CEDEFOP 2014). According to information from the Eurydice network, the educational budget in 2014 dropped by 3.6 % in relation to 2013 (Eurydice 2014). However, incentives to steer the education and training system closer to the needs of the labour market have been in place, largely
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thanks to the ESF funds.

France

In the previous programme period, ESF funds have been used to fund projects related to the production of labour market intelligence. The French national ESF Operational Programme (OP) for 2007-2013 (where the first priority was helping workers and enterprises adapt to economic change) included a number of actions aimed at enhancing the anticipation of labour market and future skills needs. Indeed, the OP states "the intervention of the ESF should help improve anticipatory measures and lead to better management of economic change in France through social dialogue and by networking all the different stakeholders working in the field"⁷⁷. While the ESF contributed to the strengthening of labour market intelligence in France, the size of ESF funding in this area remains relatively small when compared to national funding; thus ESF provided a supportive rather than a directional/critical role in this field. Among the actions implemented to attain these objectives, ESF funds supported the development of diagnostic analysis carried out together with the social partners, in order:

- to improve knowledge of jobs and the qualifications required in order to identify obsolete skills;
- to define the jobs and qualifications required in the medium term; and,
- to propose action plans to adapt skills and

⁷⁷ 'Regional competitiveness and employment', National Operational Programme ESF France, February 2007

	protect the jobs of the most vulnerable workers. For instance, one of the main missions of the Job Centres (Maisons de l'Emploi, MDE) is to forecast the needs in human resources, on the basis of local indicators, shared by all the actors of the territory concerned. ESF funding supported the diagnostic analysis led by the observatories built up by MDEs (e.g. by a financial support of a maximum of 50 % of the expenditure, up to EUR 75 000)⁷⁸. Apart from diagnostic analysis, ESF funds supported actions dealing with the anticipation and management of economic change, awareness-raising measures, and actions of assistance, geared primarily for managers. For instance, in the Centre region, ESF supported an action aiming at implementing the Prospective Management of Jobs and Skills (Gestion Prévisionnelle des Emplois et des Competences - GPEC) in small and medium enterprises and industries.	
Spain	A variable proportion of the funding for training for employment comes from the ESF, depending on the region.	A variable proportion of the funding for training for employment comes from the ESF, depending on the region.
Croatia		In 2014, the Ministry of Science, Education and Sports (MSES) published the Call for Proposals for Improving Quality in Higher Education with the Application of the Croatian Qualifications Framework, funded from the ESF under the Operational Programme Human Resources Development 2007-

⁷⁸ See, for example, Maison de l'Emploi Nîmes Métropole (in the Languedoc Roussillon region, the ESF support the building of the territorial observatory, proving EUR 75 000 of co-financing funds to the global amount of EUR 159 884).

		2013, with a total budget of HRK 64 million (EUR 8.4 million). In April 2014, MSES has selected 30 projects that will be funded from ESF within this call. Similar calls for proposals funded from ESF can be expected in the future.
Italy	ISFOL project co-funded by ESF and national resources, including the following strands: national survey of occupational profiles and the audit of skills needs as part of the National Integrated Information System of Professions (Sistema Informativo Integrato delle Professioni); analysis and mapping of Italian qualifications, leading to a report referencing the Italian qualifications to EQF.	The VET system is mainly funded through regional resources, which account for almost half of the total funds. The Ministry of Labour contributes more than two-thirds of the funds and the remaining share is covered by EU funds. Until recently it was equally resourced through national and local funds; while now it is mainly funded by local resources and in the Southern Regions more than half is funded by ESF ⁷⁹ .
Cyprus	The Post-Lyceum Institute of Vocational Education and Training (PLIVET) began operating in 2012, following co-funding offered by the ESF. The ESF has co-sponsored a number of programmes to improve the balance between labour market demand and supply and to overcome specific frictions in the labour market. However, it has no direct involvement in the HRDA forecasts. Public schools and training centres are funded by the state from general revenues, in some cases with co-funding by the ESF. A certain amount of thinking in response to the CSRs and with the aid of the European Social Fund (ESF) had been done and a number of initiatives taken, even prior to the Cyprus crisis. A LLL strategy has been produced, integrating and stressing the availability of various opportunities.	

⁷⁹ Isfol (2012) I percorsi di istruzione e formazione professionale nell'anno della sussidiarietà, a.f. 2011-2012

	Very substantial progress has been made by the Human Resources Development Authority (HRDA) in mapping out the requirements for professional qualifications in scores of professions; testing opportunities have been provided and they have been availed of. A New Apprenticeship System is being refined. In 2006, a modernisation drive for PES, co-funded by ESF, was started. Qualified employment counsellors were hired and trained by external consultants to provide guidance on employment prospects and opportunities and on training possibilities. Unfortunately, the crisis and the rising number of the unemployed have limited the implementation of these plans. Technical Schools have a poor image, owed not so much to the quality of the education that they are capable of providing as to the limited interest shown by society in technical and vocational options. The Ministry of Education and Culture (MOEC) is only just beginning, following pressure from the Lisbon process and responding to the incentives offered by the ESF, to promote major changes in this area.	
Latvia	In 2007, the Dynamic Optimization Model, which was developed through 2005 – 2007, was presented within a study 'Long Term Forecasting System of Labour Market Demand and Analysis of Improvement Opportunities' which was 75 % co-funded by the ESF. The Dynamic Optimization Model is based on five modules: public, economic, environment and resources, technological and labour market. ESF supported the project 'State Employment	ESF offers stipends for VET students and high achievers in priority programmes (dates unclear).

	Agency's labour market forecasting and monitoring system development', which led to the use of an econometric forecasting model by the State Employment Agency (dates unclear). As part of the ESF programme, a new project 'Development of Labour Market Demand Medium Term and Long Term Forecasting System' was carried out over the period 2010-2013 in order to improve the existing system and quality of the forecasts. From 2010, ESF-supported short vocational programmes for young unemployed (these are possibly still ongoing).	
Lithuania	Key activities to update education and training offer have been funded from ESF. Within the project 'Formation of qualifications and development of modular VET system' 10 sectoral qualifications standards and 60 modular VET programmes are being designed (project implemented during 2010-15). The coordinator of project is Qualifications and VET Development Centre (KPMPC). (For more information about project (in Lithuanian) see http://www.kpmpc.lt/kpmpc/?page_id=1364). 50 HE study fields descriptors (benchmark statements) were designed within the project "Development of study fields' descriptors regulating system (SKAR-2)". The coordinator of project was the Centre for Quality Assessment in Higher Education. (For more information about HE study field descriptors (in Lithuanian) see http://www.skvc.lt/default/lt/kokybes-uztikrinimas/krypciu-aprasai). The Lithuanian Students' Non-Formal Education	The Lithuanian Students' Non-Formal Education Centre implemented an ESF-funded project to promote science and technologies among young students, providing youngsters with an opportunity to engage in scientific activity. For example, in 2014-2015 a mobile laboratory visited general education schools in different regions of Lithuania. During these visits 8-11th year students carried out scientific research, attended lectures, observed demonstrations of scientific experiments.

	Centre is responsible for methodological assistance to schools and other institutions, and is involved in training career guidance staff. It has coordinated a national ESF project (2010-2015) for the development and management of vocational guidance system in general education and VET.	
Luxembourg	No mention of ESF	No mention of ESF
Hungary	ESF funds have been used to develop both forecasting tools and also procedures for using the results, yielding a number of instruments. As of 2013, the Integrated HE Graduate Tracking Database (IHGTD) was put in place (Nyüsti and Veroszta 2014) using ESF funding⁸⁰. In 2010, a project was launched with ESF funding⁸¹ to establish a model framework and an associated databank to support a medium-term forecast of demand and supply on the labour market. The main aims set by the Ministry for Social Affairs and Labour, the project was delivered by the Institute of economics, Hungarian Academy of Sciences. Following developments of similar intent (Cseres-Gergely 2008a), the aim was to improve upon those by introducing a modular modelling structure to improve transparency and consistency and by using data that spans both demand and supply at the micro level as well as by delivering highlights of the results to the general public in an innovative way. The project is	Hungary operates several devices of skills intelligence ranging from a structural estimation framework to short-term surveys. These are related thematically and share know-how on an ad-hoc basis, but are nevertheless not part of an integrated development strategy. ESF funds are used for initial developments, but continued development (a prerequisite of usefulness in many cases) is not always guaranteed. Grants for the development of teaching material and training for lecturers are used in higher education, much of which has ESF backing.⁸² Grants and ESF-funds do play a part in the operation and development of both kindergartens and primary schools, but their role is not decisive. Examples include programmes in the SROP priority 3, such as the SROP 3.1.4 and 3.1.5 in the case of kindergartens and primary schools, promoting competence-based education, inclusion and training of teachers. Such programmes fund also schools and programmes for children with special education needs, such as the SROP 3.1.7. Vocational education also

⁸⁰ Project 4.1.3-11/1-2011-0001 of the Social Renewal Operational Programme.

⁸¹ Project 2.3.2-09/1-2009-0001 of the Social Renewal Operational Programme. See more including reports at <http://elorejelzes.mtaki.hu>. Note that the author was deputy head of the project.

⁸² Examples include programmes in the SROP priority 4.

	described in detail in (Bakó, Cseres-Gergely, and Galasi 2013a), while (Bakó, Cseres-Gergely, and Galasi 2013b) gives a compact summary. After 2012, the central development of LLG using ESF funds shifted away from information sources, but the new main direction is not clear yet.	benefits from these programmes. Training programmes provided as ALMPs are financed through the central budget and from EU funds, mainly ESF.
Malta	ESF funds have been used in the production of a number of reports regarding skills supply and needs. Governments have promoted further education in specific areas of study through various scholarship schemes. Several of these schemes are co-financed through EU funds.	The proposed development of a 'National Interactive Science Centre' which will be co-financed by EU funds, is meant to include hands-on science exhibits and to encourage scientific research. The centre aims "to entice students to take up science subjects at school as well as to bring science closer to the general public"
The Netherlands	In the former ESF time frame a lot of companies made use of ESF to provide small courses to their low skilled workers.	• An ESF strand that has been prolonged is the one addressing interventions for pupils with learning difficulties, aiming at assisting school-leavers from special education into a job or into further education.
Austria	ESF funds have been used only to a limited extent for the production of labour market intelligence. Very occasionally, projects in some regions were implemented. Apart from research projects with the aim of identifying training needs of certain disadvantaged groups, few projects were carried out with a focus on regional employment perspectives⁸³. The main objective is to identify skills demands of regional companies and to develop relevant training programmes. These projects are isolated and not an integrated part of a regional skills governance strategy.	

⁸³ E.g.: <http://www.newskills.info/>; <http://www.rmooe.at/projekte/regionale-koordination-des-pakts-f%C3%BCr-arbeit-und-qualifizierung-o%C3%B6-paq>

Poland

In 2011, a process towards a more integrated anticipation system was initiated by launching the ESF-funded project Task 2: Elaboration of integrated prognostic and information system. This project was jointly run by the Centre for Human Resources Development (leader) and the Institute of Labour and Social Studies (partner) and aimed to implement an integrated system of employment forecasts in Poland by 2014. However, the extent to which this target has been achieved is unclear.

The Study of Human Capital in Poland (Bilans Kapitału Ludzkiego BKL) is the main forecasting tool at the moment. The results of the BKL have been used to inform/steer the disbursement of ESF funds in the National Operational Programme (2007-2013). For example, following the results of the study which showed training needs in the areas of team work, project work, and general competences the local agency in charge of the ESF funds (Marshal agency) in the province of Malopolska allocated funds specifically for training on these areas.

The BKL project is entirely funded by ESF funds (Grant amount is approximately 5,000,000 Euro), under the Human Capital Operational Programme, Priority II Development of human resources and adaptation potential of enterprises and improvement in the health condition of working people, Measure 2.1.

The European funds co-fund vocational trainings, courses, vocational apprenticeships and other projects with the aim of supporting the enhancement of the Polish labour market.

	ESF funding allowed, under a number of regional projects to develop forecasting methodology to collect labour market information.	
Portugal	At least two major studies related to the production of labour market intelligence were co-financed under the Programme of Technical Assistance (POAT) of the National Strategic Reference Framework 2007-2013 (QREN), namely Roberto Carneiro (Coord.) (2011) Portugal 2020: Antecipação de Necessidades de Qualificações e Competências [Portugal 2020; Anticipation of needs of qualifications and competences], Lisbon/UCP Paulo Feliciano (2013), Estudo de Avaliação Regional das Necessidades de Qualificações – Relatório Final [Study in regional evaluation of skills needs – Final report], study financed by the ESF-NSRF, Lisbon/Quatenaire February 2013 The Anticipation System of Skills Needs (Sistema de Antecipação de Necessidades de Qualificações, SANQ) itself does not receive support from European Funds, but the Managing Authority of the Operational Programme Human Capital (Programa Operacional Capital Humano, POCH) will make use of the System in the implementation of all VET-measures with double certification (school and occupational). Also, large proportions of the support from European Funds were channelled to the education and training system, in particular to the New Opportunities-Initiative (Iniciativa Novas Oportunidades, INO), but also to the regular schools and higher education.	The National Agency for Qualification and Vocational Education (ANQEP) expects that the financial support from the Operational Program Human Capital (Programa Operacional Capital Humano, (POCH/ESF) may be important for upgrading the role of the Centres for Qualification and Vocational Education (CQEPs). A further positive impulse may come from POCH's financing model for the CQEPs that gives an extra incentive to those CQEPs who guide at least 20 % of their users to VET-measures at other institutions (e.g. a CQEP at a school guiding at least 20 % of their users to IEFP-measures).

Romania	In higher education, ESF co-financing in the frame of Priority Axis no.1 of the SOP HRD 2007-13 has been used to finance doctoral and post-doctoral studies ⁸⁴ .	Several types of financial incentives are available both to individuals as well as to enterprises in order to stimulate engagement in education and training with a particular focus on vocational education and training at all levels⁸⁵. Apprenticeship is well endowed in this respect with the apprenticeship act (law no.279/2005 with subsequent changes and amendments) providing a subsidy for employers engaging in this type of combined employment and training focusing on the young. Employers receive a subsidy calculated using the benchmark of the social reference indicator for each apprentice with which they conclude an apprenticeship contract. These subsidies may be topped up with allocations from the ESF, provided that the company engaging in apprenticeships is a beneficiary or partner in such a scheme. Subsidies are provided for the entire period of apprenticeship. Academics and research also play their part in steering the system as due to the contribution of the ESF they are better equipped to produce and provide all stakeholders with forecast and studies and make them available on a more regular basis.
Slovenia	Co-funded ESF project (2007-2013) 'Methodology projections of labour market needs and suitable model identification of qualifications in the case of mechatronics technician PTI'.	Scholarship schemes (regional), initiated by the Public Fund of HRD and scholarship and co-financed by ESF and companies, contribute to matching skills demand and supply in regions, better planning of career

⁸⁴ Subsidies offered in the frame of this scheme were quite generous which explains the relative success of the scheme, at least in terms of its „output indicators“.

⁸⁵ Initial education, both general and vocational at all levels, **is free in Romania** according to Constitutional provisions, for all citizens (*education is provided free at all levels also in the languages of the main national minorities*). However, following a second cycle of university education, even if with a state university, has to be paid. Therefore only one full cycle of tertiary academic education is free of charge and paid for by the state budget. Continuing education both general and vocational is paid. Incentives and facilities apply only to cases described in some detail in this section;

	ESF co-finances educational deficit reduction programme (national level) for active population (ages 25-64), in place since 2009. ESF financed national initiative for Lifelong Career Orientation (dates unclear). VET promotion is provided mostly by the VET institutions. In January 2006, the Ministry of Education established the board for VET promotion⁸⁶, which was followed by the adoption of the action plan for improving recognition and promotion of occupations (2007-13). The action plan was implemented mainly via projects run by the Institute of the Republic of Slovenia for Vocational Education and Training and was financed by ESF.	development and strengthening cooperation between employers and educational institutions. There are some projects (for example Effect, DialogueS), mostly partially financed by the ESF, where some Slovenian regions and associations are cooperating with European counterparts in an attempt to increase the knowledge on the methodology and implementation of good practices into local environment.
Slovakia	The National System of Occupations (NSO) (due for finalisation at the end of 2015 with funding from the 2007-2013 ESF period) includes the setting up of a job registry with national occupational standards, describing employers' job requirements in terms of necessary skills and qualifications. In 2014 the Central Labour Office launched a new ESF-funded national project 'Forecasting labour market developments' and commissioned private agency Trexima to develop a comprehensive skills anticipation system that would serve to optimise the secondary school network and adjust the offer of study and training programmes. The ESF-supported (2013-2015) project run by the National Lifelong Learning Institute involves, inter	

⁸⁶ The promotion board was active until 2009 when its responsibilities were taken over by the Mojaizbira.si team.

	alia, the creation and implementation of a monitoring and forecasting system of educational needs for lifelong learning and career guidance. ESF-funded national project – ‘Universities as engines of the development of a knowledge society’ (2013-2015)⁸⁷ project aimed to assess the effectiveness of study programmes with regard to labour market needs. ESF-funded project Development of secondary vocational education (2013-2015)⁸⁸ aimed to support career counselling and professional orientation of secondary VET students with the aim to improve their preparedness for the labour market.	
Finland	ESF funds have been widely used to support the development of the forecasts infrastructure. Several ESF funded anticipation projects have been carried out. The role of these instruments is not less important in practice, but they do not form such a coherent structure as VATTAGE / MITENNA (VATTAGE (steered by the consortium of key ministries) and MITENNA (the Ministry of Education and Culture) are two key forecast tools used to steer education). They include regular surveys, interviews, databanks and statistical follow-ups of labour and skills need in working life. One interviewee mentioned that a large part of the anticipation activities in Finland rely heavily on ESF funding which unfortunately	In Finland, there is an extensive career guidance system, with specialised professionals, extending from high schools to further education and in PES offices. The already well-established system is continuously developed, and in the next round of the Structural Funds (ESF) special development projects are anticipated to further enhance the system. See http://www.opinovi.fi/english/.

⁸⁷ The project is coordinated by the National Institute for Certified Educational Measurements, a <http://www.vysokoskolacidopraxe.sk/>

⁸⁸ <http://www.rsoy.sk>

	makes them quite discontinuous and under-resourced. The frame for qualitative forecasting is mainly financed by ESF. ESF funds have been widely used in the education sector. Learning in - as real as possible - working environments has been one of the most active fields of project development, especially in VET. Most vocational qualifications include time spent on compulsory on-the-job learning. The problems identified relate to the commitment of business and industry to the joint projects and to creating permanent practices. In recent years, several regions have faced major restructuring. Structural Fund including national and ESF funds has granted support to these regions in order to re-educate workers who have been made redundant, among other measures. At the regional level several projects and permanent players have indirect influence on education provisions.
Sweden	• While the Swedish ESF Council⁸⁹ does not provide direct assessment or forecasting on skill and occupational needs, it finances various projects at the regional level that may improve the matching process in the labour markets. The Swedish social fund usually supports projects that aim at enhancing the employability of individuals across the life course through competence development. Some of the

⁸⁹ The Swedish ESF Council is the authority responsible for the implementation of the Social Fund (2007-2013) in Sweden

		funded projects listed in the Swedish ESF Council home page ⁹⁰ aim to identify skill needs for a particular occupation, industry or region. In each of the eight regions included in the Swedish ESF, there is a partnership consisting of local actors and representatives of the labour-market organisations. The regional partnerships participate in the set-up of the regional plans, which contain some political assessment about skill and competence needs at the regional level.
United Kingdom	No mention of ESF	No mention of ESF

Compiled by ICF Consulting, on the basis of the country fiches prepared by the EEPO experts

⁹⁰ <http://www.esf.se/Resultat/Projektartiklar/Kompetensutveckling/>

Annex 2 – Information gaps and indications for further research

Gaps in information or evidence on this topic identified during the course of the drafting of this Synthesis Report are listed in the table below.

Table 2. *Information Gaps and Indications for further research*

Skills governance is a concept which is multi-faceted and complex. There could be value in conducting a review of the concept of skills governance, with a view to establishing a more robust definition.
It is hard to group or 'label' countries according to their approaches to skills governance, partly because of the multi-layered nature of the concept. In the future, there is scope to do more work to look at the governance systems within the different education and training sub-systems, to try to shed light on how they are coordinated.
Further analysis would be needed to understand the extent to which the characteristics of national education and training systems tally with the national forecast infrastructure and which mechanisms to shape educational policies would be most appropriate in different settings.
Future work could also look at the issue of how countries with devolved responsibility for education can ensure that forecasts are taken into account.
A series of case studies could look at examples of skills governance from across Europe in order to identify evidence-based good practices. There could be merit in sharing good practices in data collection methods, including collecting data from employers; approaches to ensuring integration / exploiting synergies of concurrent data collection systems; effective statistical infrastructures; approaches to promoting cooperation between stakeholders; and policy on skills forecasting / governance; dissemination.
The overview of ESF support for skills governance activities provided in Annex 1 could be reviewed and updated.
Further research could look at the efficacy of transmission mechanisms.
In a number of countries it is not clear to what extent skills and labour market intelligence determines the actions and decisions of users. Further research is needed to get a clear picture on the use and processing of information provided by various forecast approaches and the efficacy and efficiency of existing institutional mechanisms to ensure that labour market intelligence is used
Further research could also address the needs of users in terms of the time-period of forecasts (short-, medium- and long-term).
One main problem in adapting to future skills needs is the lack in fundamental research regarding the impacts of digitalisation of the labour market.
It would also be valuable to gain insights into the extent to which the interests of small businesses are covered by skills intelligence and the different needs they may have as users of intelligence.
There is a lack of information on the extent to which career guidance services take into account skills forecasting mechanisms.
Further research would be needed on the extent to which information is used to inform education and training policies and provision.
There is a lack of information / evidence on how policies and strategies are influenced by the context of dual education systems.

It would be interesting to find out the level of student demand for promoted subjects and programmes.

What kind of accreditation and approval mechanisms impact most effectively on the quality and relevance of provision.

The impact of adjusted education and training programmes on employment and employability, especially for the unemployed.

How different policies and strategies are coordinated across regions of a country, especially where there is a high level of labour mobility across regions.

The extent of long-term adaptation of education and training provision as opposed to adaptation to short-term priorities.

The sorts of data that might be useful to inform at the strategic level and that are necessary to ensure the more immediate responsiveness of providers to skills needs.

The extent to which (financial) incentives to steer education and training provision take into account the results of skills forecasting.

Further research could look into the extent of stakeholder involvement in steering education and training provision and the mechanisms that are most effective for different kinds of stakeholder (e.g. employers and trade unions).

There was a lack of evaluative information on the effectiveness of stakeholder involvement in steering education and training provision in the country fiches. This may be an issue to look at more closely in the future. A more in-depth review of employer and / or social partner involvement might also be useful.

A new dimension not investigated so far might be the outcome of any skills governance taking place, which would have to evaluate whether there seem to be weaknesses in the current national labour markets, or whether they appear to function well.

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