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Forecasting skill supply and demand in Europe: Model developments

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

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

Overall assessment of the lessons to be learned to date from the previous research (based on the detailed feedback and recommendations from *Skillsnet* workshop participants), including:

- labour supply and supply of skills
- demand side refinements (including RDs)
- greater consistency between modules:
 - 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.
- Interactions and imbalances

Labour supply and related issues

- Need to 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 11 and Task 9)

Supply of skills

- Need to focus more attention on flows and their integration into the supply forecast (Task 9);
- Need to avoid problems with implausible cohort effects on the supply side (Task 9);
- Further econometric analysis of skill supply:
 - Use of economic and other indicators (behavioural links)
 - Exploiting the panel nature of the data set (variations across countries as well as over time)

Demand side refinements

- Demand side refinements:
 - Replacement demand refinements (Task 5 & links to Task 11 (migration))
 - Expansion demands (econometric refinements (Task 8) & links to Tasks 6 (skills upgrading) and Task 14 (striving for greater detail))

Expansion demands: further econometric analysis

- Use of economic and other indicators (especially sectoral and structural indicators from E3MElinks)
- Exploiting the panel nature of the data set (variations across sectors and countries as well as over time)
- (NB Links to Skills upgrading)

Replacement Demands

- Improving the integration of replacement demand
 - Net-flows versus supply
 - Migration
 - Participation and RD
- Alternative estimation methods
 - Cohort component
 - Panel (short / long)
 - Retrospective question
- Understanding the reasons that lead to RD
- NB links to Task 11 (migration)

Replacement Demands (Alternatives)

Cohort component



Net flows by cohort groups

Panel / Retrospective



Out (and in-)flow probabilities by person characteristics

Replacement Demands

Using person rather than cohorts has the following advantages:

- Out- and inflow-**probabilities** can be calculated on **person characteristics**.
- **Reasons** for in- and outflow can, potentially, be identified. Allowing to identify reasons for replacement demand (retirement, migration, etc.) independent of assumptions.
- No problems through **sampling errors**.

Replacement Demands

Task 5

- Modelling alternative estimators using panels:
 - BHPS (UK)
 - GSOEP (Germany)
 - EBB (Netherlands)
 - Other?
- Using retrospective question(s):
 - EU LFS

Mismatches and imbalances

Three main challenges:

- Improve the comparability of supply and demand estimates;
- Develop indicators that allow
 - Comparison within countries;
 - Comparison on EU level;
- Presentation and interpretation of the indicators.

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