Eurostat's experimental indicators on skills mismatch

**ETF Seminar on Skills mismatch measurement
25th November 2021**

The European Skills Agenda is a five-year plan to help individuals and businesses develop more and better skills and to put them to use

It sets objectives to be achieved by 2025, based on well-established quantitative indicators:

- Participation of adults aged 25-64 in learning during the last 12 month should increase from 38% to 50%

-Participation of low-qualified adults 25-64 in learning during the last 12 months should increase from 18% to 30%

-Share of unemployed adults aged 25-64 with a recent learning experience should increase from 11% to 20%

-Share of adults aged 16-74 having at least basic digital skills should increase from 56% to 70%

Policy objectives

The skills policy aims at ensuring that the skills available on the labour market correspond to the needs of the business and economy in general.

Data on skills should support and monitor the policy goals in the specific priority areas as presented in "European Skills Agenda".

2016 Technical Group

*In January 2016, a **Technical group on statistics for skills and human capital** chaired by Eurostat has been setup as an inter-service technical group of the Commission, including members of several Commission services (EAC, EMPL CEDEFOP, CNET…)*

*The technical group was given the
Mandate to provide a report containing
a proposed roadmap for the development
of skills statistics within the
European Statistical System (ESS).*

Skills dimensions

Skills supply *- skills possessed by the labour force;*

Skills demand *- skills demanded by employers;*

Skills development*, for example enrolments and on-the-job trainings;*

Skills mismatch*, defined as the gap between demand and supply of skills.*
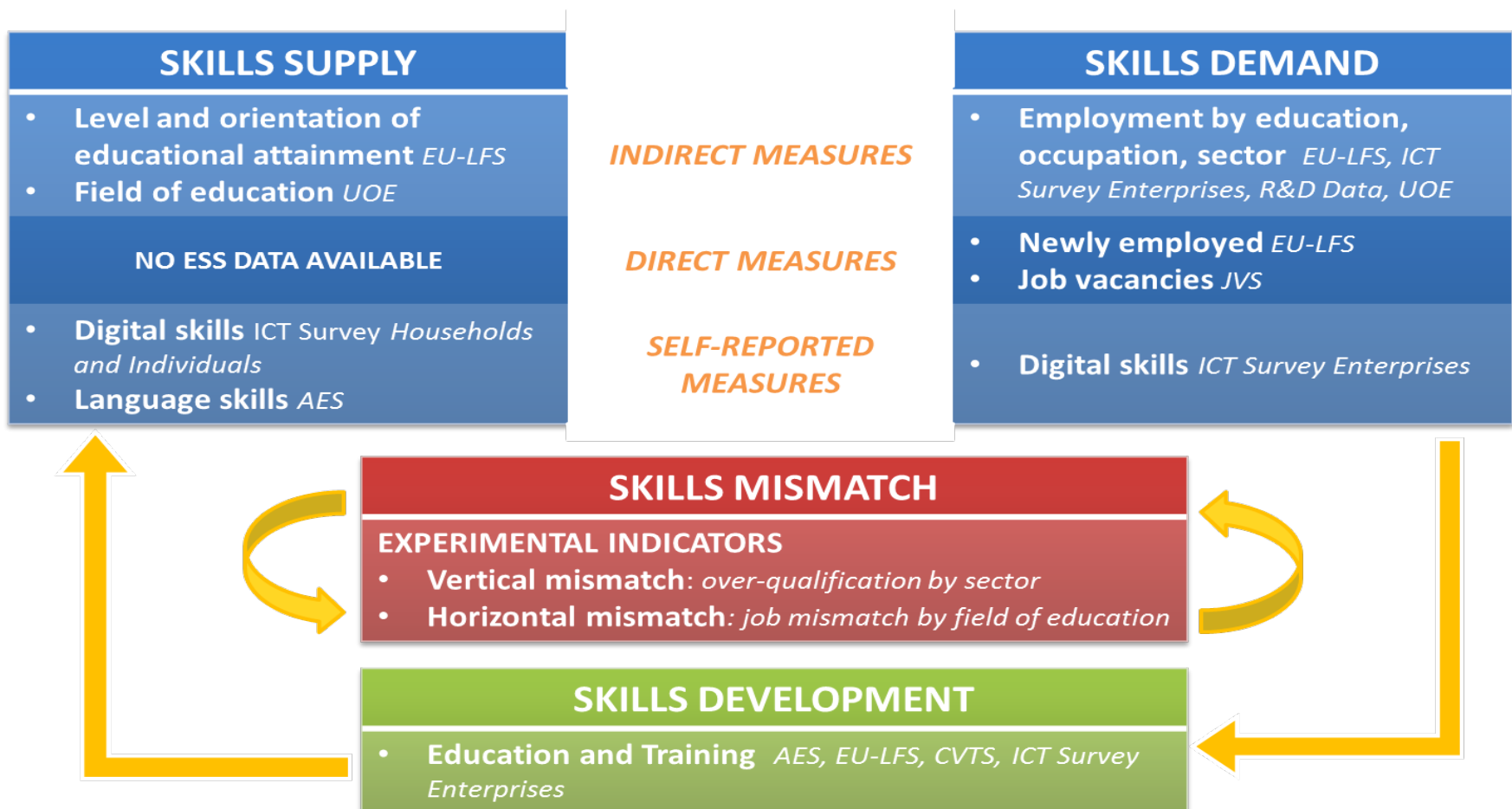
Skills measurement approaches

Indirect measures *are proxies of a certain level of skills (i.e. data on qualifications and occupations);*

Direct measures *are direct assessments of skills (i.e. test scores for skills supply), or data on newly employed and job vacancies data for the demand side;*

Self-reported level of skills *are individuals' self-evaluations of skills (i.e. subjective level of digital skills)*.

Conceptual framework & sources

SKILLS SUPPLY

- **Level and orientation of educational attainment** *EU-LFS*
- **Field of education** *UOE*

NO ESS DATA AVAILABLE

- **Digital skills** ICT Survey *Households and Individuals*
- **Language skills** *AES*

INDIRECT MEASURES

DIRECT MEASURES

SELF-REPORTED MEASURES

SKILLS DEMAND

- **Employment by education, occupation, sector** *EU-LFS, ICT Survey Enterprises, R&D Data, UOE*
- **Newly employed** *EU-LFS*
- **Job vacancies** *JVS*
- **Digital skills** *ICT Survey Enterprises*

SKILLS MISMATCH

EXPERIMENTAL INDICATORS

- **Vertical mismatch**: *over-qualification by sector*
- **Horizontal mismatch**: *job mismatch by field of education*

SKILLS DEVELOPMENT

- **Education and Training** *AES, EU-LFS, CVTS, ICT Survey Enterprises*

Skills-related figures

- Skills-related statistics
  - Skills supply - indirect measures (sks_sim)
    - Education and training - labour force survey (sks_simlf)
    - Education and training - UNESCO, OECD, Eurostat (UOE) joint data collection (sks_simuoe)
    - Education and training - human resources in science and technology (HRST) (sks_simhr)
  - Skills supply - self-reported measures (sks_ssr)
    - Digital skills - ICT usage in households and by individuals (sks_srds)
  - Skills demand - indirect measures (sks_dim)
    - Employment - labour force survey (sks_dimlf)
    - Employment - ICT usage and e-commerce in enterprises (sks_dimict)
    - Employment - research and development (sks_dimrd)
    - Employment - high-tech industry and knowledge-intensive services (sks_dimht)
    - Employment - human resources in science and technology (HRST) (sks_dimhr)
  - Skills demand - direct measures (sks_ddm)
    - Newly employed - labour force survey (sks_ddmlf)
    - Job vacancies - job vacancy statistics (sks_ddmjv)
  - Skills demand - self-reported measures (sks_dsr)
    - Digital skills - ICT usage and e-commerce in enterprises (sks_dsrds)
  - Skills development (sks_dev)
    - Participation in education and training - labour force survey (sks_devlf)
    - Participation in education and training - UNESCO, OECD, Eurostat (UOE) joint data collection (sks_devuoe)
    - Participation in education and training - ICT usage and e-commerce in enterprises (sks_devict)

Sources

EU Labour Force Survey (EU-LFS);

UNESCO OECD Eurostat (UOE) joint Data Collection;

EU Community Survey on ICT Usage in Households and by Individuals;

EU Community Survey on ICT Usage and e-Commerce in Enterprises;

Job Vacancy Statistics (JVS);

Adult Education Survey (AES);

Continuing Vocational Training Survey (CVTS);

Statistics on Research and Development (RS).

Skills Mismatch: Experimental statistics (1-2)

Vertical skills mismatch: over-qualification rate

The over-qualification rate is calculated by means of the number of tertiary graduated persons in employment (ISCED 2011 level 5 to 8) whose occupations are assumed not to require tertiary education (ISCO 2008 major groups 4 to 9).

(based on EU-LFS)

Over-qualification rate (OQR):

$$OQR(Country, Year, Nace) = \frac{\text{Persons employed with ISCED } 5-8 \text{ and ISCO } 4-9}{\text{Persons employed ISCED } 5-8}$$

Persons employed aged 20-64
ISCED 5-8 refers to the educational attainment level (ISCED 2011)
ISCO 4-9 refers to the occupation (ISCO 2008)

Skills Mismatch: Experimental statistics (2-2)

Horizontal skills mismatch by field of education

The horizontal skills mismatch rate by field of education is calculated by matching (mainly) broad fields of education and training (ISCED-F fields of education and training) to occupations at ISCO 2008 3-digit level.

(based on EU-LFS)

Horizontal skills mismatch rate by field of education (HSMR):

$$HSMR\,(Country, Year, FoE) = 1 - \frac{Persons\ employed\ with\ matching\ FoE}{Persons\ employed}$$

Persons employed aged 15-34 and with an educational attainment level 3-8 (ISCED 2011)
'Matching FoE' means working in an occupation (ISCO 2008) that matches the FoE (field of education, ISCED-F)

Dissemination

Published as excel files on Eurostat's website dedicated section on skills statistics:

https://ec.europa.eu/eurostat/web/experimental-statistics/skills

Published the first time in 2017, and updated every year (roughly in September); for vertical skills, 2008-2020 data currently published, for horizontal skills, 2014-2020 data currently published

THANK YOU VERY MUCH!

Questions/ suggestions?

You can address them now or later at:
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