



European Centre for the  
Development of Vocational Training

## **MEDIUM-TERM FORECAST OF OCCUPATIONAL SKILL NEEDS IN EUROPE: INTERIM RESULTS**

Skillsnet technical workshop

7-8 May 2007, Maastricht, the Netherlands

### **WORKSHOP CONCLUSIONS**

The workshop was coorganised by the European Centre for the Development of Vocational Training (Cedefop), within its network on early identification of skill needs 'Skillsnet', and by the Research Centre for Education and the Labour Market (ROA) in the University of Maastricht in the Netherlands.

Participants: 37 experts from 23 European countries (20 EU Member States) and several European institutions and organisations attended the workshop.

#### **Background and objectives**

In October 2005, Skillsnet/Cedefop organised in **Cyprus** (in cooperation with Human Resource Development Authority (HRDA) in Cyprus and the Research Centre for Education and the Labour Market (ROA) in the Netherlands) an expert workshop exploring the feasibility of a European skill needs forecasting approach. All participants agreed on the desirability of launching a European-wide skill needs forecasting exercise and asked Cedefop to continue with this initiative<sup>1</sup> and coordinate further steps. The decision taken was to proceed along two main paths:

- ⇒ in the short term to create a Pan-European forecasting model which would use data available for all Member States (for example Eurostat data, such as LFS);
- ⇒ in the longer term to involve all European countries in this exercise with the view to harmonise or match sources used at national level, creating a new core forecasting system for use by all European countries.

The expert workshop held in **Warwick** in November 2006 aimed to build on this foundation, presenting various initiatives which might contribute towards the development of a common approach to European skill needs forecasting. At this event Cedefop announced that, following a competitive response to an Open Call for Tender, a research team comprising

---

<sup>1</sup> This initiative respects the needs of Member States and does not affect the subsidiarity principle: Pan-European skill needs forecasting will not replace existing national forecasting systems. It is a voluntary exercise intended to complement, rather than replace, national forecasting.

IER, CE and ROA, had been awarded funding for developing a set of *Medium-term forecasts of occupational skill needs in Europe*. Some preliminary results demonstrating the feasibility of producing a regular and consistent set of Pan-European projections were presented. These results and the detailed debate amongst the assembled experts also highlighted some of the technical and other problems facing such a project.

The technical workshop in **Maastricht** aimed at taking this process a further step forward. The workshop's main objective was to get feedback from country experts on the interim results of a medium-term forecast of occupational skill needs in Europe. The forecast is being developed and conducted by a team of researchers from the Warwick Institute for Employment Research (IER), Cambridge Econometrics (CE) and the Research Centre for Education and the Labour Market (ROA), within the framework of Cedefop's international network on early identification of skill needs 'Skillsnet'.

The workshop:

- reported on developments towards producing a Pan-European forecasting model;
- presented interim results of the medium-term forecast of occupational skill needs in Europe;
- discussed with Member States related data quality, possible scenarios and approaches to modelling replacement needs;
- discussed data gaps and possible ways to fill the gaps;
- discussed further concrete steps towards the development of a high-quality Pan-European forecast.

## **Workshop conclusions**

### *1. Summary*

The project team (IER, CE and ROA) presented interim results and progress to date with the development of medium-term forecasts of occupational skill needs in Europe. The project is using a modular approach involving 4 main modules: a multi-sectoral macroeconomic model; occupational and qualifications expansion demand modules; and a replacement demand module. During the initial phase of the project the team developed a database and tools required to produce comprehensive and consistent set of skill needs projections for all Member States (except Bulgaria and Romania). It is based on data from Eurostat, adopting common methods and models. The team highlighted the main data and technical problems that have to be addressed in developing a system for producing regular projections of future skill needs at European level.

The following issues were discussed in detail:

- comparing National Accounts and European Labour Force Survey;
- E3ME employment forecasts and scenarios;
- expansion demand and changes in occupational structure;
- country workbooks;
- replacement demand and cohort change analysis.

### *2. Conclusions*

## Use of Labour Force Survey (LFS) or National accounts (NA)

A key issue which has been addressed in the project is the best data to be used to measure employment structure in Europe. There are two main alternatives: use of LFS data; or use of NA estimates. This topic was discussed in a detail during the workshop.

The numbers presented by sector, as used in the multi-sectoral macroeconomic model, are based on Eurostat NA. There are some significant discrepancies between NA and LFS data and both have advantages and disadvantages. There are also discrepancies between LFS data published by Eurostat and the micro data set provided by Eurostat. Estimates of employment based on NA are preferred in many respects, as they are consistent with other key economic indicators such as output and productivity, and NA estimates are more suitable for the demand-side projection. On the other hand, one should keep in mind the planned supply-side projection and the need for compatibility of data for the potential measurement of the mismatch in future. These considerations favour the use of LFS estimates.

The reasons for the differences are numerous. One factor is the distinction between national and domestic concepts. Another is that in the NA statistics temporary agency workers are included in the industry of the agency which employs them and not in the industry they actually work as it might be the case in LFS. The LFS might also provide a better coverage of informal employment in some countries, where this type of employment is important.

Recently much emphasis has been put on estimates of employment based on the European Labour Force Survey (LFS). These have the considerable advantage of being broadly consistent across countries and providing a measure of employment structure by skill (occupation and qualification) that is not available from the NA based estimates. Moreover all recent European policy indicators related to Lisbon agenda are based on LFS data.

The project team has begun a process of dialogue with country experts to explore these issues further. The team has produced two sets of data so far (one based on LFS and one on NA estimates). It was agreed to continue this approach and produce two sets of projections. The most detailed results will be based on the NA Sectoral estimates as used in the macroeconomic model. A second set will also be developed, which will be consistent with the published LFS estimates at an aggregate level.

## E3ME model

The multi-sectoral macroeconomic model E3ME uses a bottom-up approach and therefore feedback from country experts is very important. CE agreed to send detailed results to experts for comments. This will comprise documents including: key labour market and employment outputs; lists of variables and scenarios; and a structured response form for feedback about information regarding future major policy and related developments planned in individual countries (reforms, etc.).

As far as scenarios are concerned, there was a proposal at the workshop to produce more detailed scenarios for selected sectors with the view of a specific focus on the skills impact. Although in general the suggestion was welcomed by other workshop participants, it was decided that this approach is far too demanding in terms of time and data in the short term. However, it might be feasible and desirable in future if it is decided to continue with such projections in the coming years. It was decided, therefore, that at present the scenarios will follow the proposed layout (baseline, optimistic and pessimistic) and focus upon the proposed variables as set out by the CE team.

## Gender and status

The team have explored the possibility of expanding the results to include gender and status. However, it was agreed that it is not a priority to concentrate on this issue but the team should focus the remaining time on the production of the two sets of results (LFS vs. NA).

#### Replacement demand

Replacement demand is calculated by means of the cohort change analysis which might not be ideal but common data availability dictates this methodology. **The occupational outflow data remain problematic.** It is important to accept that for some countries estimates will be less stable, given shorter time spans of the available data.

A solution for the lack of migration data has not been found either. It was mentioned that estimations will be used where possible, given that there is little experience in historic migrations patterns for the new member countries, forecasts of the impact of migrations are difficult.

#### Period of forecast

The discussion regarding the period of forecast concluded that detailed results will be provided up to 2015 although trends and more broad brush results will be presented beyond 2015, as an indicator of longer term prospects. The main reporting will focus upon 2015.

#### Publication of results

There is a need to distinguish between different users of the forecast (policy-makers, general public and researchers) and to publish and disseminate the results in appropriate way to each group of users. For example, only experts should have the access to the country workbooks where more detailed information will be available. Warnings regarding use of data, dissemination and citation will be placed on each publication.

### *3. Further steps / timetable*

The team will complete the documents relating to the macroeconomic and sectoral forecast within a few weeks after the workshop and send them out to experts for their comments, with the deadline for responses of mid-June.

Final results will be available in October 2007. An expert meeting in Vienna will take place in October or November 2007. This will provide an opportunity to discuss the final results.

The results will be presented to a wider audience at Skillsnet's Agora conference in February 2008 in Thessaloniki. A summary publication (mainly for a broader public and policy-makers) will be prepared for this event.

Further analysis of results and publications will follow.

Workshop documents (agenda, list of participants, presentations and papers) are available at Skillsnet webpage [www.trainingvillage.gr/skillsnet](http://www.trainingvillage.gr/skillsnet).