ETF Working together Learning for life

European Training Foundation

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THE EU AGENCY SUPPORTING COUNTRIES TO DEVELOP THROUGH LEARNING

SKILLS ANTICIPATION AND LABOUR MARKET INTELLIGENCE SYSTEMS

Methodologies, institutionalisation and comparable data across countries, including administrative and big data

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Why do countries need labour market and skills intelligence?

Changing demand for occupations and skills



Interacting transitions are changing jobs and skills needs, increasing the need for timely intelligence.

How is skills intelligence produced?

Combining complementary data sources and analytical methods

Data sources

- **Official** and **population surveys** (i.e., labour force surveys)
- **Administrative data** (i.e., education, employment, PES records)
- **Worker, employer** and **tracer surveys**
- **Big-data** and **web-based sources** (i.e., online job vacancies, patent and labour-platform data)
- **Qualitative evidence** (i.e., interviews, focus groups)

Analytical approaches

- **Descriptive** and **statistical analysis**
- **Skills mismatch** and **sectoral analysis**
- **Econometric modelling** and **forecasting**
- **Web scraping, text mining, classification** and **skills extraction**
- **Foresight** and **mixed-method analysis**

SKILLS INTELLIGENCE FOR POLICY

Skills Anticipation and Matching: a toolbox of complementary approaches

ETF guides and e-toolkit, freely accessible on Open Space



- Labour Market Information System
- Public Employment Services
- Employer Surveys
- Skills Forecasts
- Skills Foresight
- Sectoral Approaches
- Tracer Studies
- Labour Market Observatories
- Big Data Analysis

Available on the Open Space:
https://openspace.etf.europa.eu/pages/skills-anticipation-and-matching-e-toolkit

Administrative Data and Big data for Labour Market Intelligence

Administrative data

Potential contribution

- Regular and often extensive coverage of registered population
- Possibility of longitudinal analysis
- Links between education and labour market records
- Potential for detailed territorial and sectoral analysis

Important limitations

- Not originally designed for analytical purposes
- Definitions reflect national administrative rules
- Informal and unregistered activity may be missing
- Access, linkage and data-protection can be challenging

Big data, including online job vacancies

Potential contribution

- Timely signals of labour demand
- Detailed information on occupations, skills and requirements
- Identification of emerging job profiles and terminology
- Granular analysis by location, employer or sector

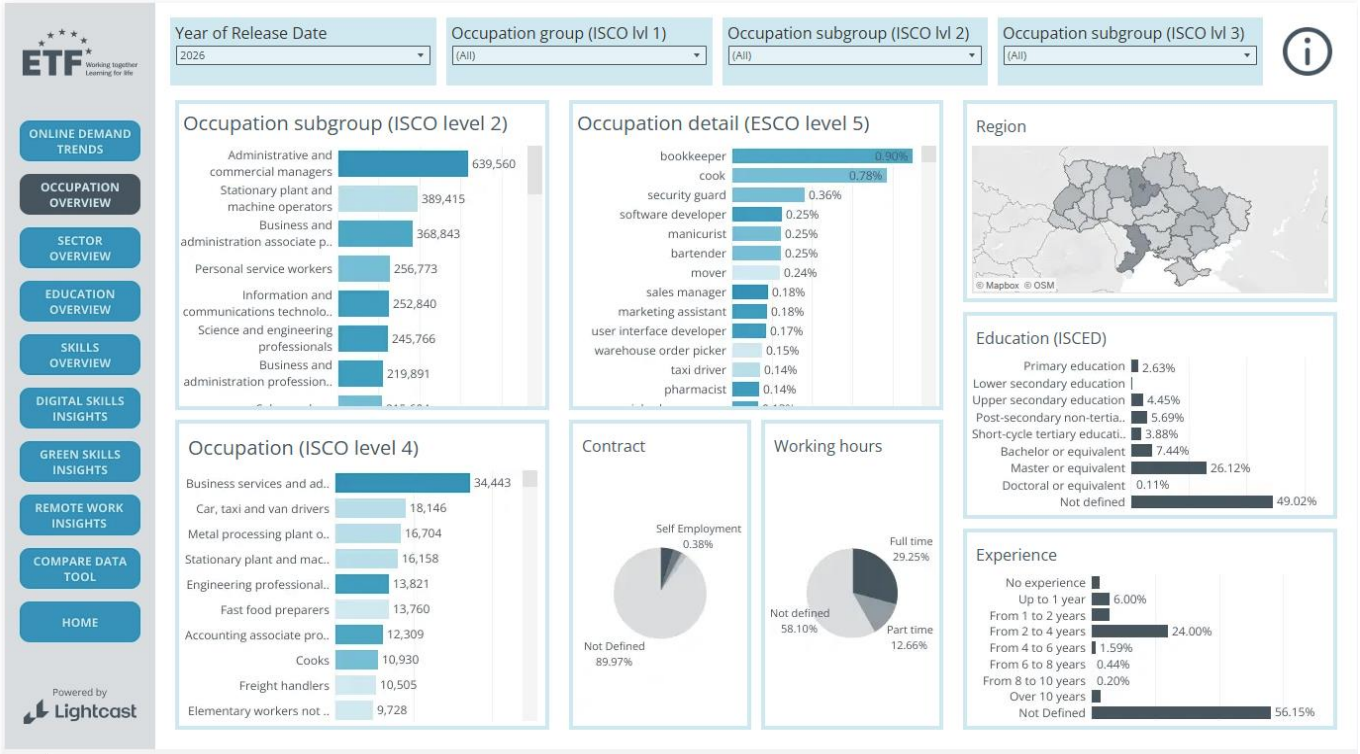
Important limitations

- Uneven coverage across occupations, sectors and countries
- Duplicates and changing platform coverage
- Informal recruitment is often absent
- Harmonised processing is essential for comparison

Big data: Online Job Vacancies (OJV)

- Analysis of Online Job Vacancies (OJV) to understand labour demand in a country
- OJV Data dashboards developed for Bosnia and Herzegovina, Serbia, Morocco, Georgia, Ukraine, Tunisia, Egypt, Kenya
- Accessible at https://solutions.lightcast.io/?pc=x$fhADtD*cu$BjY9
- Variables to search: occupation, region, sector, location, digital and green skills, occupation-education, occupation-sector occupation to skill (ESCO, O*NET)

UKRAINE OJV dashboard: Occupational and skills analysis



https://solutions.lightcast.io/dashboard/ETF_UA

From Multiple Data Sources to Comparable Intelligence

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Diverse national sources

- Administrative records
- Statistical and dedicated surveys
- Online job vacancies and other web-based sources
- Interviews, focus groups, expert consultations
- …

Common analytical framework

- Agreed concepts and definitions
- Common classifications and coding
- Harmonised indicators
- Transparent collection and processing
- Clear documentation and quality assurance

More comparable intelligence

- Consistent analysis over time
- Meaningful cross-country comparisons
- Identification of genuine national differences
- Shared policy learning

Institutionalising Labour Market Intelligence

Moving from ad hoc activities to a sustainable system requires four interrelated functions:

Clear governance

- Clear responsibilities
- Effective coordination

Data cooperation

- Regular data-sharing
- Shared data standards

Sustainable capacity

- Technical expertise
- Adequate and predictable resources

Policy use

- Producer-user dialogue
- Integration into policy cycles

Key Messages

1. Use a combination of methods

No single methodology can capture all current and future skill needs.

2. Combine data sources

Administrative data, surveys, qualitative evidence and big data provide complementary insights.

3. Build comparability deliberately

Common concepts, classifications, indicators and quality standards are essential.

4. Invest in institutions and policy use

Clear responsibilities, cooperation, capacity and policy demand sustain the system.

The objective is not simply to produce more labour market data, but to transform complementary evidence into actionable skills intelligence.

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