

Overview of key PES quantitative indicators: design and implementation

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The 3 parts of presentation

- Data under the benchlearning exercise
- What has been done by now
- Next steps and deadlines

1. Data under the benchlearning exercise

The PES administrative data under the benchmark learning exercise in EU cover the following areas:

1. Contribution to the reduction of unemployment
2. Contribution to the reduction of unemployment duration and of inactivity so as to address long term and structural unemployment as well as social exclusion
3. Filling of vacancies (including through voluntary labour mobility)
4. Customers satisfaction with PES services

1. Contribution to the reduction of unemployment
 - a) Transitions from unemployment into employment
 - b) Number of people leaving the PES unemployment records as share of registered unemployed.

EU quantitative indicators

Transition from unemployment into employment

Share of unemployed that transitioned to employment in the reference period. It is calculated as the number of transitions to employment on the stock of registered unemployed in the reference period (i.e. the sum of the total number of unemployed registered at the end of each month divided by the number of months of the reference period).

Measurement:

$$\frac{\text{Total number of outflows into employment} * 100}{\text{Total stock of registered unemployed}}$$

Disaggregation

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8;

Type of employment transition: subsidized and unsubsidized.

Timeframe: monthly, quarterly, annually;

Data source: administrative data of PES combined with data warehousing (i.e. the matching of different administrative databases)

Western Balkan quantitative indicators

Transition from unemployment to employment

Share of registered unemployed that transitioned to employment in 2016. It will be calculated as the number of transitions to employment (outflows, not individuals) on the stock of registered unemployed in 2016 (i.e. the sum of the total number of unemployed registered at the end of each month divided by 12).

Measurement:

$$\frac{\text{Total number of outflows into employment} * 100}{\text{Total stock of registered unemployed}}$$

Disaggregation:

Sex: Total, men, women

Age-group: five years interval (from 15 to 64);

Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES

Timeframe: annual data for 2016

Analysis: This indicator will provide indication of the capacity of the PES to ease the transition to jobs of unemployed clients and especially for population groups that may be at risk. As for the EU indicator, the focus is on number of transitions to employment, rather than single individuals.

Additional requirements

National PES should provide the precise definitions used for “unemployed” and “outflow to employment” and the method used for pooling administrative figures. This will allow taking corrective measure to make this indicator comparable. For qualification levels, national PESs will make reference to the International Classification of Education ISCED 2011) or in terms of the eight levels of the EU qualification frameworks. Typically, the National Statistical Offices have “translation tables” to aggregate national figures on the basis of internationally accepted definitions.

EU quantitative indicators

Number of people leaving the PES unemployment records, as a share of registered unemployed individuals

Share of unemployed individuals who were deleted from the PES register (irrespective of the reason) in the reference period as a percentage of total registered unemployed. It is calculated as the number of outflows on the total of registered unemployed (at the time the measurement is done, typically the end of the year).

Measurement:

$$\frac{\text{Total number of outflows} * 100}{\text{Total number of registered unemployed}}$$

Disaggregation

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8;

Although there is no requirement to disaggregate by type of outflow (sanction, employment, shift to other labour market status), national PESs usually report also the reason of deletion.

Timeframe: monthly, quarterly, annually ;

Data source: administrative data of PES combined with data warehousing (i.e. the matching of different administrative databases)

Analysis: This indicator serves to provide the background for the analysis on the indicator on transition to employment (i.e. to understand whether transition to employment is the main reason for outflow or whether other type of outflows prevails, such as sanctioning).

Western Balkan quantitative indicators

Number of people leaving the PES unemployment records, as a share of the stock of registered unemployed individuals

Share of registered unemployed that were deleted from the records in 2016. It will be calculated as the number of outflows (not individuals) over the stock of registered unemployed in 2016 (i.e. the sum of the total number of unemployed registered at the end of each month divided by 12).

Measurement:

$$\frac{\text{Total number of outflows} * 100}{\text{Total stock of registered unemployed}}$$

Disaggregation:

Sex: Total, men, women

Age-group: five years intervals (from 15 to 64);

Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES

Timeframe: annual data for 2016

Analysis: As for the EU indicator, these figures will serve to shape the analysis on the indicator on transition to employment.

Additional requirements

If feasible, national PESs can provide the data disaggregated by type of outflow, as follows

Total, of which

- deletion due to sanctions,
- deletion due to transition to employment,
- deletion due to transition to inactivity (return to education, pensionable age)
- other reasons, unclassified (death, possible migration etc.)

Discussion with PES representatives

2. Contribution to the reduction of unemployment duration and of inactivity so as to address long term and structural unemployment as well as social exclusion

a) Transition into employment within 6 and 12 months of unemployment

b) Entries into PES register of previously inactive persons

EU quantitative indicators

Transition into employment within 6 and 12 months of unemployment

Share of unemployed transited to employment within 6 and 12 months (from registration) over total number of unemployed transited to employment in the reference period. It is calculated as the number of outflows into employment that took place within 6 and within 12 months from the date of initial registration over the total number of transition to employment.

Measurement:

$$\frac{\text{Total number of outflows (within 6 and 12 month)}}{\text{Total number of transition to employment}} * 100$$

Disaggregation

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8;

Timeframe: monthly, quarterly, annually ;

Data source: administrative data of PES combined with data warehousing (i.e. the matching of different administrative databases)

Analysis: This indicator serves to measure the effectiveness of early intervention approaches over time (i.e. the more unemployed shift to employment before long-term unemployment sets in, the better the performance).

Western Balkan quantitative indicators

This indicator is not required as some PESs can not readily report on it.

However, national PESs are encouraged to attempt this measurement to understand the changes that would need to be applied to regularly report on it.

Measurement:

$$\frac{\text{Total number of outflows (within 6 and 12 month)}}{\text{Total number of transition to employment}} * 100$$

Disaggregation

Sex: Total, men, women

Age-group: five year intervals;

Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES

Timeframe: annual data for 2016

Data source: administrative data of PES combined with data warehousing (i.e. the matching of different administrative databases)

Analysis: As for the EU indicator, this figure will serve to measure the effectiveness of early intervention approaches in the reference year.

Discussion with PES representatives

Entries into the register of previously inactive persons

Share of previously inactive individuals who register with the PES as a share of total individuals registering in the reference period. This is calculated by disaggregating inflows by type (education, inactivity due to care or family responsibility, due to illness or disability and so on). It was introduced to report on the effectiveness of PES in reaching out to non-traditional clients, and especially in the framework of the Youth Guarantee.

Measurement:

$$\frac{\text{Total number of inflows from inactivity}_t}{\text{Total number of inflows}_t} * 100$$

Total number of inflows_t

Disaggregation

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8

No additional disaggregation required

Timeframe: monthly, quarterly, annually ;

Data source: administrative data of PES combined with data warehousing (i.e. the matching of different administrative databases, and especially the Education Information Management System)

This indicator is not required as no Western Balkan PESs currently implement outreach strategies or have a Youth Guarantee in place.

3. Filling of vacancies (including through voluntary labour mobility)

a) Job vacancies filled;

b) Results arriving from the question of Eurostat's Labour Force Survey: Has the PES contributed to the finding of your current job?

EU quantitative indicators

Western Balkan quantitative indicators

Job vacancies filled

Share of job vacancies filled by the PES, as a ratio of the total number of registered unemployed. It is calculated as the share of job posts that were filled through PES activities over the total number of unemployed registered in the reference period.

Measurement:

$$\frac{\text{Total number of vacancies filled} * 100}{\text{Total number of registered unemployed}}$$

Disaggregation

No disaggregation required

Timeframe: monthly, quarterly, annually ;

Data source: PES administrative data

Analysis: This indicator serves to measure tightness of the labour market the PES operates into A low ratio indicates that there is low demand compared to the number of registered unemployed.

This indicator is not required since (i) the definition of “vacancy” differs substantially across Western Balkan countries; (ii) not in all countries employers have an obligation to notify vacancies; and (iii) PESs have different approaches as regard the posting of vacancies (open and closed systems).

EU quantitative indicators

PES involvement in job finding

Share of currently employed individual as detected by the Labour Force Survey who found their current job through the PES over total number of employed individuals. This indicator builds on the microdata collected by national statistical offices on employed individuals.

Measurement:

Total number of employed who found a job through the PES $_t$ *100

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Total number of employed individuals $_t$

Disaggregation

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8

No additional disaggregation required

Timeframe: annually ;

Data source: National Statistical Office, microdata of the Labour Force Survey.

Analysis: This indicator serves to measure the market penetration of the PES. It is considered as a sort of benchmark of the effectiveness of PES in executing its core function.

Western Balkan quantitative indicators

This indicator is not required since:

- 1) it would be difficult for most PES to provide the figures/require the statistical office to carry out this calculation;
- 2) the indicator would not be really meaningful without geographical distribution (i.e. it does not allow comparison across catchments areas of the PES).

4. Customers satisfaction with PES services

- a) Overall satisfaction of jobseekers;
- b) Overall satisfaction of employers.

EU quantitative indicators

Overall satisfaction of jobseekers

Share of jobseekers that are satisfied with the services they received from the PES as a percentage of all jobseekers served. This indicator is calculated on jobseekers (i.e. the “unemployed” plus individuals looking for jobs, but not unemployed) served by the PES (receiving one or more services) over total jobseekers (and not only unemployed) registered. The EU PES network has published a tool for collecting these type of information through surveys (EU Toolkit to assist PES with the development of customer satisfaction systems 2016).

Measurement:

$$\frac{\text{Total number of jobseekers satisfied}_t * 100}{\text{Total number of registered jobseekers served}_t}$$

Disaggregation (recommended)

Sex: Total, men, women

Age-group: 15-24; 25-29; 30-54; 55+;

Qualifications: ISCED 0-2; ISCED 3-4; ISCED 5-8

No additional disaggregation required

Timeframe: annually ;

Data source: Surveys carried out by the PES.

Analysis: This indicator serves to measure the level of satisfaction of jobseeker clients with the service they received.

Western Balkan quantitative indicators

This indicator is not required as the methods used by national PES to measure clients satisfaction are not comparable (some measured it only for ALMP participants, others measured it through employers’ surveys rather than separately, etc).

Context indicators

The countries preliminary agreed on three sets of PES-related context indicators.

Composition of the unemployment register (by individual characteristics and geographical distribution)

These figures relate to the characteristics of registered unemployed and their distribution across local employment offices. The data refers to the total number (,000) of registered unemployed, as published by the PESs in their Annual Report 2016 and with the disaggregation presented below.

Disaggregation:

- Sex: Total, men, women
- Age-group: five years intervals (from 15 to 64);
- Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES;
- Unemployment spell: total, less than 6 months, 12 months and over 12 months;
- Geographical distribution: by local employment office (catchment area)

Discussion with PES representatives

Inflow and outflow

These figures relate to the total number of unemployed that registered in the PES records (inflow) and total number of registered unemployed that were deleted from the records (outflow) in 2016. The data refers to the total number (,000) of inflows and outflows, as published by the PESs in their Annual Report 2016 and with the disaggregation highlighted below

Disaggregation:

Sex: Total, men, women

Age-group: five years intervals (from 15 to 64);

Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES.

Discussion with PES representatives

Participants to active labour market programmes

These figures relate to the total number of registered unemployed that participated to the active labour market programmes financed by the PES. The data refers to the total number (,000) of registered unemployed, as published by the PESs in their Annual Report 2016 and with the disaggregation highlighted below (if possible)

Disaggregation:

Sex: Total, men, women

Age-group: five years intervals (from 15 to 64);

Qualifications: ISCED levels (when feasible), or according to the disaggregation used by the PES;

Unemployment spell: total, less than 6 months, 12 months and over 12 months;

Type of programme: labour market training; job subsidies; internships; self-employment; public works.

Discussion with PES representatives

2. What has been done by now

Technical meeting in Skopje

21. June 2017

- Discussion on set of quantitative and qualitative indicators used at EU level with a view to select and agree upon a number of quantitative indicators that could be collected for benchmarking exercise across Western Balkan PESs.

Transition from unemployment into employment

All Western Balkan 6 economies shared with RCC data on transition from unemployment into employment for 2016.

Albania and BiH shared data for the period 2010-2016.

Serbia shared data for the period 2013-2016.

Transition from unemployment into employment disaggregation definitions by countries

	Albania	Montenegro	BiH	Serbia	Kosovo*	The Former Yugoslav Republic of Macedonia
Age groups (5 years interval)	✓	✓		✓	✓	✓
ISCED Level of education	✓	✓			✓	✓
National level of education			✓	✓		

The first findings

2016	Albania	BiH	Montenegro	Serbia	Kosovo*	The Former Yugoslav Republic of Macedonia
	Total	Total	Total	Total	Total	Total
Stock of unemployment jobseeker	119,710	521,357	42,825	713,154	101,773	108,289
Outflow to employment	25,158	132,054	10,787	265,111	6,754	51683
Transition from unemployment into employment	21.0%	25.33%	25.19%	37.17%	6.64%	47.7%

GDP growth and unemployment rate 2016

	Albania	BiH	Montenegro	Serbia	Kosovo*	The Former Yugoslav Republic of Macedonia
GDP growth in 2016	3.4	2.5	2.4	2.8	3.7	2.4
Unemployment rate 2016	16.01	25.4	17.5	15.9	27.5	23.6

3. Next steps and deadlines

Deadlines

Activities	Deadlines
Transition from unemployment into employment (disaggregated by sex, age group and qualifications) – trends 2010-2016	August 1, 2017
Number of people leaving the PES unemployment records, as a share of the stock of registered unemployed individuals (disaggregated by sex, age group and qualifications) – trends 2010-2016	September 1, 2017
Transition into employment within 6 and 12 months of unemployment (disaggregated by sex, age group and qualifications), tentative and where available – trends 2010-2016	October 1, 2017
Composition of the unemployment register (by individual characteristics and geographical distribution) – trends 2010-2016	October 15, 2017
Inflow and outflow (disaggregated by sex, age group and qualifications) – trends 2010-2016	December 1, 2017
Participants to active labor market programs (by individual characteristics and type of program) – trends 2010-2016	December 15, 2017

Matching LFS and PES register micro
data and imputation of the ILO
definitions into PES register

The matching methods

- Direct matching of data – 1-1 matching by using for instance personal ID number
- Statistical matching - the usual approach is to define one data set as the recipient, in this case PES register and one as the donor, LFS

Statistical matching diagram

Recipient dataset – PES register

Variable Y	Variable X Matching variable
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Donor dataset - LFS

Variable X Matching variable	Variable Z
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Matched dataset

Variable Y	Variable X Matching variable	Variable Z
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Methods for statistical matching

- Unconstrained statistical matching – creating a matched file A with X, Y and Z data by finding for each A unit the same B unit closest in age (e.g. A1 is male and 42, and the best matching B unit is B1 who is male with 41. Method of single imputation of nonresponse use in statistics.

- Discussion of matching methods in different but related statistical contexts is extensive
- Likelihood-based methods for handling missing data lead to explicit imputation models such as the ones based on linear regression or logistic regression techniques

- The optimal constrained or Population matching method
- File Concatenation with adjusted weights and multiply imputation technique
- The method assuming Conditional independence of Y and Z given X
- The method assuming a non-zero partial correlation between Y and Z given X

Next steps

- Develop a detailed methodology for statistical matching which will be followed by testing of different methods that will be used in the study
- Upon assessment of feasibility and approval of methodology, explore access to LFS 2016 micro-data and PES administrative data.

Thank you