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Implications for future labour market imbalances

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Summary

- Making supply and demand comparable to identify imbalances
- Some imbalances are solved automatically
- Modeling imbalances
  - ‘Naive’ first estimates
  - Demand for education with sorting
  - Demand for education with substitution
- Indicators of imbalances

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Where do we stand?

- Demand forecast
  - based on National Accounts / LFS data
  - E3ME model forecast
  - Demand is by occupation
- Supply forecasts
  - LFS data and other sources
  - Stock approach (LFS)
  - Flow approach (Unesco/OECD/Eurostat – education statistics)
  - Supply is by education

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Imbalances – Allocation

- Imbalances are derived by matching supply and demand
- Allocation towards occupations is by education
- Within one occupations several education (levels) can be observed

Matching processes I

% share of education in occupation	Medical doctor	Car mechanic
Medical school	100%	0%
Car mechanic vocational school	0%	100%

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Matching processes IIa

% share of education in occupation	Civil servant	Banker
Master in Finance	20%	90%
Master in Economics	80%	10%

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Imbalances

- After overcoming problems of comparing (matching) supply and demand, imbalances can be identified:
  - ‘Naive’ first estimates
  - Demand for education with sorting
  - Demand for education with substitution

Matching processes – Sorting model

- Stock model of supply
- Demand for qualification model
- Unemployment level (E3ME) are exogenously divided over education levels
- Sorting model (RAS) reconciles demand with supply

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Imbalances – Interpretation

- Balance: “Good matches”

- Imbalance:
  - “Overeducation” – excess supply
  - “Undereducation” – excess demand

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Outlook: Substitution

- Supply and demand are generated within the framework of the **forecasting model**
- Supply is matched to demand by using **occupation/education-allocation** matrices
- Initial **imbalance identified**
- **Substitution routine** based on adjustment process is included

=> *Only imbalances remain that cannot be solved without adjustments*

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Substitution

- Needs ISCO/ISCED share matrix
- Static allocation matrix
  - More stable, but ignores developments
- Allocation matrix across years allows to infer (automatic) substitution processes

- (Heuristic) rules for further substitution?

Imbalances Indicators

- Indicators based on supply-demand mismatches
  - directly derived
  - corrected for substitution
  - measures of over-/undereducation
- Imbalance indicators based on other indicators
  - Unemployment by education level / field
  - (Relative) wage rates / changes in wage rates

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Conclusion

- Imbalances are the key to interpreting the results of skills forecasts.
- Differences in methodology, underlying assumptions and data for the supply and demand forecasts should (and will be) reconciled to allow the derivation of imbalances.
- Methodology to allow for flexibility in the allocation of the supply of workers to the demand should model ‘automatic’ adjustment processes.
- Remaining imbalances will determine the scope and need for action in support of additional adjustments.

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