

BULLETIN

Anticipating Europe's skill needs

This Warwick Institute for Employment Research (IER) *Bulletin* addresses the development of a Pan-European skill needs forecasting capability¹. Cedefop (the European Centre for the Development of Vocational Training) and other European organisations have been repeatedly approached with requests for better information on this issue. In 2005 the European Commission, through Cedefop, set up an Expert Workshop in Cyprus, which focused on the feasibility of developing Pan-European occupational forecasts on a consistent basis. In November 2006 a follow-up workshop was held, hosted by IER. The workshop formed part of the celebration of the 25th anniversary of the founding of IER. The event was organised in partnership with Cedefop and the Research Centre for Education and the Labour Market (ROA) at Maastricht University. The workshop at Warwick represented the next major step in developing Pan-European occupational forecasts, which this *Bulletin* discusses.

Introduction

The information deficit about future skill needs in Europe has been recognised for some time. Cedefop and other European organisations have been repeatedly approached with requests for better information on this issue. With the free movement of labour resulting from the opening up of labour markets across the continent, much hope has been placed on the role of increased mobility across European countries to help to reduce unemployment. The European labour market is now a reality on the EU policy agenda.

At the same time, the occupations, skills, competences and qualifications which will be in demand in the future European labour market are not very well identified. The "Integrated guidelines for growth and jobs"² for 2005-2008 explicitly ask for a better identification of occupational needs and anticipation of future skill requirements as keys to adapting education and training systems to new skills and competence requirements. Finding better ways to obtain information on future skill needs in Europe, including joint European action, has become a priority.

The October 2005, Skillsnet/ Cedefop workshop, organised in cooperation with the Human Resource Development Authority (HRDA) in Cyprus and the Research Centre for Education and the Labour Market (ROA) in the Netherlands, explored the feasibility of European skill needs forecasting. Experts in forecasting occupations and skills from 13 European countries discussed their different approaches, data availability and compatibility of classification across countries. All participants agreed on the desirability of launching a European-wide skill needs forecasting exercise and asked Cedefop to continue with this initiative and to coordinate further steps.

A decision was taken to proceed along two main paths:

- in the short term to secure funding to develop a Pan-European forecasting model, which would use data available for all Member States (for example Labour Force Survey data);
- in the longer term to involve all European countries in this exercise, with a view to harmonising or matching sources used at national level, and with the possibility of creating a new core forecasting system for use by all European countries.

Such initiatives respect the needs of Member States and do 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.

¹ This Bulletin should be cited as Livanos, I. and R.A. Wilson (2007) 'Anticipating Europe's skill needs', *Warwick Institute for Employment Research Bulletin*, Number 85. For any further information please contact Ilias Livanos at IER (I.Livanos@warwick.ac.uk).

² See Commission of the European Communities (2005), *Integrated Guidelines for growth and jobs*, Brussels

Workshop rationale and objectives

The expert workshop hosted by IER in November 2006 aimed to build on this foundation, presenting various initiatives which it is hoped will contribute towards the development of a common approach to European skill needs forecasting. The workshop was attended by around 45 experts from all over Europe. The participants were all experts in (econometric) forecasting of occupations, skills and qualifications, at national and European level. Representatives of the European Union and Cedefop also attended the event.

The workshop, which was also organized within the framework of Cedefop's international network on the early identification of skill needs, "Skillsnet", focused upon methods and data. This included concrete suggestions for further practical steps and the gradual involvement of all European countries interested, including European Economic Area/European Free Trade Association and candidate countries.

The workshop aimed to:

- report on various developments towards producing a Pan-European forecasting model;
- present various country initiatives on common approaches to skill needs forecasting in Europe;

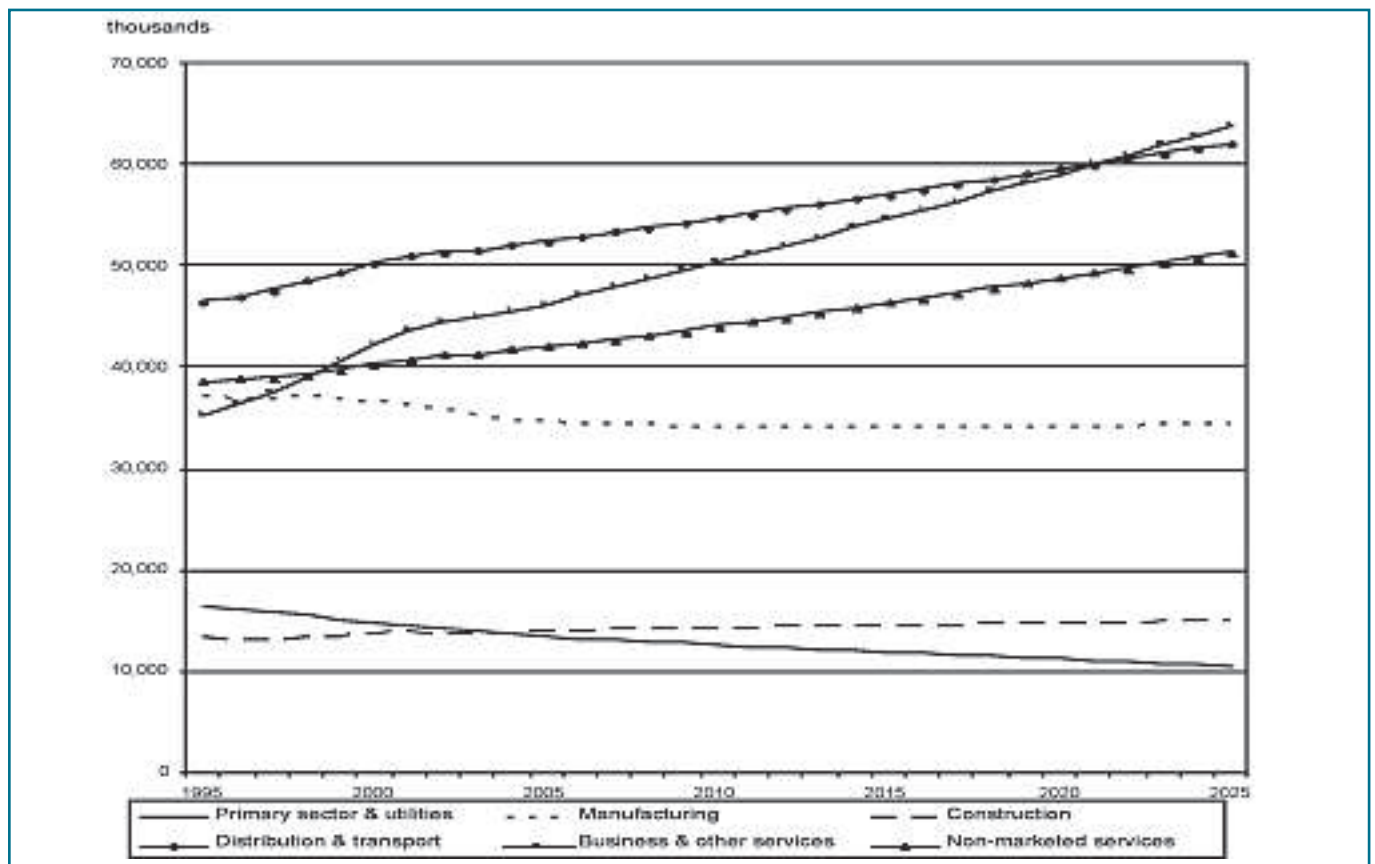
- compare the sets of consistent information provided by Member States prior to the meeting;
- identify data gaps and possible ways to fill them;
- begin a discussion of approaches to supply side projections;
- agree further concrete steps towards the development of a robust system for European skills need forecasting.

Presentations

A number of formal presentations were made³, which covered key issues in anticipating future skill needs. The workshop started with two introductory presentations by Cedefop representatives. The first provided an overview and follow-up of previous Cedefop activities in anticipating skill needs, and mainly highlighted the major conclusions made in the previous workshop in Cyprus. The second presentation set out the aims and rationale of the Warwick workshop (as described above).

Cedefop announced that (following a competitive tendering process) IER, in collaboration with ROA and Cambridge Econometrics (CE), had been awarded a contract to develop a set of medium-term forecasts of occupational skill needs in Europe.

Figure 1: Employment trends by broad sector (EU25)



Source: IER estimates based on Cambridge Econometrics E3ME Model

³ The main presentations from the workshop can be found at http://www.trainingvillage.gr/etv/Projects_Networks/skillsnet/news.asp?idnews=2056

Rob Wilson from IER then presented an outline of the project including the approach to be utilized and some preliminary results based on a macro-economic scenario prepared by CE. The results demonstrate the feasibility of developing a set of consistent and comprehensive employment projections across all 25 countries of the EU. While the results have their limitations, they provide a useful starting point for thinking about likely future developments in employment structure across the continent. Figures 1 and 2 illustrate some indicative employment trends by broad groups of sectors of economic activity (6 categories), and occupational groups (9 categories) across all 25 EU countries (i.e. for the whole of Europe⁴). They illustrate slow but inexorable change in employment patterns by both sector and occupation. These trends are generally reflected across all the countries of the EU although there are many detailed variations.

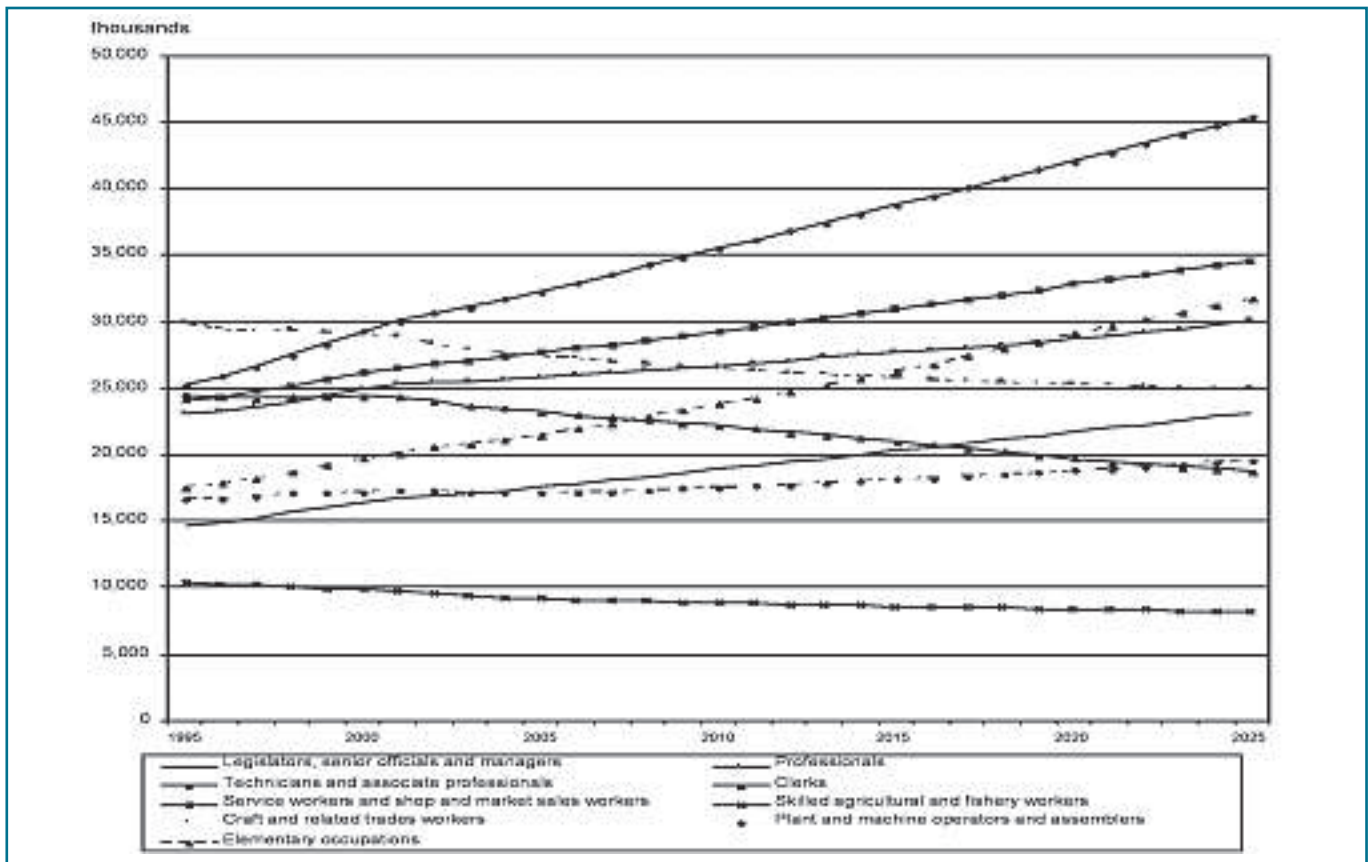
Ben Gardiner, from Cambridge Econometrics, presented a brief description of the multi-sectoral macroeconomic model E3ME, which will be the foundation for the production of Pan-European medium-term forecasts of occupational skill needs in Europe. E3ME is an Energy-Environment-Economy (E3) Model of Europe. The economy element includes a detailed treatment of sectoral employment. The model has been used for

general macro analysis and for more focused analysis of policies relating to the environment, as well as employment forecasting. Its Pan-European coverage is appropriate for an increasingly integrated European market. E3ME provides a one-model approach in which the detailed industry analysis is consistent with the macro analysis: in E3ME, the key indicators are modelled separately for each sector, and for each region, yielding the results for Europe as a whole.

Experts from The Netherlands, Ireland and France also outlined the forecasting methodologies that their institutions have developed.

- Hans Heijke from ROA presented a general outline of the 'ROA approach' to labour market assessment and forecasting.
- Frank Corvers from ROA discussed *Skill Structures of EU Countries*.
- Roger Fox from Foras Aiseanna Saothair presented a critical assessment of the 'Cohort Component Method of Deriving Replacement Demand'.
- Claude Sauvageot from the French Ministry of Education presented a methodology and some results from France, using international classifications.

Figure 2: Employment trends by broad occupation (EU25)



Source: IER estimates based on Cambridge Econometrics E3ME Model.

⁴ This table refers to the European Union before 1/1/2007.

- Jan Koucky, from the Education Policy Centre of the Charles University of Prague, also presented a more general methodology and results for 19 European countries, focusing on job structures and qualifications requirements.
- Finally, a presentation on methods for projecting the supply side was made by Manfred Tessaring from Cedefop. The presentation of models of the supply-side made a useful start to a broadening of the discussion, which it was agreed should be continued in future, either in the form of a special workshop or in a section on future workshops on European level forecasting in general.

Prior to the event, individual country experts had also been asked to prepare a country report, which was based on a template set by the organizers. The purpose of this exercise was to compare their estimates of structure and trends with the preliminary individual country results, prepared by Rob Wilson and reported in his presentation. A key aim of this was to generate debate about the data and other issues that should be taken into consideration, and the areas that should be improved upon, in order to produce high quality research and robust results when anticipating future skill needs. A key issue which emerged was the often large discrepancies between employment estimates based on National Accounts and the Labour Force Survey. There are many reasons for these differences. These issues will need to be addressed by the project team in producing a definitive set of results that have general credibility.

Political momentum for a more systematic approach to anticipating skill needs in Europe

A Pan-European forecasting of skill needs project is very much in tune with the current policy agenda and can contribute substantially to achieving a number of policy objectives at European level⁵. The agenda for growth and jobs has led to the production of guidelines which include improvement of the identification of skill needs⁶. These guidelines have to be translated into national action plans. This implies an increased interest in skill needs forecasting at member state level. There are a number of other EU-level initiatives where the potential role of Skillsnet in general, and the Pan-European forecasting project in particular, may be significant (e.g. EC-approved qualitative-type projects on scenario development, technology platforms, clusters, EU framework on key competences, etc.). The aim of those

⁵ The need to anticipate skills and occupational needs is a priority in the Maastricht Communiqué, in the Regulation (EC) on the European Social Fund, in the Social partners' framework of actions for the lifelong development of competencies and qualifications, etc.

⁶ European Council's integrated guidelines for employment for 2005-2008 (guidelines nos 19, 20 and 24) – http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_205/l_20520050806en00210027.pdf

involved is to harness this current political momentum in order to advance the approach to these issues across Europe. It is important to be clear about what such projects can and cannot bring, to avoid raising false expectations. The short-term exercise, which was the main focus of the Warwick workshop, is a technical, independent research project with no political agenda. For the long-term approach political agreement may need to be achieved and policy-makers will have to be given their say on what they expect from such a broader project.

Conclusions

The Warwick workshop reached a general consensus on the desirability of producing Pan-European skill needs forecasts. It was proposed that all experts should reconvene in follow-up workshops in 2007, in order to discuss these issues further. This will include a presentation of the scenarios being developed by the CE/IER/ROA team, and an opportunity to comment on the preliminary results produced by then. It is planned that the final results of the medium-term forecasts of occupational skill needs in Europe project will be presented in a workshop in the autumn of 2007. The participants also agreed on future collaboration which will lead to the development of more sophisticated forecasting methods in the future.

Main papers presented in the workshop: *Anticipating Europe's Skill Needs*, 2-3 November 2006, University of Warwick

Corvers, F. (2006) *Skills Structure of EU Countries: Results of Developments in Industry Structure or Technological Change?*

Fox, R. and B. Comerford (2006) *The Cohort Component method of Deriving Replacement Demand- Lessons from Ireland*

Gardiner, B. (2006) *Description of the E3ME Model*

Heijke, H. (2006) *ROA's labour market forecasting approach: Beyond manpower planning*

Koucky, J. (2006) *EU Labour Market, Job Structures and Qualification Requirements*

Sauvageot, C. (2006) *Forecast methodology in employment – education and training using international classifications – application to France*

Tessaring, M. (2006) *Supply forecast methods*

Wilson, R.A. (2006) *Pan-European Employment Projections: Individual Country Results*

Wilson, R.A. (2006) *Pan-European Employment Projections: Some Preliminary Results*

In addition a number of other country specific papers were tabled, highlighting trends and issues in individual countries.