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Forecasting skill supply and demand in Europe: Year 2 work programme

SKILLSNET TECHNICAL WORKSHOP
15-16 June 2010, Thessaloniki, Greece

**Institute for Employment Research,
University of Warwick, United Kingdom**



Researchcentrum voor Onderwijs
en Arbeidsmarkt

Research Centre for Education
and the Labour Market

WARWICK INSTITUTE *for*
EMPLOYMENT RESEARCH



Overview

- **Key Tasks in Year 2 of the work programme**
- **The focus of this workshop**
- **The role of country experts**

Key Tasks

Task 1: New scenarios	CE/IER
Task 2: Validation/ confrontation	IER/CE/ROA
Task 3: Model development	IER/ROA
Task 4: Qualitative scenarios	IoE/IER
Task 5: New approaches to RD	ROA/IER
Task 6: Skills upgrading	ROA/IER
Task 7: Interactions & imbalances	ROA/IER
Task 8: Refining demand models	IER
Task 9: Refining supply models	IER
Task 10: CGE scrutiny	CGEs
Task 11: Migration	PPMI/IER
Task 12: International comparisons	EPC/GIB/IER
Task 13: Generic skills	EPC/IER
Task 14: Detailed Occupations	AM/IER

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Task 1: Update and policy/impact scenario (CE/IER *et al.*)

1. Aim:
 - to improve strategic thinking and policy making; and
 - to clarify how better anticipation can help to improve outcomes.
2. Provide an updated benchmark projection, taking into account the latest macro data and recovery from recession;
3. Development of alternative policy/impact scenarios around this benchmark:
 - sensitivity of outcomes to key external drivers;
 - key policy changes and reforms, which might be implemented;
4. Task to be closely integrated with development of more qualitative scenarios (Task 4).
5. The *Skillsnet* workshops to be used as a sounding board for the new scenarios, providing inputs and feedback.

Task 4: Development of more qualitative scenarios (IoE, *et al.*)

1. Not everything can be quantified – and the interpretation of the results is also not a purely a matter of numbers
2. This task will develop procedures for using the results as part of a scenario development tool that is relevant and useful for decision makers involved in the provision/supply of skills at a national and pan-European level.
3. It will show how they can contribute a qualitative element to the policy debate, including exploration of new scenarios and impacts of possible external shocks.
4. It will develop qualitative scenarios linked to the main quantitative results (including the new ones developed in Task 1) as a readily understandable evidence base that can help decision makers to make best use of the outcomes of skills needs and supply forecasting – as a translation device for complex data.

Task 2: Validation/confrontation of forecast results against outcomes (IER *et al.*)

1. How good are the forecasts?
2. A simple question but there are no simple answers
3. This task will involve confronting the forecasts from the two pilot projects (both supply and demand) against the actual developments on the labour market and to provide an explanation of why differences have arisen.
4. Not a straightforward task - need to develop a methodological approach to evaluation:
 - validation of the methodological approaches;
 - evaluation of the use and usefulness to users;
 - assessment of the performance of the models;
 - Overall approach, combination of :
 - Internal quantitative assessment .
 - External more qualitative overview

Task 3: Further development and improvement of the system/model/modules (IER)

1. An overall assessment of the lessons to be learned to date based on findings from the previous work (including the detailed feedback and recommendations from *Skillsnet* workshop participants).
2. These include the need (*inter alia*) to:
 - focus more attention on flows and their integration into the supply forecast;
 - to avoid problems with implausible cohort effects on the supply side;
 - ensure greater consistency between modules, including integrating:
 - labour market participation decisions and educational participation amongst young people;
 - retirement decision for older people and implications for replacement demands; and
 - migration flows and replacement demands.

Task 5: New approaches to replacement demand (ROA)

1. Development of new replacement demand estimates:
 - small selection of countries;
 - use of national data sets (more detail, panel)
 - use of retrospective questions & possibly panel estimates (LFS));
 - comparisons with cohort component method.
2. Also draw on lessons identified in Task 3, highlighting the need for consistency with other modules on the supply side.

Task 6: Skill upgrading in Europe (ROA)

1. This task will explore different methods of assessing the importance and speed of skill upgrading using Labour Force Survey data and other sources;
2. Methodology to be articulated around data containing wage information using the KLEMS data set for 12 countries, (incl. Australia, Japan, USA)
3. Estimation of the speed of skill-upgrading for three skills group (low, medium and high educational levels), within 11 sectors of industry.

Task 7: Modelling interactions and analysis of imbalances IER/ROA)

1. This task will continue the development of the methodology for analysing interactions between demand and supply (modelling of adjustment processes); and
2. How they could be applied to the skill demand and supply forecasts.
3. Report on recommendations and concrete proposals for the development of the methodology for the analysis of interaction between demand and supply to be implemented in 2011.

Task 8: Refinement of the econometric modelling of demand for skills (IER)

1. This will involve refining the treatment of expansion demands by exploring the use of more sophisticated econometric models, incorporating more economic drivers and covering other types of analysis that might help to develop more behavioural explanations of skill changes in the EU.
2. It should be recognised however that there are limits to what can be achieved in this direction due to data limitations.
3. The results will be written up in a technical report describing the findings and the scope for using these to generate alternative projections from the standard model.

Task 9: Refinement of stock supply model (IER)

1.This task will continue the work on improving the stock supply model, including:

- providing additional detail on level and type of qualification;
- exploring the potential for focussing more upon flows; and
- exploring the possibility of introducing more behavioural content by establishing robust links between education/supply choices and economic indicators such as rates of return to certain type of skill investments to use the results to generate alternative projections in a later stage.

2.As with the demand side, it is important to recognise the limitations of what may be possible in all three areas due to data limitations.

Task 10: Additional country expert scrutiny (CGEs)

1. The role of the Country Group Experts is to act as a sounding board to scrutinise and check the detailed data and results for groups of countries as part of the validation and evaluation process
2. This is in addition to *Skillsnet* individual country expert validation.
3. Acting as facilitators and rapporteurs, producing inputs for the *Skillsnet* Workshops as well as reviews of the discussions.

Task 11: Migration (PPMI)

1. Key issue affecting both skills demand and supply in many countries;
2. Main aim to develop new insights and quantitative estimates, which can enhance the projections of skills supply and demand;
3. NB - Migration a misnomer? (much relates to mobility within Europe);
4. The project will:
 - Draw upon existing research and evidence in the context of the Cedefop project;
 - Focus on **all** countries covering recipients as well as donors;
 - Also consider migration in and out of EEA; and
 - Consider qualification recognition across country borders.
5. The final outputs from this task to be tied directly to the main quantitative projections.
6. Production of a technical report summarising:
 - the key features of past and future migration trends across Europe;
 - implications of this for quantitative estimates of the future supply and demand of skills to feed into next year's projections.

Task 12: International comparisons of changing skill structures and projections (EPC *et al.*)

1. This task will compare methods and approaches adopted, as well as main trends in the development of employment structures recognized in recent available forecasts, from and outside Europe.
2. The aim will be to identify any methodological lessons that might be learned from other country's experiences as well as to identify common patterns and probable key developments for particular countries or sectors.
3. The task will be focused on detailed comparison with the US BLS projection 2008-2018, the Prognos AG projections up to 2020, and a brief overview of 3 other competitor countries forecasts (Canada, Australia and one Asian country).
4. A comparative analysis of the methods and main trends in sectoral and occupational development of selected countries in and outside Europe will be set out in a detailed report, summarizing key features in common, and key differences.

Task 13: Implications for generic skills and disciplines (EPC *et al.*)

1. This task will involve the development of “static” 2008 (year) skill profiles for some 40 E3ME sectors and about 110 occupations (ISCO 3-digit level), but also including some 900 sector-specific occupational profiles (E3ME sector and ISCO 3-digit occupational groups);
2. It will also focus on likely change of skill profiles for individual occupations over time and develop additional "dynamic" profiles for 2000, 2009 and 2020 to be ready for use in the 2011 update (to be delivered in Excel format compatible with the main workbooks).
3. It will also consider links to new taxonomy/terminology European Skills Competences and Occupations (ESCO) to be developed by the EC in 2010.
4. It will produce an updated methodological report on how all the key concepts are defined and measured at the level of occupation and sectors.

Task 14: More detailed projections of occupations and skills (AM & IER)

1. Need for greater detail
2. This task will involve the development of a more robust database of data by sector and ISCO 3-digit occupational groups using the LFS (and subject to data limitations breakdowns by field of study).
3. It will also develop robust procedures to analyses developments at this level and link them to the main modules (EDMOD and STOCKMOD) to increase the capacity of projecting demand at this level for 2010/2011, in a manner compatible with Task 13.
4. A methodological report will be produced explaining how this works and providing guidelines for interpretation.

Contact Details

Rob Wilson

Institute for Employment Research

University of Warwick

COVENTRY, CV4 7AL

r.a.wilson@warwick.ac.uk

Tel: +(44) 2476-523530