Study supporting the evaluation of the Council Recommendation on the integration of long-term unemployed into the labour market

Annex 6 Integration of secondary data

1. Policy measures, output and results: an analysis with indicators

1.1 Introduction

In this annex we use secondary data and data from the mapping exercise to test a number of possible outcomes from the Recommendation illustrated in figure 1 below. The figure is not a full intervention logic (which can be found in the main report), but a figure to give a brief framework to help the reader to follow the steps this Annex. In this scheme the logical chain is that the Recommendation leads to changes in measures related to the Recommendation, and that in a following step these changes lead to changes in output indicators (e.g. increased registration rates) and result indicators (e.g. increased transition rates of LTU into employment).

Figure 1 Logical chain of possible effects of recommendation
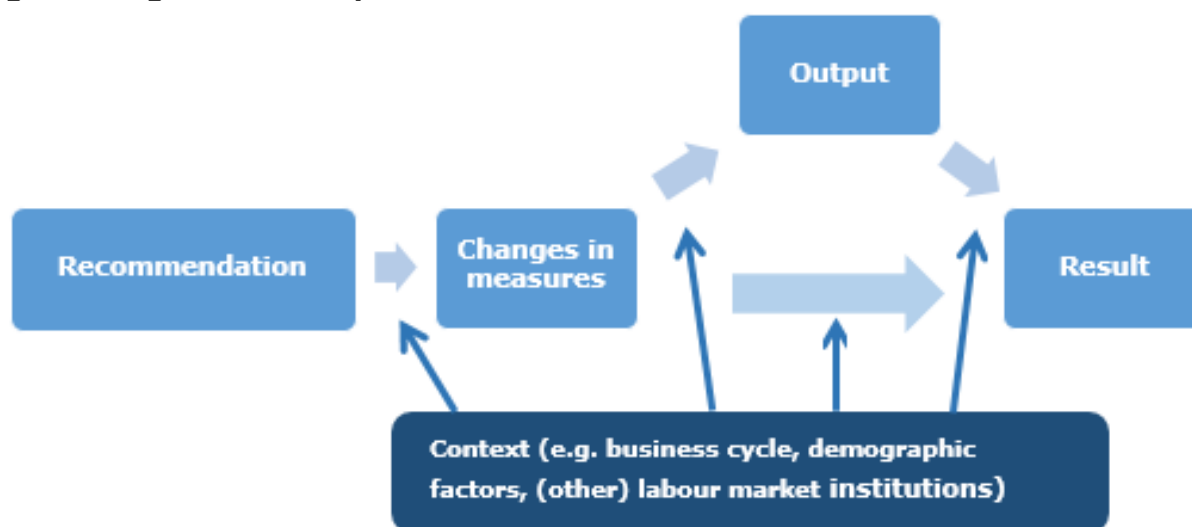
But in reality, intervening factors play a role in this chain. All these steps could be influenced by context factors, like the business cycle, demographic factors and labour market institutions outside the scope of the recommendation. For example, a recession can reinforce the need to initiate measures to support the increasing group of long-term unemployed. Moreover, at the same time, such a recession can also decrease the transition rates into employment. Other potential barriers for the integration of long-term unemployed in the labour market outside the scope of the recommendation are investment constraints, a low skilled labour force and the unemployment benefits trap.[1] Investment constraints and a low skilled labour force could be barriers to hire labour. The benefit trap can act as an incentive for unemployed to remain unemployed. The fact that other intervening factors play a role can also mean that certain trends in output and result indicators after the baseline period for this evaluation (2015H1) are part of a longer lasting trend related to other factors and can therefore (not only) be attributed to changes in measures related to the Recommendation. In the analysis of this section we therefore follow a stepwise approach, exploring the chain presented above:

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[1] See figure 6 on page 10 from: Commission Staff Working Document: Analytical Supporting Document accompanying the Proposal for a Council Recommendation on the integration of the long-term unemployed into the labour market. COM(2015) 462 final. A benefit trap is a situation when benefits discourage the unemployed to go to work.

- In section 2 we look at the changes in policy measures since the baseline period (2015H1), using a number of different indicators using the mapping exercise and a specific ad hoc module to the PES Capacity Questionnaire;
- Section 3 gives an overview of a number of context, output and result indicators we use for the analysis in this Annex. Many of these indicators come from the Employment Committee (EMCO) indicator framework, but some other indicators are added. We have also collected long time series of data for a number of these indicators to be able to test if after the baseline period (2015Q2), any breaks in trend in output and result indicators have taken place compared to a longer-term development of these indicators before the baseline period. A longer time trend also gives better possibilities to determine the influence of other intervening factors, like the business cycle on result indicators.
- In section 4 we present some of these data. In this more descriptive analysis, we will cluster some of the data on output and result indicators according to the scores of the indicators on (progress of) LTU-measures. This can be seen as a first more descriptive step in trying to connect changes in LTU-measures with output and result indicators.
- In section 5 we go one step deeper, by doing a statistical testing if a break in trend has taken place for result indicators comparing the situation before and after the baseline period. This so-called Chow-test also gives the possibility to make a correction for the business cycle which could influence the result indicators.

Of course, estimating the causal effect of the Recommendation on output and result indicators remains complicated. The number of observations is limited. Many other aspects which are not taken into account could play a role. The estimation of the causal effect of the Recommendation may also be hampered by reverse causality problems, because the LTU policy measures could be a response to the situation of the LTU. We will come back on these issues and limitations in section 5. Therefore, the results of the analyses can only be seen as indicative and should be combined with the results of the other research activities.

2. Indicators for (changes in) relevant LTU-measures

The first step and crucial step in figure 1 is that the Recommendation leads to changes in LTU-measures which are linked to the policy fields mentioned in the Recommendation. In the mapping exercise a systematic overview has been collected of these changes. The results of the mapping are described in more detail in Annex 3. Some of the main characteristics of the three sources are shown in the following table.

Table 1 Some characteristics of the two sources (mapping and PES-survey)

	Mapping scoreboard	**PES-survey**
Position	External country expert	Advisors for European PES Affairs (AFEPA's)
Questions relate to	Whole system dealing with LTU	PES and LTU
Moments of data collection	2 moments: May/June 2018 + September/October 2018	April/May 2018
Reference period for changes	H1 2015 to H2 2018	Since 15-2-2016, but moment of change before 2016 also often mentioned

The table shows that the mapping has the added value of a more external perspective, so that the state of the art and changes in policy are assessed from a more independent perspective, although information from "insiders", has also been taken into account. A pro of the independent perspective of external respondents in the mapping is that there is no political influence in the type of responses. Another added value of the mapping for this evaluation is that the reference period for policy changes in the mapping is 2015H1, the baseline for this evaluation. 2015H1 is taken as a baseline in the evaluation, since the preparatory work and negotiations may have influenced LTU policy prior to adoption of the Recommendation. A pro of the PES-survey is that insiders could have more (non-public) information and be very experienced with the system.

Both sources are described more in detail in this section, although in the main text we give most attention to the mapping for the reasons given above. In a separate Sub-appendix 2 more details of the PES-survey are described.

2.1 Indicators from the country mapping (task 1)

The first type of indicators for changes in LTU-measures is based on the country mapping performed in task 1. These mappings also contain indexes on the rate of implementation of policy fields related to the recommendation. These indexes labelled "quality of measures" range from 1 – 5, with 1 being no or basic implementation only, while 5 means established and well-developed service/function that fulfils all the guiding elements of the Recommendation. In the first data collection moment before summer 2018, the indicators refer to the situation in 2015H1 (the baseline). In October 2018 a new measurement has been made available for the situation at the end of September 2018. By comparing the results of the recent measurement round with the situation of the baseline, we have created indicators on the changes made for specific policy areas which can be linked to output and result indicators in a later stage of this document. The changes in the mapping scores for the aspect of Interinstitutional coordination and SPOC, and Individual assessments are linked to expectations expressed in the Staff Working Document (SWD) accompanying the Commission's proposal for the Recommendation. With regards to the assessment of expectations in the SWD regarding individual assessments, the existence of profiling systems is an important input, which is less explicitly taken into account in the mapping for this policy area. But both concepts are still closely related and therefore we also include the SWD-expectations in this policy area.

For changes in policy areas of the registration rate and JIA, the SWD did not directly cluster countries according to expected impact. The changes in the policy area of coverage of registration are therefore related to the registration rate in 2014, before the introduction of the Recommendation.

With regards to JIA, we present the results without any differentiation according to expected impact. The same counts for employer involvement. The SWD makes a clustering of expectations for policy changes of countries on this issue based on the share of LTU-schemes in public works in 2012. The idea is that reduction of the importance of measures in public works creates room for other interventions which are more market-related, creating a greater involvement of employers. However, because the share of public works in LTU-schemes is only a one-sided way of formulating expectations on this issue; the extent of already existing services to employers also plays an important role as mechanism to improve employer involvement. Therefore, we do not show expectations which are only based on the public works mechanism.

Figure 2 shows the change in quality ratings for the policy area 'registration'. The ratings for this and following figures are based on the mapping exercise figure 3.1.1 ('Assessment of the quality of measures in place, general'). Note that countries can only be located at full points, small deviations are made to be able to distinguish different colours/shapes. Member States with a low starting point progressed in terms of registration measures. Most Member States had moderate to high registration rates in 2014. Only Italy, Bulgaria, Estonia, Latvia and Romania had registration rates below 50%. From these countries, Latvia has clearly improved registration measures moving from 1 to 4 in quality assessment; Italy, Romania and Bulgaria have improved by 2 points each and Estonia by 1 point. Seven out of nine Member States with high registration rates in 2014 do not show improvements in the mapping scale. These patterns clearly show that there is a relationship between the initial situation in registration rates and improvements in the quality of measures in this policy area.

Figure 2 Changes in mapping scores for measures to encourage registration of long-term unemployed, colour coded by LTU registration rates in 2014.
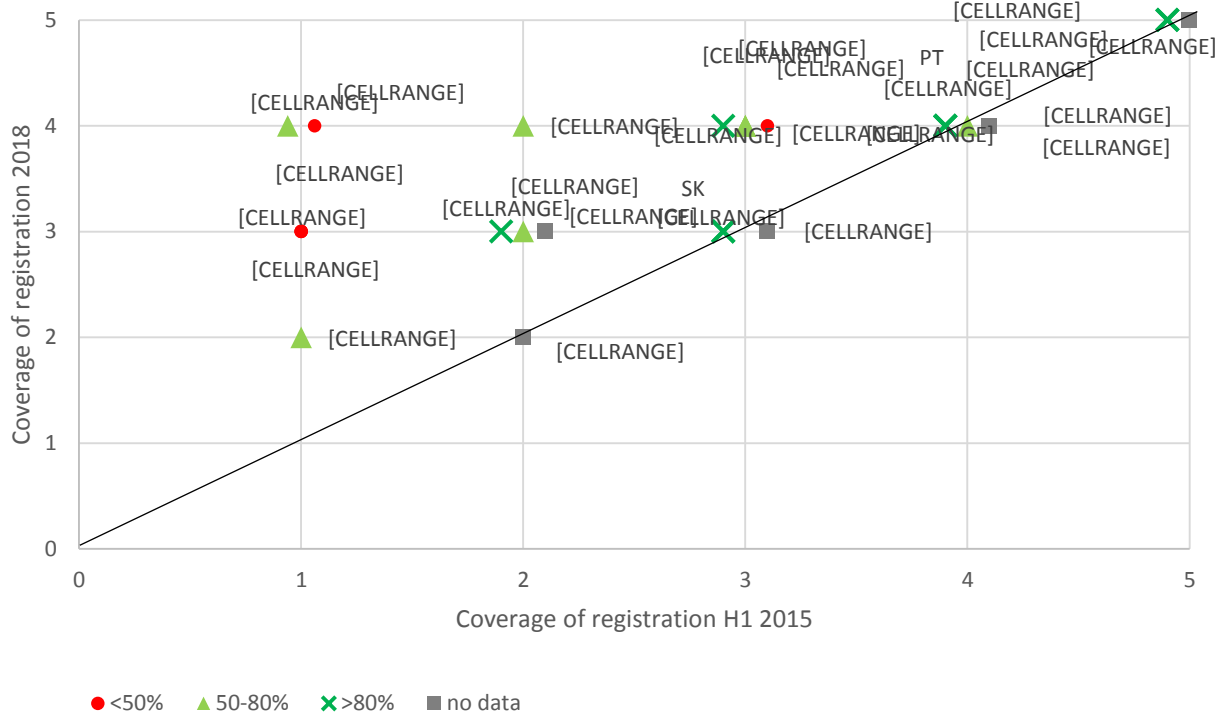

Figure 3 shows the expected impact according to the SWD, taking into account use of individual action plans and profiling and segmentation, and the change in mapping scores ('Assessment of the quality of measures in place, general') for the aspect of individual assessments. The existence of profiling system is less explicitly mentioned as an element in the mapping, but these kinds of tools are taken into account because – good functioning - profiling systems are an important cornerstone of individual assessments and experts have had access to information on profiling. But an existing profiling system is no guarantee that this has contributed to high scores of the quality of individual assessments, because implementation, reach and quality can be poor. Note that countries can only be located at full points, small deviations are made to be able to distinguish different colours/shapes. The dispersion of the colour-codes shows that the expectations in the SWD beforehand about changes in the quality of policy areas only partially have come out according the mapping scores. Of the countries where *no* impact was expected, positive changes are reported for Bulgaria, Ireland and Lithuania. Member states for which a *strong* impact was expected show improvements in the policy indicator of the mapping with the exception of Cyprus, the Czech Republic and Greece. Latvia is the only country for which a medium impact was expected that scored higher in the second assessment.
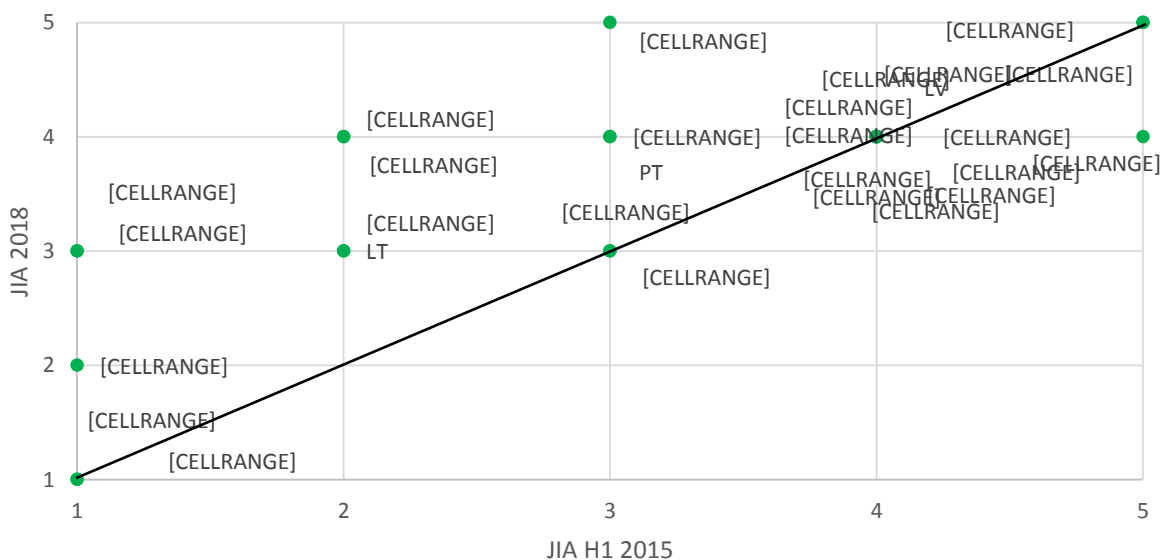
Figure 3 Changes in mapping scores for the aspect of individual assessments 2015H1-2018
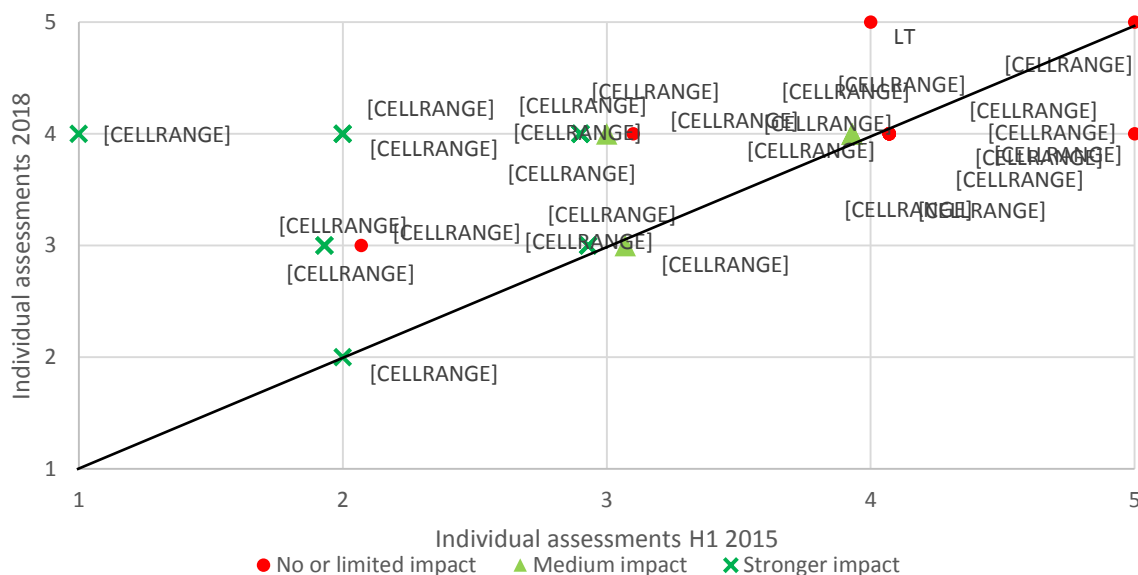
Note: Expectations (no/limited, medium and stronger impact) are derived from the Staff Working Document (EC, 2015): The mapping scores are scores from figure 3.1.1. (general) in annex 3, the mapping exercise.

Figure 4 shows changes in mapping scores for the aspect of JIA (figure 1 mapping exercise). Scores did not improve for countries that scored a 4 or higher before the introduction of the Recommendation (in 2015H1). Of the countries that scored below 4, only Romania, Greece, the Czech Republic and Poland do not show improvements between 2015H1 and 2018. Strong improvements over the time are reported for Bulgaria, Hungary, Luxembourg, Spain and Cyprus.

Figure 4 Changes in mapping scores for the aspect of JIA 2015H1-2018.

Note: The mapping scores are scores from figure 1 (Quality of measures, general) in Annex 3, the mapping exercise.

Figure 5 shows the changes in mapping scores ('Assessment of the quality of measures in place, general') for the aspect of interinstitutional coordination and SPOC[2]. Countries are color-coded by the degree of coordination already in place according to the SWD (EC, 2015). Note that countries can be located at half a point and full points because we combined the mapping scores for the aspects of interinstitutional coordination and SPOC; small deviations are made to be able to distinguish different colours/shapes. A higher impact of the Recommendation is expected for countries without any formal coordination before the introduction of the Recommendation. Most countries without any formal coordination in place before the Recommendation made progress with the exception of Croatia. Countries with already a SPOC had decreasing (UK), unchanging (CZ, IE, DE, DK and NL) or slightly increasing scores (FI). Most member states that already had some coordination in place (partnership or data exchange) had increasing policy indicators with the exception of Cyprus, Portugal, Estonia, Sweden and Austria. To sum up, a higher impact of the Recommendation is expected for countries without any formal coordination before the introduction of the Recommendation. Most countries without any formal coordination in place before the Recommendation made progress with the exception of Croatia. Countries with already a SPOC had decreasing (UK), unchanging (CZ, IE, DE, DK and NL) or slightly increasing scores (FI). Most member states that already had some coordination in place (partnership or data exchange) had increasing policy indicators with the exception of Cyprus, Estonia, Sweden and Austria. There is a clear relationship between expectation on this policy area in the SWD and changes in mapping scores.

Figure 5 Changes in mapping scores for the aspect of Interinstitutional coordination and SPOC (2015-2018)
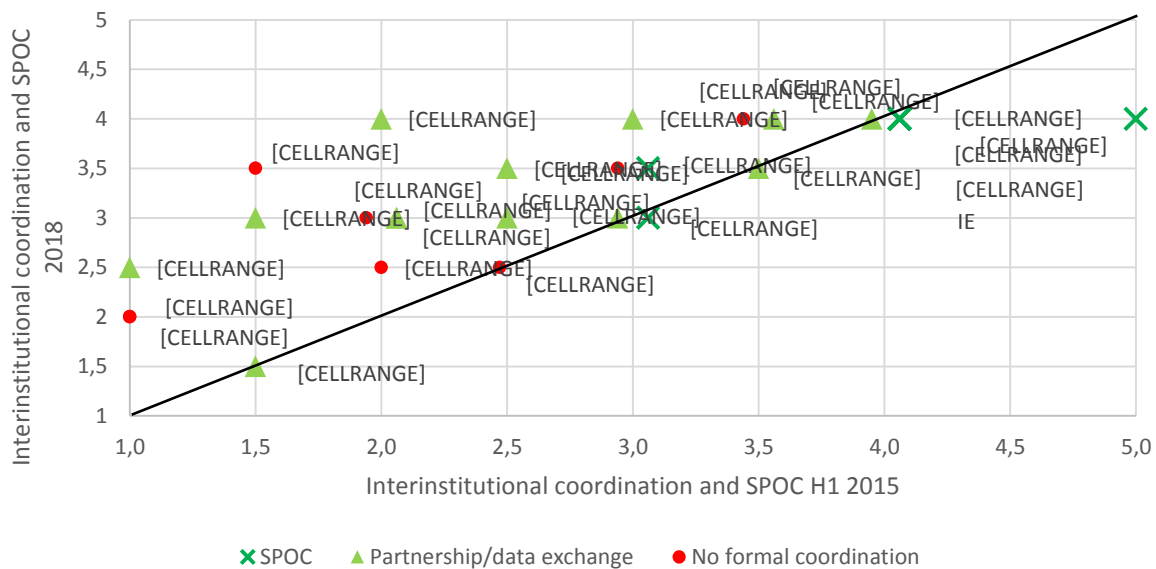
Note: classification for degree of coordination already in place (SPOC, partnership/data exchange, no formal coordination) is based on Staff Working Document (EC, 2015). Expected impact is higher for countries without formal coordination in place. The mapping scores are scores from figure 3.1.1 (general) in annex 3.

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[2] Because these two policy areas are so much intertwined we have taken them together. In the SWD expectations, SPOC and coordination are also combined to come to one type of classification.

Figure 6 shows the changes in mapping scores (figure 1 mapping exercise) for the aspect of employer involvement. For this aspect, two relevant mechanisms are mentioned in the SWD: (1) enhancing services to employers and (2) reducing to a minimum public works. The SWD presents a clustering of countries and expected impacts based on the share of public works only, while the mapping exercise is based on both mechanisms. Therefore, we present the results without any clustering according to expected impacts. A large share of member states show improvements in the mapping, especially among countries with a low score in the baseline situation (except Italy which remains at a low score).

Figure 6 Changes in mapping scores for the aspect of employer involvement 2015-2018
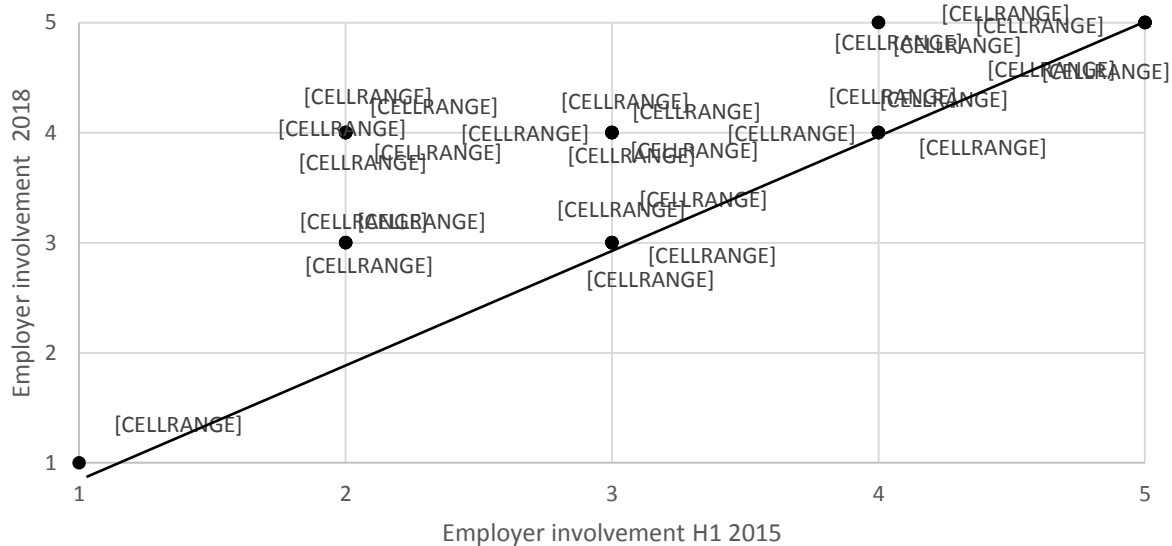
Note: The mapping scores are scores from figure 3.1.1 (general) in annex 3, the mapping exercise.

When comparing the expectations in the SWD to changes in the mapping, there is a rather weak link in the area of individual assessments, but the link is stronger in the area of SPOC/interinstitutional coordination.

Above we have discussed the results of the mapping, reflecting changes in policy areas. For the analysis of the link of policy changes to output and result variables we look at relationships with changes in mapping scores for individual policy areas, but also construct clusters of countries based on combinations of changes in scores on the various policy areas from the mapping exercise. These clusters reflect the broadness of changes (have changes taken place in many of the policy areas?) and in case the changes have taken place in many areas, a distinction is also made on the size of changes.

- One group of countries with **no change** where no change means there is no positive change on any of the policy areas from the mapping exercise (AT, CZ, DK, NL, SE, UK)
- One group with **minor change** where there are only positive changes in one of the policy areas (BE, CY, DE, FI, FR).
- One group with **mixed change** where there is a positive change in 2 or 3 policy areas (EE, EL, HR, IE, MT, PT, SI), but no change on the other 2 or 3 policy areas.
- One group with **strong change** where there is change in 4 out of 5 of the areas with maximally one policy area having a stronger increase than 1 point in the scale of the mapping scores (ES, IT, LV, SK).

- A final group of **very strong change** with change in at least 4 out of 5 areas and at least 2 policy areas with an improvement of more than 1 point (BG, HU, LT, LU, PL, RO). So in this group, changes are in a broad range of policy fields, but for a number of fields (at least 2), the changes are also very substantial.

We refer to these five groups at a number of places throughout the study. The groups are used to assess if they differ in changes of output and result indicators (e.g. in Figure 16). However, because these clusters are a summary of the information and still contain different situations within a cluster, we keep using the individual scores on the various policy areas in the analysis.

2.2 Indicators from the PES-survey

In the Ad hoc module to the 2018 PES Capacity Survey Questionnaire PES were asked about the state of the art of a number of measures related to the Recommendation and whether there have been changes in measures or not. The results of the survey are reported in a Survey report for DG Employment[3] and detailed findings can be found in Sub-appendix 2. The report contains several questions directly related to the current state of the art of the implementation of the Recommendation: if a JIA is offered (by the PES) and if the PES is appointed as a SPOC. The nomination of the PES as a SPOC does not necessarily imply it works as a SPOC as intended by the Recommendation.[4] The question on SPOC in the PES-survey only asks if an institution is made responsible for arranging and offering SPOC services to LTU whereas the mapping formulates minimum requirements for the SPOC from the PES quality standards to assess the SPOC.[5] Similarly for JIA, the question on JIA in the PES-survey uses a definition a little less detailed than the PES quality standards that are used in the mapping exercise on the aspect of JIA.[6] So these differences in questioning and side-information can lead to discrepancies when comparing the results of the PES-survey and the mapping.

For both questions a majority of PES have chosen a positive answer. A few southern European PES report a "No" on both aspects (Portugal, Cyprus and Greece). Several countries in the "No-group" for JIA offer individual action plans for each LTU rather than JIA (Bulgaria, Czech Republic, Greece, Poland, Portugal and Sweden). JIAs and IAPs (Individual Action Plans) are similar tools that offer for a personalised and more intensive approach, but an IAP is often offered to a broader group of clients and misses one or more characteristics to be considered JIA. Only Cyprus and Lithuania report no on offering JIA or IAP.

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[3] ICON-INSTITUT/European Commission, European Network of Public Employment Services (2018). Ad Hoc Module to the 2018 PES Capacity Questionnaire Survey Report.

[4] *See table A2.1 in Sub-appendix 2 on the questions in the PES-survey and use of definitions.*

[5] *From annex 3 **mapping exercise**: " … the minimum standards of service, such as registration towards a registration service, capability to conclude and implement JIAs with LTU at very latest when they have reached 18 months of unemployment, an individual service offer for registered LTU, mechanisms for transmission between service providers of relevant information of job vacancies etc." From Question 6.1 in the **PES-survey**: "the responsibilities for arranging SPOC services and support to LTU can be related to employment-oriented services (e.g., ALMP measures), complementary social services and benefits."*

[6] *Question on JIA in the **PES-survey**: "It should detail explicit goals, timelines and the obligations which the registered long-term unemployed must meet, and the service provider's offer to the long-term unemployed person." PES quality standards used in **mapping**: "Job integration agreements should: 1. be made in writing at the very latest when a long-term unemployed person has reached 18 months of unemployment. 2. include an individual assessment and specify individual follow up of the unemployed persons situation providing capacity for regular monitoring. 3. combine relevant services and measures provided by different organizations. Furthermore the JIA will specify realistic job goals and results of an individual assessment."*

In the PES-survey most changes are detected in the areas of coverage of registration and closer links to employers. For the aspect of JIA there is information since when these arrangements exist (so less on "minor" new arrangements, influencing quality if a JIA is already existing; see table A2.2 in Sub-appendix 2). In the area of SPOC there is information on since when this exists, but also on new arrangements within this larger category. 6 countries report new changes in the area of SPOC since 2015 (BE-Flanders, CZ, FR, HR, RO, SL). See for the precise year sub-appendix 2 table A2.2.

If new measures or changes have been introduced since 2015, we have no direct information on the role of the Recommendation. However, in the PES survey an overall direct question on this role towards LTU policy prioritisation is included (table 2). A third (10 out of 30) describes the role as "no/very small changes". Half of the responding PES (15 or 30) characterise the role as "moderate – only to some extent". 3 PES (Greece, Luxemburg and Malta) describe the role as significant.

Table 2 Role of the Recommendation in changes in PES

Country	Changes in PES towards LTU policy prioritisation	Changes in PES monitoring its performance
AT	No/very small	No/very small
BE-Flanders	Moderate	Moderate
BE-Brussels	No/very small	No/very small
BE-Wallonia	No.very small	No/very small
BE- East Belgium		
BG	Moderate	Significant
CY	Do not know	Do not know
CZ	Moderate	Moderate
DE	No/very small	No/very small
DK	No/very small	No/very small
EE	No/very small	Moderate
EL	Significant	No/very small
ES	Moderate	Moderate
FI	Moderate	No/very small
FR	Moderate	Moderate
HR	Moderate	Moderate
HU	Do not know	Do not know

IE	No/very small	No/very small
IT		
LT	Moderate	No/very small
LU	Significant	Significant
LV	Moderate	Moderate
MT	Significant	Significant
NL	Moderate	Moderate
PL	No/very small	No/very small
PT	Moderate	No/very small
RO	No/very small	No/very small
SE	No/very small	No/very small
SI	Moderate	Moderate
SK	Moderate	Moderate
UK		

Source: PES survey and report about the survey. Specific questions: To what extent do you think the LTU Recommendation has prompted towards LTU policy prioritisation (e.g. delivery of ALMP's, human resources, financial resources)? / To what extent do you think the LTU Recommendation has led to changes in how your PES monitors its performance (targets, indicators, outcomes, etc.)?

Although the changes introduced by PES to support the LTU through policy prioritisation vary, the key changes according to the survey report were: the allocation of a larger share of financial and human resources (BE-VDAB, LV, SI and SK), and ALMP measures (CZ, EL, LT, LU and SI) targeting the long-term unemployed. Three PES (BG, HR, and LT) strengthened LTU profiling and counselling practices. The Finnish PES enhanced cooperation with private employment agencies while the PES in Malta started outsourcing the services to better respond to the needs of the LTU.

The answer of MS on the question in the PES survey on the effect of Recommendation on the prioritization of LTU differs between member states. One would expect that the – perceived – effects of the Recommendation on prompting changes towards LTU prioritization in the PES survey would be higher in MS with the least developed individualized support in place beforehand, because there is more room for improvement. The following table shows this relationship exists: for a number of the countries for which no or limited impact was expected in terms of individualized support[7], indicate that no or only a very small LTU-policy prioritization has been prompted by the Recommendation. Many of the countries for which a medium or strong impact was expected also indicated a moderate or significant effect in terms of LTU-prioritization prompted by the recommendation. On the other hand, PL and RO for which a stronger impact was expected, indicate only no or small effects due to the Recommendation, although they both made significant changes in the support provided to LTU over the years.[8]

Table 3 Perceived effects of Recommendation on LTU-policy prioritization in PES-survey, sorted by expected impact on individualised support in SWD

No or limited expected impact individualized support (SWD)		Medium impact individualized support (SWD)		Stronger impact individualized support (SWD)	
Country	Effects in PES-survey	Country	Effects in PES-survey	Country	Effects in PES-survey
DE	No/very small	AT	No/very small	CY	Do not know
UK		BE		CZ	Moderate
DK	No/very small	MT	Significant	EL	Significant
EE	No/very small	NL	Moderate	ES	Moderate
SE	No/ very small	LV	Moderate	HR	Moderate
FI	Moderate	SI	Moderate	HU	Moderate
BG	Moderate			IT	
FR	Moderate			PL	No/very small
IE	No/very small			RO	No/ very small
LT	Moderate			LU	Significant
PT	Moderate			SK	Moderate

Source: SWD and PES-survey. In the PES survey, some results are missing (IT, UK), or differ between regions (BE).

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[7] Individualized support takes into account use of individual action plans t and profiling/segmentation.

[8] PL and RO belong to the group of countries with "very strong change" with change in at least 4 out of 5 areas and at least 2 policy areas with an improvement of more than 1 point.

Another direct question on the role of the Recommendation refers to introduced changes in PES self-monitoring. The results on this question in the PES-survey are also included in table 2 (last column). The results are strongly comparable to the question on the role of the Recommendation on LTU policy prioritisation. 13 out of 30 have chosen for "no changes, or very small changes in the PES monitoring its performance", 12 for "moderate changes" and 3 PES report significant changes prompted by the Recommendation.

This opinion on the effects of the Recommendation based on perceptions will be one element in the triangulation exercise in which other elements will be taken into account, like changes in trends in output and result indicators which are discussed in section 4 and 5 of this Annex.

3. Output, result and context indicators

In the logical chain of figure 1 task 6 changes in measures lead to certain (changes in) outputs and results, but these relationships are also influenced by the context. In this section we will discuss a number of indicators from secondary data we have available for outputs, results and context. The most important source of data is the EMCO Monitoring framework (step 1). These data are enriched in a number of ways: adding complementary indicators (step 2), and addition of values for earlier years (step 3). The addition of both recent data as well as data for earlier years is important if we want to compare trends before and after the baseline period in a later stage of this section. In the following of this section we describe the various steps and sources of constructing the output, result and context indicators.

3.1 Step 1: Systematically cluster the information from the EMCO Monitoring framework by output, result and context indicators

The most important source of secondary data is the EMCO monitoring framework. This framework is developed by the Employment Committee (EMCO) to monitor the implementation of the Recommendation. The framework consists of a number of indicators for which EMCO collects yearly data for every member state. EMCO uses several data sources (like the European Union Labour Force Surveys and the European Union Statistics on Income and Living Conditions - SILC, but also administrative data) to collect the data. In Sub-Annex 3 we have given a full overview of data from the EMCO-monitoring. Table 4 gives an overview of the indicators from the EMCO Framework which we have used for this study. We focus on indicators which are directly related to the questions and indicators included in the evaluation matrix of this study (see Annex 1 of main report). The most recent data is from October 2018, with also some new indicators. We have classified the indicators in output, result and context indicators.

Table 4 Classification of indicators from EMCO framework, also used in current study

Indicators from EMCO framework	Output	Result/ impact	Context
Long term unemployment rate of adult (25-64) working age population (as % of active population 25-64) - Also split by educational level, gender and age subgroups (25-55 and 55+)		X	
Share of adult working age population (25-64) long-term unemployed as a percentage of the total adult working age population (25-64) unemployment		X	
Activation rate of adult registered long-term unemployed (LMP cat.2-7)	X		
Activation rate of adult registered long term unemployed (LMP category 4 – employment incentives)	X		
Transition rate of adult long-term unemployed to employment - Also split by age (25-55 and +55), gender and qualification level		X	
Long term unemployment rate of adult working age population by duration (12-18m, 18+)		X	

Share of LTU registered with public employment services (25 – 64) - also split by gender	X		
Participation in education and training for LTU working age adults (aged 25-64)(in %)	X		X
Use of Job integration agreements (JIA) (=number of adult registered long term unemployed with duration of unemployment more than 18 months having a job integration agreement / number of adult registered long term unemployed with duration more than 18 months)	X		
Regained employment for LTU (= number of adult (aged 25-64) registered long term unemployed who entered employment in the reference year after a job integration agreement/ total number of adult (aged 25-64) registered long term unemployed having a job integration agreements in the reference year) - Also split by educational level, gender and age subgroups		X	

3.2   Step 2: Adding complementary indicators

Step 2 entails adding complementary indicators to our database. We have added the following complementary variables to the database:

1. Differences in long-term unemployment as % of active population by NUTS 2 regions (context variable).[9] In some Member States there are substantial differences between regions with respect to economic development and labour market dynamics. Labour market policy is also strongly decentralized in certain EU-countries (like Spain, Italy, Belgium, The Netherlands, Denmark, Finland, Poland[10]). These data have been added to support the case studies (See Annex 3). In a separate appendix (sub-appendix 8) some graphical illustrations of the regional differences per country are presented.
2. Quarterly data on the long-term unemployment rate and share of long term unemployed in total unemployment for 25-64 years old. The advantage of these data in a statistical analysis is that we have more observations available to test relationships. Moreover, these data can be used to have recent figures in country factsheets to be produced.
3. Share of the long-term unemployed who participate in ESIF projects regarding social inclusion (output variable). This variable can be regarded as an output variable, because if policies for the group of long-term unemployed are intensified in relation to the Recommendation, this could partly be implemented by using ESIF-funds. The use of ESIF funds for this groups is also an evaluation issue on its own for this study.

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[9] The NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the economic territory of the EU. The current NUTS 2016 classification is valid from 1 January 2018 and lists 133 regions at NUTS 1, 311 regions at NUTS 2 and 1373 regions at NUTS 3 level.

[10] See for example: Mosley, H. (2011) Decentralisation of public employment services, PES to PES dialogue, DG Employment, Social Affairs and Inclusion, Unit C.3 Skills, Mobility and Employment Services.

4. Indicators for trends in expenses on ALMP-policies from the LMP-database. We distinguish sub-categories. This gives an added value, because the categories differ in the direct link to the Recommendation. Preferably we would have even more targeted data on expenses per long-term unemployed. Some kind of rough estimate on ALMP-participation and expenses for LTU are constructed in OECD (2018)[11] on the basis of the EC's LMP database. However, in this publication these data are only constructed for 2015. In principle – although labour intensive - it is possible to construct in a similar way a few of these indicators for earlier years and for 2016 (the most recent year possible) to see if any changes in time have taken place. Inputs to construct the variables for 2016 are available mid-September. For the link with the period of the Recommendation being introduced, it is a limitation that data for 2017 are not yet possible to construct. Moreover, the indicators used are only an estimate, because the measures include long-term unemployed as a target group, but could also include other target groups. Because all these limitations we give some attention to the available material on this but do not go further in making further constructions of data.

5. (Real) GDP growth rate (context variable). This variable is an extra indicator for the business cycle. It is important to take the business cycle into account while estimating the effect of the Recommendation on the position of the long-term unemployed, because the business cycle has a substantial influence on the position of the long-term unemployed.

3.3 Step 3: Addition of the values for indicators for earlier years

We use the Eurostat database to add values for indicators for earlier years to our database. However, the Eurostat database does not provide data for all indicators from the EMCO framework. We have found data for the following indicators in the Eurostat database:

- Long term unemployment rate of adult (25 - 64) working age population (as % of active population 25 – 64)
- Share of adult working age population (25 – 64) long-term unemployment as a percentage of the total adult working age population (25 – 64) unemployment
- LTU rate of unemployment by NUTS2 region
- Activation rate of adult registered long-term unemployed (LMP cat. 2 – 7)[12]
- Transition rate of adult long-term unemployment to employment
- Long-term unemployment rate of adult working age population by duration
- Share of LTU registered with public employment services (25 – 64)[13]
- Number of registered adult (aged 25 - 64) long-term unemployed with a duration of unemployment up to 18 months / total number of registered adult (25 - 64) long term unemployment
- (Real) GDP growth rate
- Share of long term unemployed who participate in European Structural Investment funded projects[14].

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[11] OECD (2018), *LMP interventions for the long-term unemployed*, OECD: Active Labour Market Team.

[12] The activation rate is the share of the long-term unemployed who participate in an active labour market policy (LMP cat. 2 – 7)

[13] In the context of the EMCO monitoring framework, Eurostat-data was available for 2013-2017.

[14] These data are made available from the Annual Implementation Reports (AIR).

Important comment to this is that adding figures for earlier years for some of these indicators needs some manipulations using available data. For example: with regards to the first indicator, the Eurostat database supplies information on the numbers of the long-term unemployed[15], but does not give direct information on the share of these numbers in the active population of the same age groups. These shares however can be calculated by using the number of active persons for the same age groups[16].

Sometimes Eurostat indicates that there is a break in the data. For example, when a new definition is introduced, or systems of sampling have changed. We will take these breaks into account, especially when these breaks can be found just before or after the baseline period (so around 2015). We have to avoid that breaks in series that have a pure statistical reason disrupt linking trends to LTU-measures. This is one of the reasons that in trend analyses we will not include the period before 2005 although this data is available, because in the Eurostat database, there is a break for many indicators in 2005.

Table 5 Overview and availability of the indicators that are part of our database

Source	Indicator name	Quarterly availability	Length time-series	Subcategories
Eurostat	Long term unemployment rate of adult (25 - 64) working age population (as % of active population 25- 64)	Q&Y	1998Q1 – 2017Q4[a)]	Gender & age
Eurostat	Share of adult working age population (25 – 64) long-term unemployed as a percentage of the total adult working age population (25 – 64) unemployment	Q&Y	1998Q1 – 2017Q4[a)]	-
Eurostat	Long term unemployment rate (as % of active population) by NUTS2 region	Y	1999 – 2017	-
Eurostat	Activation rate of adult registered long-term unemployed (LMP cat. 2 – 7)	Y	1997 – 2016	-
Eurostat/ DG Employment	Labour market policy expenditures (%GDP), differentiated according to expenditure categories	Y	2005 - 2016	
Eurostat	Transition rate of adult long-term unemployed to employment (25 – 54)(55+)	Y	2011 - 2017	Gender
Eurostat	Long term unemployment rate of adult working age population by duration (12 - 18m, 18+)	Y	1998 – 2017	-
Eurostat/ EMCO	Share of LTU registered with public employment services	Y	2013-2017 in framework EMCO	Gender, education, age

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[15] Code: **[lfsa_ugad]**

[16] These data are available on the Eurostat website using codes: [**lfsa_ugad]** and **[lfsa_agan]** or **[lfsa_agaed]**.

monitoring			monitoring	
Eurostat	Share of LTU working age adults (25-64) receiving any benefits	Y	1983 – 2017	-
Annual Imple-mentation Reports	Number and share of the long-term unemployed who participate in ESI-funded projects	Y	2015 - 2017	-
Eurostat	GDP growth rate (percentage change to previous period, volume)*	Q&Y*	2006Q1-2017Q4[a)]	-

*Where * indicates that quarterly data is seasonally adjusted.*
More recent quarterly data on 2018Q1 are available on the Eurostat website. In October 2018 data have become available on 2018Q2. We have used these data for trends in country specific charts.

4. Trends in output and result indicators

4.1 Introduction

In this section we show some trends in the output and result variables described in section 3. The descriptive analysis of this section consists of two elements:

1. We describe to what extent output and result indicators changed since the baseline period. In the descriptive figures we include the trends before the baseline period as well, to see if any trend after the baseline was already taking place before that time. In the next section (5) we do a statistical test to determine if such a break in trend has taken place, also taking into account the role of the business cycle. The figures in this section can be seen as a first step to this analysis by making the (changes in) trends more visible.

2. In doing this we also make a first tentative attempt to see if the improvements in output and result indicators are related to the changes in policy measures. This is done by clustering the trend of output and result indicators by clusters of countries according to trends in changes of quality of measures according to the mapping and by some correlation analyses between these variables. We also calculate some correlation coefficients with clustering of countries according to expected changes expressed in the SWD accompanying the Recommendation. However, this is only a tentative analysis, because we have to keep in mind that many other factors, like the business cycle, could also influence the development of these indicators. Moreover, the number of observations is limited, both in terms of observations after the baseline period, as well as number of countries within different clusters.

There are differences in which results are disturbed by other factors and complications in the testing process:

- Output indicators (like the registration rate, JIA-participants, activation rates, ALMP-expenditures) are relatively more directly affected by policy making and less influenced by other intervening factors than result indicators (like the transition rates and the LTU-rate). So we have to be even more careful in conclusions about the impact of the Recommendation based on trends in result variables than in the case of assessing trends in output variables. The same counts when assessing correlation coefficients of result variables with indicators for policy changes. The fact that various other intervening factors are involved will limit the size of the correlations.

- The implementation of the Recommendation will take time. So, the more recent data we have the better the possibilities for testing. For some indicators we only have data until 2016, which is a serious bottleneck. If 2017 is included, testing offers better prospects.

- Implementation of changes which have an important institutional component will probably need more time. Changes with a strong institutional component, like in the area SPOC, probably need more time than JIA and improving registration rates. Although the latter could also require coordination with other actors. The necessary implementation time reinforces the former bottleneck of time lags in the data and the importance of the availability of data for 2017. Because the implementation could be stronger in recent periods, we often looked at developments between 2016-2017 besides 2014[17] and 2017.

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[17] In case there is yearly data, we compared changes between 2014-2017. Because the baseline is 2015H1, part of the changes expected by the Recommendation could have occurred in 2015H2. In order to take this into account, we use changes in 2014-2017 to include developments in 2015H2 (rather than changes between 2015-2017, which would leave out changes in 2015H2).

We describe the following indicators: the registration rate (4.2), reach of JIA (4.3), the activation rate (4.4), active labour market policies (4.5), ESF participation (4.6), the LTU-rate and the share of LTU in total unemployment (4.7) and the transition rates into employment (4.8).

4.2 Registration rate

The registration rate is the percentage of LTU registered with a Public Employment Service. The Recommendation aims at increasing the coverage of registration among LTUs. It is therefore expected registration rates increase after the introduction of the Recommendation in countries with a low registration rate to begin with. For countries with a high registration rate in 2014 it is more difficult to increase coverage.

Table 6 shows the share of long-term unemployed who are registered at the PES from 2013 onwards, based on lfs-data from Eurostat. National administrative data can be different to data collected by Eurostat via the labour force survey because national rules and definitions for registering differ (e.g. conditions on the extent persons with a small part-time job are allowed to register). The differences in definitions and conditions can lead to differences in both sources between countries, but less to differences in trends over time because definitions and conditions stay rather stable over time, especially in relative short periods. The LMP database gives administrative data on registered unemployed, but most recent data are for 2016, which is a clear disadvantage compared to the Eurostat data including 2017. Moreover, with administrative data one misses a denominator to calculate registration rates[18]. Therefore, we work with lfs-data on registration rates which are available for 2017 and have a denominator, making calculations of rates possible.

Table 6. Registration rate of long term unemployed (25-64) among member states

Country	2013	2014	2015	2016	2017
EU-28	72.8	72.4	73	72.1	71.8
BE	88.7	86.3	84.9	85.6	88.5
BG	41.7	40.3		38.3	
CZ					
DK	92.4	90.6		86.2	86.5
DE	91.1	91.3	90.8	90.1	91
EE	43	40.1	35.1	40.1	47.3
IE					
EL	68.3	70.6	74.3	76.5	77.9
ES	87.8	87.2	86.5	86	85.5

[18] More detailed strong and weak points of both types of sources can be found in: Konle-Seidl, R. and B. Lüdeke (2017), *What harmonised and registered unemployment rates do not tell*, in: IAB Forschungsbericht 6/2017.

|					
FR	86.5	87.5	90.3	88.7	89.8
HR	85.9	86.7	84.5	77.8	76.3
IT	50.6	49.2	48.8	47.7	48
CY					
LV		40.5			
LT	79.9	78.7	81.4	76.1	73.9
LU	71.5	74.3	66.9	65.1	64
HU	63.2	62.1	64.5	64.0	63.0
MT	65.3	74.3	68.3	61.1	54.6
NL					
AT	70.3	73.6	80.5	78.4	79.4
PL	71.8	71.9	70.0	69.9	66.0
PT	81.7	81.9	81.2	80.8	76.9
RO	24.9	22.6	16.3	13.9	12.3
SI	77.2	77.1	77.8	77.9	79.6
SK	87.3	88.6	86.5	87.6	82.6
FI	93.5				
SE	93.1	92.1	93.9	92.1	93.1
UK					

Source: Data received during the process of EMCO monitoring, based on lfs Eurostat data. The registration rate is the percentage of registered long-term unemployed out of all long-term unemployed (aged 25-64) with duration of unemployment of more than 12 months.

The EMCO monitoring main report adds the following notes for the data for 2015, 2016 and 2017: No data for IE (REGISTER variable not currently collected). Data are provisional. 2017 data for BG, CZ, IE, CY, LV, NL and UK, 2016 data for CZ, IE, CY, LV, NL and UK and 2015 data for BG, CZ, IE, CY, LV, NL and UK are not available. There are breaks in the series between 2016 and 2017 in the data for BE, DK, IE and MT and between 2015 and 2016 for DK. The 2015 data for DK include large numbers (27%) of "No answer" responses and are assumed to be not comparable with other years. The following figures may be slightly understated (max. 1 percentage point) due to missing values in the detailed data because of small sample sizes – 2015 & 2016: CZ & CY; 2017: BG, CY, LV.

Because of the incomparability of the DK data for 2015, we have excluded this figure in table 6.

For the European Union as a whole the registration rate slightly decreased since 2015 (EU-28). Figure 7 helps to get a quick view on what happened since 2014 in the registration rate per member state. The member states are ranked according to the difference between 2014 and 2017. The figure shows the situation is mixed, but a few more countries show a decrease in registration rate rather than an increase although the changes are often rather small. There is no statistical correlation between the improvement in registration rates between 2014 and 2017 and the changes in mapping scores in this policy field. This means countries with (stronger) changes in mapping scores in this area are not stronger represented among the countries for which the registration rates have improved.

Figure 7. Registration rate of long term unemployed among member states
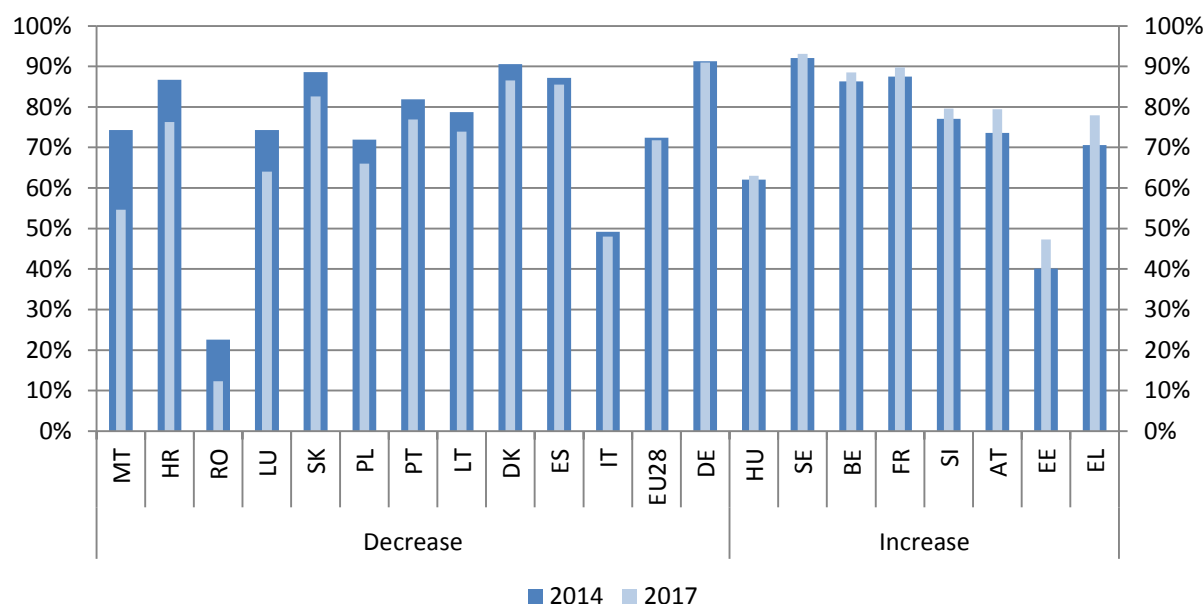
Source: Data collected in the framework of the EMCO monitoring, based on lfs Eurostat data. See the notes below table 6 for more information on the data.

In the framework of the EMCO monitoring these data have also been split out for some subgroups. These data show no large differences between these groups. For the EU as a whole the registration rate among the group aged 55-64 is somewhat higher. Differences according to gender and educational background are small, although this can vary somewhat per country. Similar differences between groups already existed in 2014.

4.3 The use of Job Integration Agreements

The Recommendation specifies that registered long-term unemployed should receive a job-integration agreement (JIA) before they reach 18 months of unemployment. The coverage of JIA is therefore an important output indicator of the Recommendation. We analyse the changes in the coverage of JIA in this section. Secondly, we use administrative flow data from the recent EMCO monitoring to have indications about the effectiveness of the JIA in terms of transitions to employment. The whole analysis of this section strongly relies on the data of the recent EMCO monitoring round.

In the framework of the EMCO monitoring the member states are split up in four groups based on how the JIA, or an equivalent instrument such as the Individual Action Plan (IAP), is delivered. A first group refers to countries which do not offer a JIA, a second group includes countries with a regular individual action plan (IAP) delivered to all unemployed, a third group includes countries that offers an IAP with an in-depth assessment for LTU and a fourth group that offers a dedicated JIA to the long-term unemployed based on an in-depth assessment. The approach of the latter two groups is considered to be equivalent on the quality continuum. This grouping in the EMCO monitoring report for 2017 is carried out by combining information from EMCO's own primary sources and to a lesser extent the PES-survey.

The classification of the EMCO monitoring and the mapping are somewhat related, but not fully consistent[19]. The mapping is based on the PES quality standards and places stronger emphasize on the quality of the agreement itself rather than its delivery. The EMCO monitoring approach on the other hand focusses relatively stronger on the delivery approach, for example the extent to which it is specifically delivered/updated/enhanced for long-term unemployed.

Reach

The EMCO monitoring report gives the reach of JIA among registered long-term unemployed in 2017 based on the collection of administrative data.

Figure 8. The share of LTU with a JIA in 2017[20]

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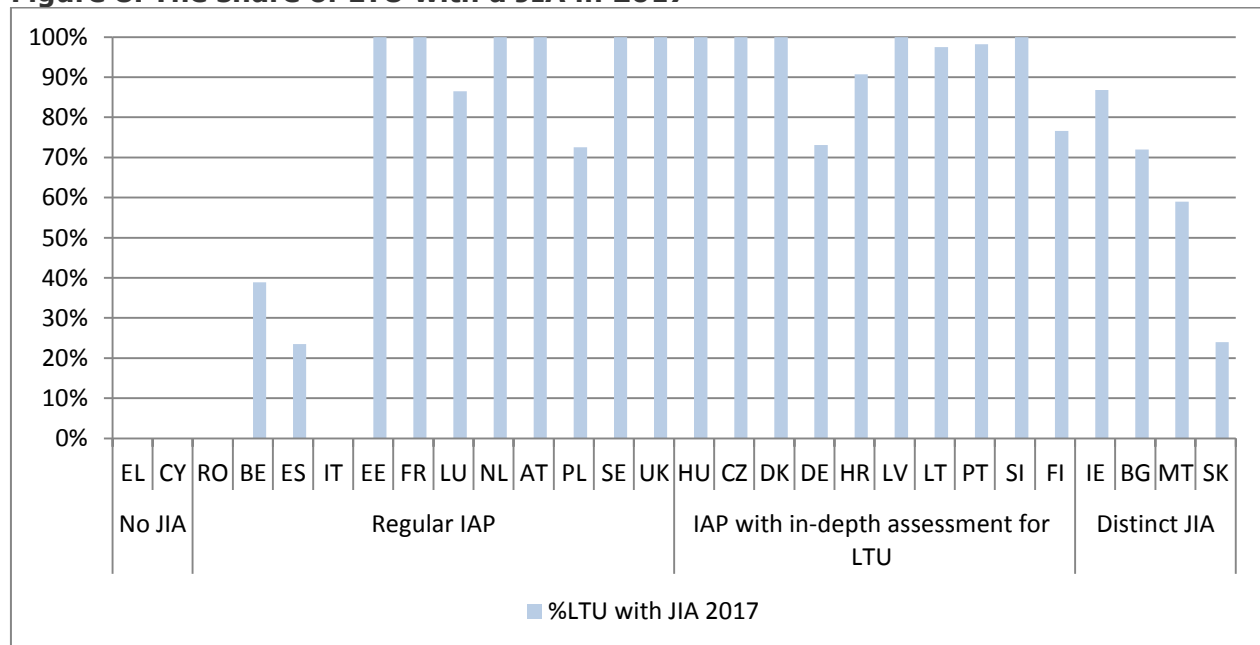
[19] There are important differences between the assessment of JIA in the mapping exercise and the classification of JIA in the EMCO report, with regards to the method: **the mapping** explicitly uses the PES quality standards, which state: Job integration agreements should: 1. be made in writing at the very latest when a long-term unemployed person has reached 18 months of unemployment. 2. include an individual assessment and specify individual follow up of the unemployed persons situation providing capacity for regular monitoring. 3. combine relevant services and measures provided by different organizations. Furthermore the JIA will specify realistic job goals and results of an individual assessment. **The EMCO-monitoring report** focusses stronger on the JIA delivery approach and uses LTU monitoring exercise, the EMCO self-assessments of 2018 and the PES-survey to answer three key questions: 1. is there a JIA delivered only to LTU or an IAP delivered to all unemployed that differs for LTU. 2. Is the JIA or IAP based on an in-depth (re)assessment that takes place after the client becomes LTU. 3. is a SPOC identified and does the JIA facilitate access to a package of services different from providers. This leads to four groups: (1) No JIA (regular IAP provided to all unemployed and is not considered to fulfil the requirements of the Recommendation; (2) regular IAP provided to all unemployed. Plan may be reviewed and updated on an ongoing basis but there are no mandatory reviews linked to the duration of unemployment (3) IAP with in-depth assessment. Regular IAP provided to all unemployed is updated/enhanced for LTU on the basis of further in-depth assessment/review process; (4) Distinct JIA. Distinct plan provided only to LTU on the basis of an in-depth assessment.

[20] Administrative data from the EMCO monitoring 2017.

Figure 8 shows the reach in 2017, with countries ordered according to the EMCO monitoring clustering. Several countries report full or near full coverage of LTU with JIA[21] in 2017 (CZ, DK, EE, FR, LV, AT, SI, SE, LT, NL, HU and PT).

A similar exercise was done in 2016. The data collection of 2016 however was less specified in terms of definitions. This makes a comparison less robust. Furthermore, the concept of a JIA could have changed between 2016 and 2017 in countries which could influence the comparison between 2016 and 2017. For example, when the concept has become stricter and reaches all elements of JIA more closely, this could lead to lower shares of long term unemployed reached, because it refers to a more intensive service. In the EMCO monitoring main report a similar comparison was therefore not made. However, in individual country fiches for certain countries this comparison is made.

In the following table some of these results are presented for countries which had no (nearly) 100% score in 2017 and were not considered incomparable in the country fiches (although comments on comparability are still added in a separate column in table 7). The differences in reach between 2016 and 2017 differ per country. In a number of countries, the reach has increased (like ES, IE, CZ, LU, PL, MT and SK) while in some other countries the reach decreased (especially DE, HR).

Table 7 – The difference in reach of JIA between 2016 and 2017 for certain countries

Country	Reach 2016	Reach 2017	Comments on comparability*
BE	41%	39%	VDAB: Minor corrections in the methodology were implemented in 2017 data collection.
ES	17%	23%	Several changes have been implemented in the 2017 data exercise. These have been applied retrospectively in the 2016 dataset, so that data are comparable*.
LU	71%	86%	Data are comparable
PL	64%	73%	Data are comparable.
DE	77%	73%	Data are comparable
IE	77%	87%	Data are comparable
MT	33%	59%	Data are comparable.
SK	9%	24%	2016 data included only LTU with an IAP; 2017 data includes LTU with both types of

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[21] In this section we focus on reach and therefore use the term "JIA" for all types of delivery implemented.

|			plan: IAPs and JIAs provided since February 2017.
HR	100%	91%	2016 data for JIA users include all users of an Individual Action plan (IAP). For 2017, data include only cases where the IAP was revised at 12 months of unemployment, which was carried out for most registered LTU.

Note: Figures based on scores in country fiches of EMCO monitoring. Only reported are countries who had no (nearly) 100% score in 2017. Also some countries are excluded because of incomparability (FI, BG). EL and CY are countries where no JIA is offered. For IT and RO there is no administrative data available in 2016 and 2017. *In the EMCO monitoring country factsheets explicit comments on data comparability are made.

Full coverage of LTU with JIA implies that all LTU receive a JIA, among those are thus disadvantaged groups (like people aged 55-64, women, lower educated). In EL and CY no JIA are offered according to the EMCO monitoring. For IT and RO no data is available. This leaves 11 countries for which we can look into the reach of specific target-groups compared with other groups.

For this analysis we exclude countries with full coverage (CZ, DK, EE, FR, LV, AT, SI, SE, NL, HU and UK), countries with near full coverage (LT and PT), countries that offer no JIA (EL and CY) and countries without data (IT and RO). This leaves us with eleven countries. In figure 9 we present the difference in coverage for females and males, people aged 25-54 and 55-64 and between low, medium and higher educted people (all in 2017).

Figure 9 Differences in coverage of JIA by gender, age and level of education in 2017
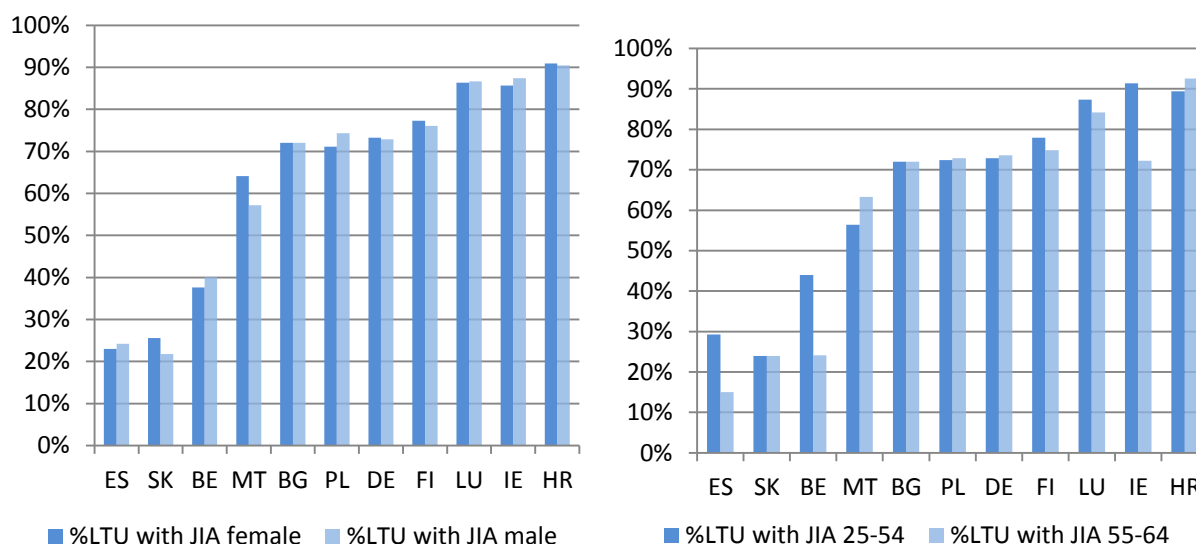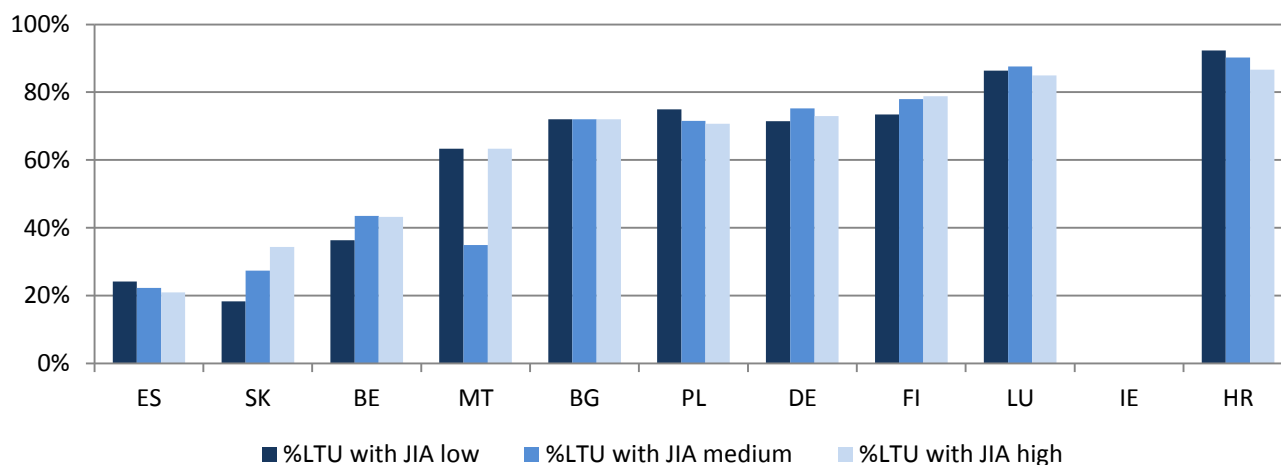
Source: EMCO monitoring data 2017. Note: Low, medium and high levels of educational attainment refer to ISCED categories 0-2, 3-4 and 5-8 respectively. Data for IE according to level of education are missing.

Differences in the coverage between males and females are small. What stands out is that Malta and Slovakia have higher coverage for females. Germany and Finland also have slightly higher coverage rates for females. Differences in coverage between people aged 25-54 and 55-64 are larger. Especially for Belgium, Ireland and Spain coverage rates are much lower for older people. Malta and Croatia are the only countries with higher rates for older people. Differences in coverage by education level are small for most countries. Only Belgium and Slovakia have substantially lower coverage rates for lower educated. In Poland and Croatia the coverage of lower educated is higher than that of other groups.

JIA and transitions to employment

The general objective of the Recommendation is to support MS to increase the rate of transitions from LTU to employment. The recommendation introduces the approach of Job integration agreements, which will act as a focal point of integration support for the long-term unemployed[22]. So, in the end, the use of the JIA, as well as improved quality of the design should lead to higher shares of LTU transitioning to employment. the EMCO monitoring report gives information on exit rates to employment for those with a JIA, taking into account all destinations (including remain unemployed). The report states that is difficult to assess if this is a good or a bad exit rate. The denominator is all persons recorded as have a JIA at some point in time during the year, so some have had a JIA only for a short period of time. So it clearly not appropriate to target 100% transition to employment.

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[22] Staff Working Document (SWD) accompanying the Council Recommendation on the integration of long term unemployed into the labour market (2015), page 22 and 23.

Therefore, the EMCO monitoring report indicates that the exit rates into employment from those whose unemployment spells ended is a more straightforward indicator of outcomes. In countries where the JIA is not universal, it is possible to compare outcomes for LTU with a JIA with exit rates of the whole group of LTU. If the exits of LTU with JIA to employment are higher than for LTU in general, this is an indication that JIA is an effective tool. Such a comparison can only be done for countries that do not offer JIA to all long-term unemployed. However, the lack of inclusion of the category "remain unemployed" makes this analysis weaker. If the (missing) category "remain unemployed" would also be taken into account, the difference between all LTU and those with JIA with regards to exits into employment could be different, because the proportion of those with JIA who remain unemployed could be different from the proportion of all LTU who remain unemployed and this is not taken into account.

A second reservation is that the differences in transitions into employment between the two groups could be related to differences in the composition of both groups. If those with a JIA have an even larger distance from the labour market, because of for example lack of qualifications, the effect of a JIA would be underestimated. If on the other hand those with a JIA are the more easily reachable and employable long-term unemployed, the effect of a JIA would be overrated when looking to difference in transitions to employment. The earlier described data on reach of JIA among groups does however, not point into strong and systematic differences in reach of JIA according to certain characteristics like education level. So there are little direct indications that these kind of differences in profile of both groups play a disturbing role in comparing transitions in employment.

A third point of attention is that there is a difference in the exits of LTU to unknown destinations between the group having a JIA and the group of all LTU. This group of unknown destinations could at least partly "hide" persons who have also found a job and should therefore also be taken into account. In the following analysis we therefore also apply alternative exit rates in which we exclude those with unknown destinations and aggregate the remaining categories to 100% and see what differences remain in exit rates to employment. The remaining exit categories consist of (1) employment, (2) ALMP and (3) other destinations which include: retirement (old-age or invalid), parental leave (under some specific circumstances), granting a work permit abroad, going abroad for more than 15 calendar days, death, caring for another person, sanction for non-cooperation etc. For example, for Slovakia, the difference in exit rate to employment between those with JIA (55.3%) and the whole group of LTU (49.8%) is 5.5%. If we exclude the group "unknown", the difference would be $(55.3/(55.3+12.4)) - (49.8/(49.8+14.1)) = 3.7\%$. So even using this alternative approach, we rank Slovakia as a country with a higher employment exit rate for LTU with JIA.

For the same eleven countries as above we first describe exit rates to various destinations for the total group of LTU and those with a JIA, including unknown (Table 8).

Table 8 – Exits of all LTU and those with JIA in 2017

Slovakia		Total	Women	55-64	low educated	Luxembourg		Total	Women	55-64	low educated
LTUs	Employment	49.8	50.4	30.7	39.6	LTUs	Employment	68.4	64.7	30.6	66.4
	ALMP	0	0	0	0		ALMP	:	:	:	:
	Other known dest.	14.1	17.6	21.1	17		Other known dest.	:	:	:	:
	Unknown	36.1	32	48.1	43.4		Unknown	31.6	35.3	69.4	33.6
JIA users	Employment	55.3	56.2	39.1	45.8	JIA users	Employment	70.9	67.9	32.1	69.3
	ALMP	0	0	0	0		ALMP	:	:	:	:
	Other known dest.	12.4	14.5	17.7	15		Other known dest.	:	:	:	:
	Unknown	32.3	29.3	43.3	39.2		Unknown	29.1	32.1	67.9	30.7
Malta		Total	Women	55-64	low educated	**Croatia**		Total	Women	55-64	low educated
LTUs	Employment	49.1	51.6	32.8	50.2	LTUs	Employment	41.9	41.9	28.7	36
	ALMP	0.7	0.8	0.5	0.4		ALMP	0	0	0	0
	Other known dest.	0.5	0.8	0	0.2		Other known dest.	13	12	28.3	14
	Unknown	49.8	46.8	66.7	49.1		Unknown	45	46.1	42.9	50
JIA users	Employment	63.4	63.4	58.4	66.5	JIA users	Employment	40.6	40.4	26.9	34.3
	ALMP	0	0	0	0		ALMP	0	0	0	0
	Other known dest.	0.4	0	1	0		Other known dest.	14.7	13.8	30	16.1
	Unknown	36.2	36.6	40.6	33.5		Unknown	44.7	45.8	43.1	49.5
Bulgaria		Total	Women	55-64	low educated	**Germany**		Total	Women	55-64	low educated
LTUs	Employment	39.5	40.3	36.7	32.9	LTUs	Employment	16.7	14.9	12.2	14.6
	ALMP	11.3	11.9	10.1	9.4		ALMP	21	19.8	11	21.5
	Other known dest.	18.9	20.5	25.8	18.6		Other known dest.	54.7	57.1	69.5	57.8
	Unknown	30.2	27.3	27.4	39		Unknown	7.6	8.1	7.3	6
JIA users	Employment	38.1	38.8	35.2	29.2	JIA users	Employment	17.8	15.8	13.6	15.6
	ALMP	12.5	13.2	11.2	10.3		ALMP	24.2	22.8	13.3	24.7
	Other known dest.	19.2	20.9	26.2	18.3		Other known dest.	51.9	54.7	67	54.8
	Unknown	30.2	27.1	27.5	42.3		Unknown	6.1	6.7	6.2	5

Finland		Total	Women	55-64	low educated
LTUs	Employment	30.7	31.8	25.4	21.6
	ALMP	26.8	27.1	13.4	26.5
	Other known dest.	20.9	23.4	42	25.2
	Unknown	21.7	17.7	19.2	26.7
JIA users	Employment	33.7	34.1	33.2	25.7
	ALMP	38.3	37.5	21.6	39.5
	Other known dest.	16.2	18.2	33.1	20.1
	Unknown	11.8	10.2	12.1	14.7

Spain		Total	Women	55-64	low educated
LTUs	Employment	44.4	42.1	25.2	41.6
	ALMP	3.2	3.1	4.4	3.7
	Other known dest.	19.5	20.8	31.5	21
	Unknown	33	34	38.9	33.6
JIA users	Employment	58.1	56.2	44.3	56.1
	ALMP	4.3	3.8	5.1	4.8
	Other known dest.	14.6	15.7	23.3	15.5
	Unknown	23	24.2	27.3	23.7

Poland		Total	Women	55-64	low educated
LTUs	Employment	35.8	34.1	27.3	27.7
	ALMP	10.1	12.5	6.9	8.6
	Other known dest.	22.8	24.6	40.8	27.1
	Unknown	31.3	28.8	25	36.6
JIA users	Employment	37.1	35.5	29.1	28.5
	ALMP	10.2	12.7	7.4	8.9
	Other known dest.	21.3	23.0	38.0	25.5
	Unknown	31.4	28.8	25.5	37.1

Belgium		Total	Women	55-64	low educated
LTUs	Employment	51	51	34.1	46.9
	ALMP	20.9	20.0	16.6	21.6
	Other known dest.	10.6	13.2	29.6	12.9
	Unknown	17.5	15.8	19.7	18.6
JIA users	Employment	47.1	47.3	32.8	44.3
	ALMP	26.7	25.8	26.1	26.8
	Other known dest.	10.7	13.6	26.1	12.7
	Unknown	15.5	13.2	15.1	16.2

Ireland		Total	Women	55-64	low educated
LTUs	Employment	43.6	40.6	29.2	-
	ALMP	25.2	25.9	31.2	-
	Other known dest.	17.2	19.8	29.2	-
	Unknown	14	13.7	10.4	-
JIA users	Employment	43.9	41	27.8	-
	ALMP	25.2	26.2	33.2	-
	Other known dest.	17.1	19.9	28.9	-
	Unknown	13.8	12.9	10.1	-

For all countries except Bulgaria, Croatia, Belgium, and Ireland (55-64) more JIA users exit to employment than LTU in in general, irrespective of the subgroup. The difference in exits to employment between JIA users and LTU-total is highest in Slovakia, Malta and Spain.

In table 9 we go a step further and add separate scores for the differences in exit rates to employment of all LTU and those with JIA, when the group "unknown" is no longer included[23].

Table 9 – The difference in JIA and non-JIA users exiting to employment in- or excluding the group unknow destinations

	Exit category "unknown" included/ excluded	Total	Women	55-64	low educated	EMCO cluster[24]	Mapping score JIA 2015H	Mapping Score JIA 2018[25]
Slovakia	Included	5.5	5.8	8.4	6.2	Distinct JIA	2	3
	Excluded	3.7	5.4	9.6	5.4			
Malta	Included	14.3	11.8	25.6	16.3	Distinct JIA	4	4
	Excluded	1.8	3.0	-0.2	1.2			
Bulgaria	Included	-1.4	-1.5	-1.5	-3.7	Distinct JIA	1	3
	Excluded	-2.1	-2.2	-2.1	-3.5			
Finland	Included	3	2.3	7.8	4.1	IAP with in-depth assessment	4	4
	Excluded	-0.9	-0.7	6.3	0.7			
Poland	Included	1.3	1.4	1.8	0.8	Regular IAP	3	3
	Excluded	2.0	2.0	2.7	1.6			
Luxembourg	Included	2.5	3.2	1.5	2.9	Regular IAP	2	4
	Excluded	0.0	0.0	0.0	0.0			
Croatia	Included	-1.3	-1.5	-1.8	-1.7	IAP with in-	3	4

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[23] We do not include a score for the EU, because available scores for EU-average (table 6 in EMCO-monitoring report) are based on the countries with available data. So if the set of countries taken into account for the average scores of all LTU and JIA-users differs (which is the case), these averages are not comparable.

[24] The EMCO Data collection for monitoring the LTU Recommendation (2017) qualifies countries by their quality of JIA.

[25] The score from figure 3.1.1 (general) in the mapping exercise for the aspect of JIA is used from the second mapping round.

						depth assessment		
	Excluded	-2.9	-3.2	-3.1	-3.9			
Germany	Included	1.1	0.9	1.4	1	IAP with in-depth assessment	4	4
	Excluded	0.9	0.7	1.3	0.9			
Spain	Included	13.7	14.1	19.1	14.5	Regular IAP	2	4
	Excluded	9.3	10.5	19.7	10.7			
Belgium	Included	-3.9	-3.7	-1.3	-2.6	Regular IAP	4	4
	Excluded	-6.1	-6.0	-3.9	-4.8			
Ireland	Included	0.3	0.4	-1.4	-	Distinct JIA	4	4
	Excluded	0.2	0.0	-1.7	-			

Note: base group consist of LTU and those with JIA whose unemployment spell ended. The exit categories consist of (1) employment, (2) ALMP (3) other destinations which include: retirement (old-age or invalid), parental leave (under some specific circumstances), granting a work permit abroad, going abroad for more than 15 calendar days, death, caring for another person, sanction for non-cooperation etc. (4) unknown.

It is now possible to say that for Slovakia, Malta, Poland, Germany, Spain and Ireland more JIA users exited to employment than LTUs in general even after we account for differences in exits to unknown destinations. For Slovakia, Poland, Germany and Spain this also counts for all subgroups distinguished. On the other hand, for Bulgaria, Belgium and Croatia those with a JIA seem to perform worse. All in all there are no systematic indications that those with JIA have better transitions into employment; for some countries this indeed can be found, but for others the reverse is true and differences in some countries are quite small.

A next step is to assess to what extent the differences in transitions to employment of all LTU and those with JIA are related to the quality of the measure. We can test this by comparing the results for the countries in table 9 with the mapping score on JIA and the classification of the EMCO monitoring. Because the exit rates refer to 2017, we use the mapping scores of both 2015 and 2018, to have an indication if a country has a relative favourable or less favourable score on this policy field over a longer period. There is no clear relationship in quality of JIAs and the effectiveness indicator. Among the countries in which those with JIA seem to score best in terms of employment exists (Slovakia, Malta and Spain), quality according to the mapping exercise varies between relatively lower scores (Slovakia: 2 in 2015 and 3 in 2018), relatively higher scores (Malta: 4 in both 2015 and 2018), and a strongly increasing score (Spain, 2 in 2015 and 4 in 2018). Slovakia has a distinct JIA according to the EMCO monitoring clustering while Spain only offers a regular IAP. The countries in which those with JIA score worse than all LTU in terms of employment exits (Bulgaria, Croatia and Belgium) do not appear to systematically have a particular low quality JIA according to the mapping exercise. Bulgaria has a relatively unfavourable score (1 in 2015 and 3 in 2018, but Croatia is scoring 3 in 2015 and 4 in 2018, and Belgium is scoring 4 for both years.

But it must be repeated that this indicator has a number of limitations as mentioned earlier, one of which is that differences between all LTU and those with JIA in terms of the proportion that remain unemployed are not taken into account. These limitations therefore automatically also count for any linking of these employment indicators to the quality indicators from the mapping and delivery approaches from EMCO monitoring. It is possible that a more sophisticated comparison of employment exits of those with JIA with a reference group or benchmark would result in better links to the quality indicators. In the EMCO monitoring report and much attention is given to transitions to employment of those with JIA (and the sustainability of these outcomes), but the report is struggling with finding proper benchmarks. The available indicators, like the one used above, have their limitations. So on the basis of this material, we are limited in making any far reaching conclusions on effectiveness of JIA.

4.4 Activation rate[26]

In figure 10 the activation rate is shown per member state from 2008 onwards. Eurostat provides data about the activation rate for all these years for nine Member States. We would expect activation rates increase after the implementation of the Recommendation. Unfortunately, Eurostat does not provide data about the activation rate for 2017. These data are likely to be available at the end of 2018.[27] Because we miss 2017, we are limited to determine whether the activation rate changed after 2014. This is even more limitation, because implementation of measures towards LTU could be expected to materialize stronger in a more recent period. Figure 10 shows the activation rates decreased for SE, AT and SI between 2014 and 2016. For PT, EE, HR, SK and LV however, the activation rates increased as of that period. In FI, DE and BG the activation rate remained relatively stable. The activation rate is influenced by the business cycle as well. Economic expansion could shorten the average duration of unemployment and in turn reduce the share of unemployed that are activated.

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[26] The activation rate is the share of the long-term unemployed who participate in active labour market policies (LMP cat. 2 – 7)

[27] Data for 2016 was updated on 13/12/2017. Metadata for the LMP (DG EMPL) mentions a 15 month time period for the release of new data. Under 14.1: https://ec.europa.eu/eurostat/cache/metadata/en/lmp_esms.htm

Figure 10 The activation rate % in MS[28]
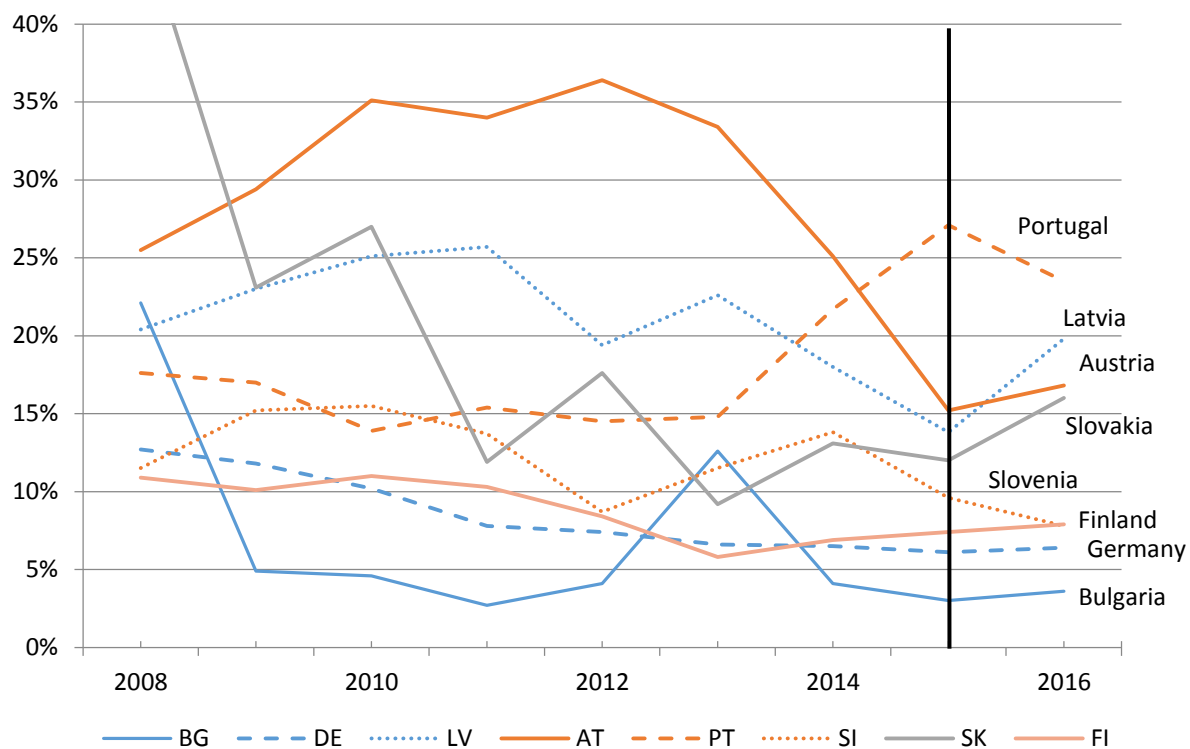
Source: Eurostat. Eurostat reports statistical breaks for SE in 2013.

Note: Values for Sweden are not reported because they would distort the figure. The values increase after the statistical break in 2013 and decrease after 2015 (2012: 27.4; 2013: 54.4; 2014: 57.8; 2015: 56.0; 2016: 49.1).

So we miss more recent data for 2017 on activity rates. In one field of ALMP – training - we have a rough indicator on trends by using participation in lifelong learning for long term unemployed. Most training of long term unemployed will be sponsored or organized in the framework of ALMP-policies. These data show that after a few years of decline in participation, the participation between 2016 and 2017 has increased according to the EMCO monitoring data. In 2017, the proportion of LTU who had received education and training (either formal or non-formal) during the previous four weeks stood at 8.0% across the EU, up from 7.5% in 2016.

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[28] Eurostat reports statistical breaks for SE in 2013.

4.5 Expenditures on active labour market policies and their relation to the Recommendation

Statistics on active labour market policies (ALMP) are classified in different categories. ALMP in category 1 are labour market services that cover all services and activities of the Public Employment Services (PES) and other intermediaries. LMP in category 2 to 7 are labour market measures that cover interventions to provide support for disadvantaged groups and interventions helping people transition to employment.[29] The activation rates mentioned above in 4.4 represent participation in active labour market policies (category 2-7), but do not represent information on LMP-activities in category 1. Expenditures in category 1 are relevant for our study because most aspects of the Recommendation are linked to services from the PES to jobseekers and employers (e.g. coverage of registration, offering of JIA, individual assessments and the establishment of a SPOC). Improvements in measures related to the Recommendation therefore demand additional investments in category 1 (labour market services). For this reason, we expect the share of GDP spent on category 1 to increase. The Recommendation is related to employer incentives in another way. In the SWD it was expected that the Recommendation would ensure stronger employer involvement through two mechanisms: 1) enhancing services to employers (category 1) and 2) directing expenditures away from public works to a more competitive labour market by using employment incentives (cat. 4) instead of public work schemes (direct job creation Cat.6). For this reason, we would expect a different (more positive) trend in cat.4 expenditures vis-à-vis a (more negative) trend in cat. 6 expenditures.

In this sub-section we therefore look at the LMP expenditures as another output indicator because expenditures in these different types of categories can be linked to the recommendation. A limitation of the data on expenditures is that they are not specifically available for the target group long-term unemployed. An indication of the share of expenditures targeted towards the long term unemployed can be given by using information on target groups for LMP-measures in qualitative reports. However, this is a very time-consuming exercise, which also leads to a rough estimate, because measures can also be targeted to various target groups. These types of data are constructed in the OECD assessment of LMP interventions for the long-term unemployed.[30] The OECD report highlights that only a few of the LMP measures are targeted at LTU only (2.3%) and 19.1% of all LMP measures has also a focus on LTU. Furthermore, other measures might be open to LTUs as well. The majority of LMP measures is open to all unemployed and therefore also to LTU. This stresses the difficulty of linking LMP-expenditure data to LTU. Because the Recommendation aims at prioritizing LTU it is expected that the share of ALMP expenditures explicitly (but not only exclusively) targeting the LTU increases after 2015. A similar analysis as in the OECD report for more recent years has not yet been carried out and maintains the limitation that measures could also be open to other groups.

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[29]See under 3.2: https://ec.europa.eu/eurostat/cache/metadata/en/lmp_esms.htm

[30] OECD (2018). *LMP Interventions for the Long-Term Unemployed: An initial assessment.* VS/20160433 – Joint OECD-EU analysis of labour market policies: enhancing the quality of administrative data and promoting their use in policy analysis and monitoring.

When considering prevention is an important element in tackling long-term unemployment, expenses for short term unemployed can still be important to avoid high and increasing long term unemployment rates. In that perspective, the lack of more targeted information on expenses for LTU is less restrictive, but it is still a disadvantage to miss that information. Another aspect of influence on the expenditure data is the development of the overall unemployment rate. If the number of unemployed decreases, expenditures on active labour market policies are likely to decrease as well. Another limitation is that there is a double time-lag in the data. Data is only available up to 2016 and it takes time for the implementation of the Recommendation to be visible in the data. Expenditures for a year are usually linked to a budget cycle which starts at an earlier stage. However, certain changes in priorities within a given total budget, will be easier to realise in a shorter period. So the time-lag will be more binding for the development in total expenses than for the shares of different categories.

Having these limitations in mind, we try to exploit the available data as much as possible. We first look at expenditures in category 1 to show that relative high expenditure on this category is related to the quality of measures proposed by the Recommendation as indicated by mapping scores in the baseline situation. This illustrates the potential value of monitoring expenditures in this category as an output indicator of the implementation of the Recommendation. We continue to check if there is an increase in the share of category 1 expenditures between 2014 and 2016. Such a trend would be consistent with a prioritisation of measures linked to the Recommendation. Next to category 1 expenditures we look at changes in category 2-7, with special attention to category 4 (employment incentives) and 6 (public works), because a growth of the first category (4) would be more in line with the Recommendation (employer involvement) than the second category (6). Because the most recent data available are for 2016, the trends observed give a picture of situation in the initial period after the baseline. The analysis shows how a similar exercise for monitoring purposes would look like for a more recent period if new data would become available.

We start with showing that LMP expenditures in category 1 are closely interlinked with the quality of policy measures in the baseline situation. In table 10 the correlation of mapping scores with cat. 1 in the baseline period is made with the average score of mapping on the four crucial dimensions. The strong and significant relationships between mapping scores on the one hand and LMP-expenditures in cat. 1 on the other hand show that this is an important output (and input) indicator for policy developments linked to the Recommendation[31]. We therefore test if a growth in this expenditure-indicator can be seen in recent years.

Table 10 Correlation coefficients of LMP expenditures in Cat. 1 (% GDP, 2015) and mapping scores in H1 2015 (mapping exercise figure 1 'Assessment of quality of measures in place (general)')

Mapping H1 2015/ Cat. 1 LMP expenditure	
Coverage registration	0.68***
SPOC	0.70***
JIA	0.64***

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[31] Similar correlation coefficients for ALMP-expenditures in cat 2-7 are lower. This confirms the importance of explicitly using data for Category 1.

Employer involvement	0.71***

Figure 11 shows the development of category 1 (labour market services) between 2014 and 2016. There is no clear trend in the data. For about half of the countries the share of expenditures is going upward and for the other half downward between 2014 and 2016. There is no clear relationship between changes in scores in the mapping exercise and changes in cat. 1 expenditures. It must be said however, that the period of changes for both types of indicators only partly overlap (2014- 2016 versus 2015H1-2018). When more recent data on ALMP-expenditures is available, it is easier to compare these indicators. The limitation of time lags in the budgetary process to asses any effects of the Recommendation will then also become less relevant.

Figure 11 – ALMP-expenditures (category 1; services), % of GDP in 2014 and 2016
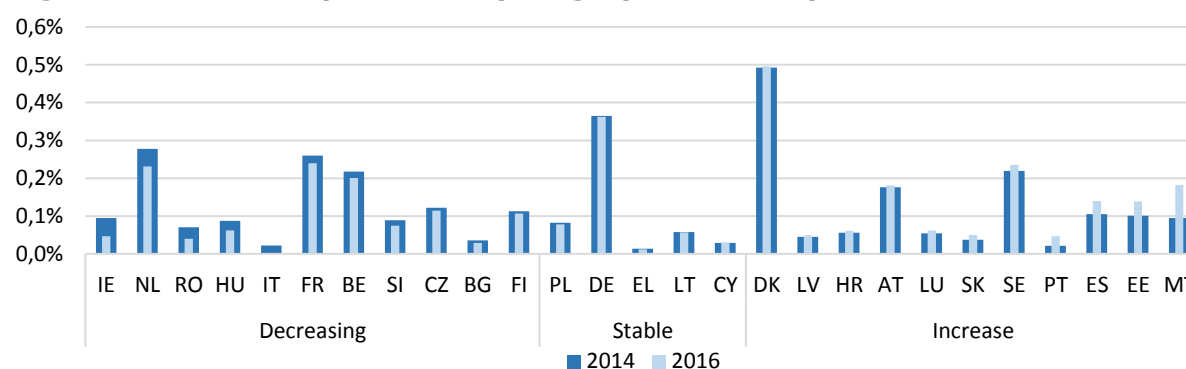
Source: Eurostat LMP-database

Figure 12 shows ALMP-expenditures (2-7) as a share of GDP in 2014[32] and 2016. Most countries spend a smaller share of their GDP on ALMPs in category 2-7 in 2016 than in 2014. Belgium, the Czech Republic, Denmark, France, Slovakia, Malta, Lithuania, Estonia, Croatia and Luxembourg spend more. The fact that the trend in category 1 is less decreasing than for category 2-7 could reflect some prioritization for category 1 which would be in line with the Recommendation.

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[32] This is because the baseline is 2015H1, so part of the changes expected by the Recommendation could have happened in 2015H2. In order to take this into account, we use changes in 2014-2016, so we also capture developments in 2015H2 (and not 2015-2016, which would leave out changes in 2015H2).

**Figure 12 – ALMP-expenditures (category 2-7), % of GDP in 2014 and 2016**[33]
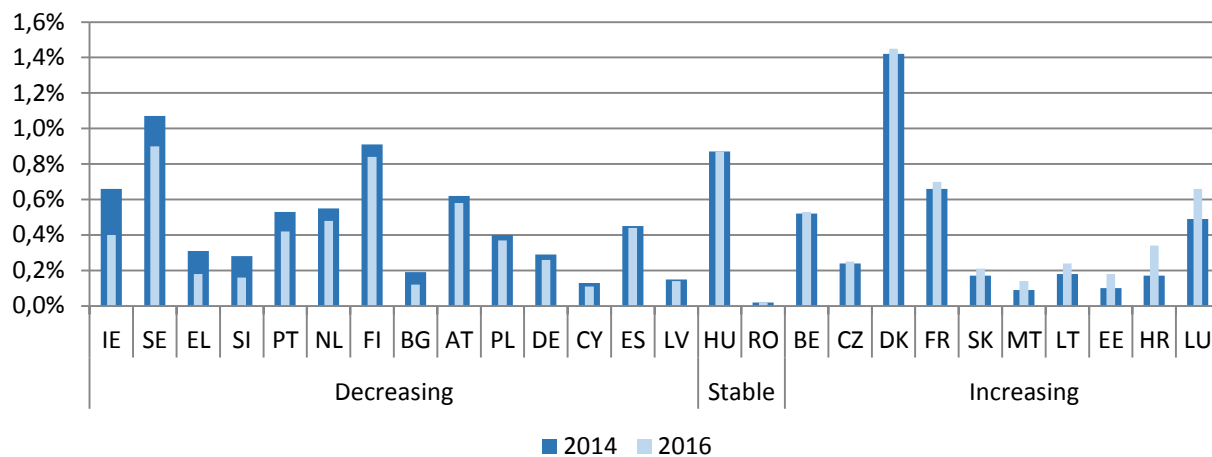
Source: Eurostat LMP-database

Note: The UK and IT is excluded because of lacking data

Growth of expenditures in category 4 (employment incentives) would be more in line with the Recommendation that growth in category 6 (public works). Figure 13 shows the changes in expenditure on employment incentives (cat. 4) as percentage of GDP. The improvement in the policy area of employer involvement from the mapping exercise is given for every country below the figure. It shows that countries with increasing expenditure shares on employer incentives have higher increases in the policy area of employer involvement. The correlation between increases in category 4 expenditures and improvements in the policy area of employer involvement in the mapping exercise is 0.31. This indicates there is a positive relationship between the expenditures in category 4 and changes in the policy area of employment involvement (although not statistically significant, which has also to do with the limited number of observations). The size of the correlation itself can also be limited by the differences in the time period captured between the mapping and the change in ALMP-expenditure data.

Figure 13 – ALMP-expenditures on employment incentives (category 4), % of GDP in 2014 and 2016 and changes in the policy area of employer involvement from the mapping exercise (ranging from 0-2)
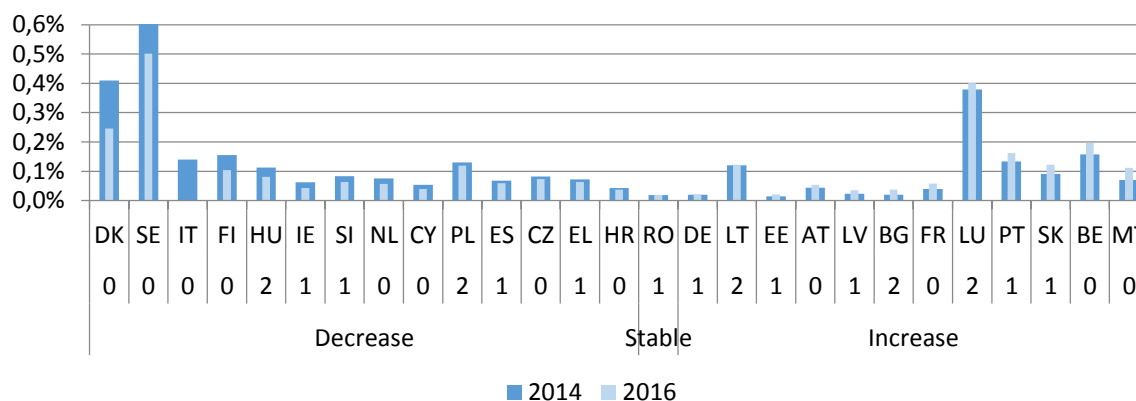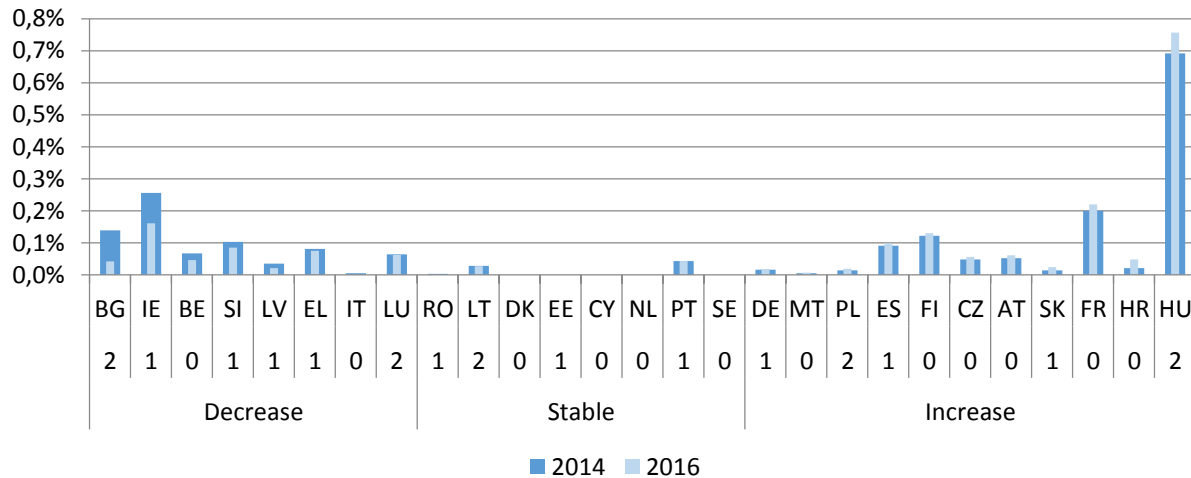

Source: Eurostat LMP-database

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[33] Eurostat reports no statistical breaks for [lmp_ind_exp] in 2014 to 2016.

Figure 14 shows the changes in expenditure on public works and direct job creation (category 6) as a percentage of GDP together with the changes in scores for the policy area of employer involvement from the mapping exercise. More countries show an increase than a decrease while a decrease would be more in line with the Recommendation. The correlation between increases in expenditures on direct job creation and improvements in the mapping exercise on the aspect of employer involvement is however negative at -0.17 (insignificant). The negative sign indicates that countries with a stronger improvement in the mapping exercise for employer involvement more often show a decrease in cat.6 expenditures. This negative relationship between the changes in mapping score on employer involvement and changes in expenditures on public works is according to expectations, even more if we consider that changes in the mapping scores are on the other hand positively related to employment incentives. But, as said, the correlation coefficient is small and statistically insignificant which can have to do with the different time periods captured.

Figure 14 – ALMP-expenditures on public works and job creation (category 6), % of GDP in 2014 and 2016 and changes in the policy area of employer involvement from the mapping exercise (ranging from 0-2)

Source: Eurostat LMP-database
Note: The UK is excluded because of lacking data

The strong correlation between the LMP expenditures in Cat. 1 (% GDP) and mapping scores in H1 2015 illustrates that expenditures on ALMP are a proper indicator for (changes in) the quality of measures. However, because we lack recent data, the possibilities to test any changes in ALMP expenditures along the lines of the Recommendation are limited. Taking this limitation into account, the data show a relative growth of the importance of category 1 expenditures (services) which can be interpreted as in line with the Recommendation. Category 6 (public works) does not seem to decrease stronger than category 4 (employment incentives), which is not in line with the importance of employer involvement stressed in the Recommendation. On the other hand, for countries for which changes are reported in this policy area, such a trend is better visible. The corresponding correlation coefficients which illustrate this, are not statistically significant, which has to do with the limited number of observations, but can also be caused by differences in the time period considered in the mapping and the LMP-data.

4.6 Long-term unemployed who participate in ESI Funded projects

The European Structural Investment Fund supports programs for social cohesion and educational and vocational training. For that purpose, the ESIF keeps track of the amount of long-term unemployed participating in its programs. Member states making progress in measures related to the Recommendation could have used ESIF-funding to realize this. This could be reflected by a combination of an increase of LTU-participants in ESIF projects in in both absolute and relative terms. Participation in projects however is influenced by the budgetary cycles of the EU and ESI funding. After the start of a budgetary cycle, member states have to implement programs and calls for funding. Participant uptake starts even later. The dynamics of ESI funds should therefore be taken into account when assessing participation in ESIF projects. The current budgetary cycle only started in 2014. For these reasons, stark increases and high volatility in participants are expected for more recent years.

Table 11 presents the number and share of LTU participants in total ESF participants based on cumulative data on ESF participants. Data for 2017 therefore includes participants in 2016 and 2015. For most countries, the amount of yearly new LTU-participants increases. The share of LTU participants in total participants does not necessarily increase as reflected by table 11. Only CY, CZ, EL, MT, SI and the UK show strong percentage point increases in the share of LTU participants between 2015 and 2017.

Table 11 Number and share of long-term unemployed in total ESF participants (2015-2017)

	Total cumulative LTU-participants			Share of LTU in all ESF participants				
	2015	**2016**	**2017**	**2015**	**2016**	**2017**	**pp. change 2015-2017**	**rel. Change 2015-2017**
AT	7180	12427	19426	45.4%	29.7%	24.9%	-20.5%	-45.1%
BE	76393	140882	224844	33.7%	31.5%	31.9%	-1.8%	-5.4%
BG	310	3738	20885	1.8%	3.9%	3.3%	1.5%	85.1%
CY	312	359	2768	23.0%	21.9%	36.5%	13.4%	58.4%
CZ	4905	5057	39507	34.3%	29.3%	40.3%	6.0%	17.6%
DE	43697	93554	181078	13.1%	13.3%	13.7%	0.6%	4.7%
DK	69	247	1050	5.5%	7.4%	9.2%	3.7%	66.5%
EE	239	6110	13890	19.6%	18.0%	19.2%	-0.4%	-1.8%
EL	31898	54926	154562	19.4%	20.1%	33.3%	13.9%	71.4%
ES	57769	153439	379463	9.0%	12.1%	12.0%	3.0%	32.9%
FI	2542	11007	22549	14.6%	16.4%	16.2%	1.6%	11.3%
FR	155594	249986	443121	21.1%	21.3%	21.5%	0.4%	1.7%
HR*	0	47	771		2.3%	3.2%	3.2%	
HU	1768	10250	37080	18.5%	12.2%	14.1%	-4.4%	-23.9%
IE	41999	71035	86750	25.1%	24.1%	23.0%	-2.1%	-8.5%
IT	50969	160936	528962	31.6%	18.0%	20.5%	-11.0%	-35.0%
LT	7078	15759	25413	19.7%	8.5%	9.6%	-10.1%	-51.1%
LU	82	250	646	13.2%	7.5%	9.9%	-3.3%	-24.8%
LV	5355	13115	27630	36.4%	36.5%	32.3%	-4.1%	-11.2%
MT	15	134	1419	4.9%	5.2%	17.6%	12.7%	262.6%
NL	31859	42760	42760	34.6%	28.0%	28.0%	-6.7%	-19.3%
PL	40282	84162	238344	40.6%	33.9%	19.7%	-20.8%	-51.4%

PT	13530	14521	32377	4.5%	4.6%	5.2%	0.7%	16.6%
RO[+]	0	0	5			0.6%	0.6%	
SE	632	3115	11115	33.3%	14.4%	12.6%	-20.7%	-62.2%
SI	0	4626	12866		33.7%	20.8%	20.8%	
SK	2336	35412	80611	46.1%	48.4%	31.4%	-14.8%	-32.0%
UK	2820	7117	36106	5.0%	6.6%	13.7%	8.7%	175.5%

Note: Data are cumulative participations. Data for 2015 therefore include participations from 2014.
Source: These figures have been extracted from the Annual Implementation Reports (AIR), end September 2018, and are still provisional. The data are the sum of long term unemployed participants in the themes educational and vocational training, Social Inclusion and Sustainable & Quality Employment. These are respectively thematic objectives 10, 9 and 8. * For Croatia, a slow take up in participations is caused by the lack of a regional strategic framework ex ante. [+]In Romania, problems with IT-systems, data exchange and a focus on setting up the program caused delays (AIR 2017).

4.7 LTU-rate and share of LTU in total unemployment

We have a number of result indicators in our database. Two of these result indicators are the LTU rate and the share of LTU in total unemployment. The Recommendation aims at reducing both indicators. The share of LTU in total unemployment is a partly complementary indicator useful to look at because this indicator compared to the LTU-rate stronger reflects results of policy priority changes from countering unemployment in general to even more specifically aiming to reduce long-term unemployment.

When connecting the developments of these indicators to the Recommendation we have to be careful in a number of respects:

- Firstly, with these kinds of result indicators, other influencing factors will play a role. Among these are the business cycle, the general institutional set-up of and quality of PES and other labour market institutions and the system of unemployment benefits. We will illustrate the importance of the business cycle in this section and analyse this further in section 5.
- Secondly, the effect of the Recommendation will differ according to the starting position and actual intensification of policies. Therefore, we will link changes to the indications of policy changes from the mapping.
- Finally, if registration policies would be very successful in reaching inactive people, they would be registered as unemployed (if they actively seek work in the LFS definition). This increases the unemployment rate and in the end the long-term unemployment rate. Registration policies could therefore lead to higher long-term unemployment rates instead of lower. This effect is likely to be limited for the time period under investigation because these people need to become unemployed first and remain unemployed for at least a year. Secondly, extra inflow in long term unemployment of registered formerly inactive persons could have an increasing effect on registration rates of the long term unemployed, but the data on registration rates do not point to strong effects in this direction (see section 4.2). The latter is less of a disturbing factor in the share of long term unemployed, because increased registration of inactive people will increase the number of short-term unemployed in the first place, so also reducing the share of long term unemployed, so working in the same direction as other elements of the Recommendation.

For these reasons we do not expect strong links between policy changes and these result variables, but it is still important to look at this because these result variables reflect crucial goals of the Recommendation. If the results would not even reflect any (small) positive relationships would not be a good indication on effectiveness, which would have to be evaluated together with other evidence from other research activities. In this section we try to asses if there is such a link. We will also try to take into account at least some of the considerations mentioned above in further analyses (e.g. section 5).

To this aim we look at the starting positions of countries with respect to LTU-rates and the quality of policy related to the Recommendation first. Afterwards, it is explored if policy changes reported in the mapping exercise are related to declining LTU-rates. We continue to investigate linkages between changes in LTU-rates expectations and changes in policy indicators to see if any changes in result indicators can be seen at the time of writing already. At last, the importance of the business cycle is discussed for which we try to correct in the statistical analysis in section 5.

As a first way of presenting some results for the LTU-rate, figure 15 shows a map of countries color-coded by the starting position of policy indicators according to the mapping exercise from task 1 (see Annex 3). An important criterium is how broad countries scored (at least) a "4" for the various policy areas in the mapping. "4" is the most frequent score, while 5 (the maximum score) is very seldom chosen in the mapping. This means that the number of scores below 4 illustrates how much room there was for a member state to improve on a broad number of policy fields. Moreover, scores on the individual policy areas are clearly related. So the group of countries with lower scores than 4 on all policy fields is quite large, meaning that there are quite a number of countries without any 4 or 5, while at the same time the group of countries which scores at least a "4" on a number of policy fields is also quite large.

Countries with a favourable starting position, meaning that they scored at least a 4 in all policy areas (coverage of registration, JIA, SPOC/interinstitutional coordination, individual assessments and employer involvement), are the UK, the Netherlands, Germany, Denmark and Austria. These countries are characterized by low LTU-rates in 2014 (see table on the right-hand side). Countries with a partly favourable starting position score at least a 4 in 3 or 4 of the policy areas and no lower score than 3 in the other policy areas. Countries with a mixed starting position only score a 4 in 1 or 2 policy areas. Of these two groups, Portugal, France and Latvia had the highest LTU rates in 2014 while Sweden, Malta and Finland had fairly low LTU rates. Countries with an unfavourable starting position in policy areas score lower than 4 in all policy areas according to the mapping exercise (BG, CY, CZ, EL, ES, HR, HU, IT, LU, PL, RO and SK). The Czech Republic, Poland, Hungary and Romania had the lowest LTU-rates of these countries. The other countries with unfavourable starting positions in terms of scores in the mapping exercise had among the highest LTU-rates in 2014. Countries with a high LTU-rate and low ratings with respect to policy areas have had stronger incentives to change policy and are therefore expected to show the strongest changes.

Figure 15 – Starting position policy indicators and LTU-rates[34] in 2014
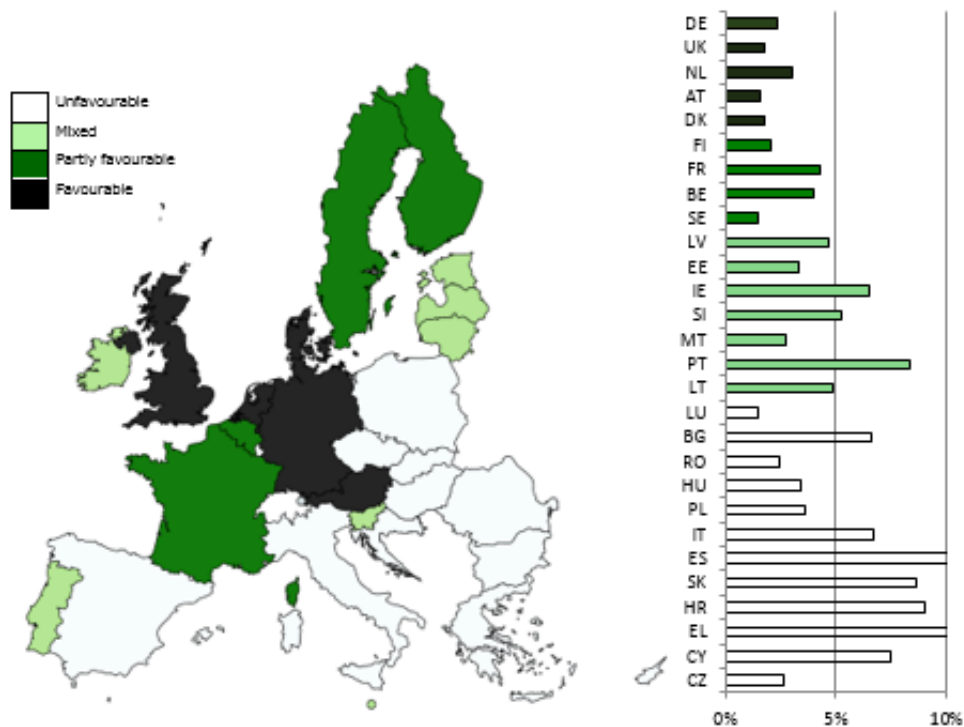
Source: mapping exercise Annex 3 & Eurostat

Note: Countries with favourable starting position have a mapping score of at least 4 in all 5 policy areas in 2015H1. Countries with a partly favourable starting position score at least 4 in 3 or 4 policy areas. Countries with a mixed starting position score at least a 4 in 1 or 2 policy areas. Countries with an unfavourable starting position score lower than 4 in all policy areas. See section 2.1 on the mapping scores. To keep the scores of countries with low LTU-rates sufficiently visible, the scale runs to a maximum of 10%. Two countries had a LTU-rate above 10%. Greece had a LTU-rate of 18.8% in 2014. Spain had a LTU-rate of 12.3% in 2014.

In figure 16 countries are color-coded by improvements in policy areas according to the mapping exercise. These clusters reflect the broadness of changes over various policy areas and in case the changes have taken place in many areas, a distinction is also made on the size of changes. For countries with no change the external expert indicated no changes in any policy area. Countries with changes in only 1 policy area are in the group with minor change. Mixed change are countries with changes in 2 or 3 policy areas. Strong change are changes in at least 4 out of 5 policy areas while very strong change is change in at least 4 out of 5 policy areas with an improvement larger than 1 for more than 1 policy area. However, because these clusters are a summary of the information and still contain different situations within a cluster, separate charts of changes for the various individual policy fields are also separately depicted in Figure 16a-e. These figures show the same countries often show similar changes for different policy areas.

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[34] The LTU-rate is the percentage of long-term unemployed in the active population aged 25-64. We use yearly data for 2014 and 2017.

Countries with no changes often had favourable starting positions while countries with strong or very strong changes had an unfavourable starting position (with the exception of Latvia which had a mixed starting position and showed strong change and the Czech Republic which had a unfavourable starting position and reported no change). This indicates that the countries that did improve the quality of measures had more "potential" to do so. They also had more need to improve measures as LTU-rates in 2014 generally were high for this group.

Countries with no or minor changes in policy also show less decline in LTU-rates[35]. But these are countries with already lower starting positions in terms of LTU-rates in 2014 (except CY). So for these countries, there was probably less incentive and potential to improve on the quality of measures. It is relatively more difficult to reduce an already low LTU-rate. It could be for this reason that most countries for which no or minor change was reported had rather stable LTU-rates (with the exception of Cyprus), although in relative terms, the decrease in LTU-rate was still quite strong in CZ, NL, and the UK. The fact that also some countries with very low long-term unemployment rates, like UK and CZ, still experienced decreasing long term unemployment rates, points out that there is no such thing as an absolute lower limit in the LTU-rate. For all countries that reported mixed or strong or very strong change LTU-rates declined rather substantially, except for Italy and Luxembourg.

Figure 16 – Progress in policy and LTU-rates[36] 2014 and 2017
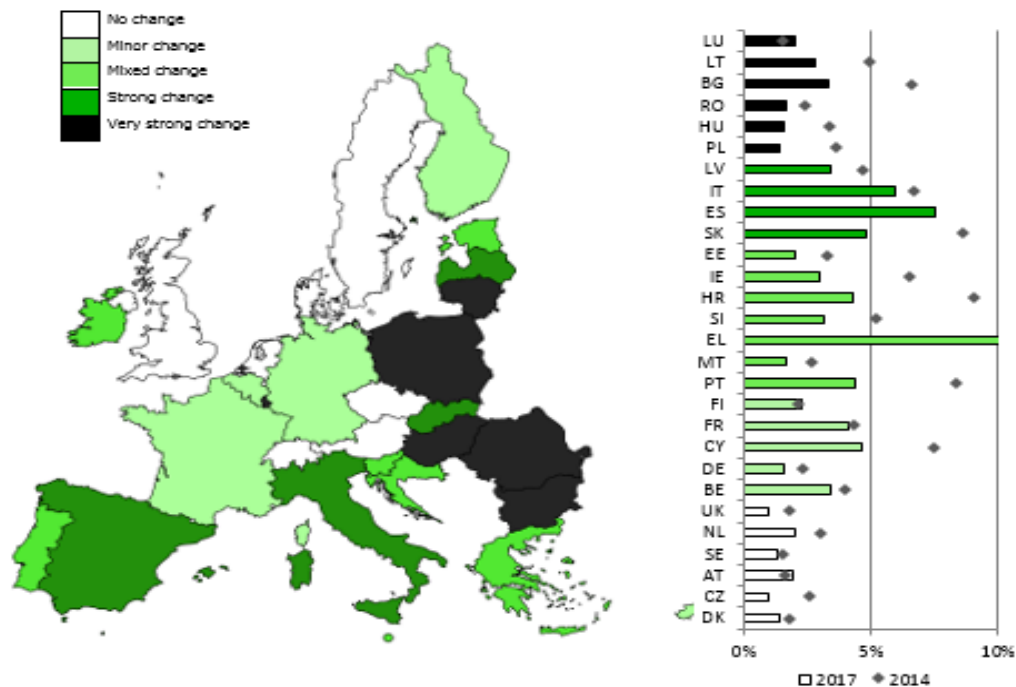
Source: mapping exercise task 1 & Eurostat

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[35] In comparing changes of the LTU-rate with the mapping, changes in the first 2.5 years after the baseline are taken into account, but we miss changes in the LTU-rate in 2018. So there is a strong overlap, but no full overlap.

[36] The LTU-rate is the percentage of long-term unemployed in the active population aged 25-64. We use yearly data for 2014 and 2017. See sub-appendix 1 for breaks in the data.

Figure 16a to 16e show changes in mapping scores (2015H1 versus 2018) per policy area. "No change" refers to countries with either no or negative changes between both assessments for a specific policy area. "Change" refers to change of 1 point in the assessment scale for this policy area[37] and "strong change" is change of more than 1 point[38] Figures 16a to 16e show that if change has taken place, this broadly speaking often concerns similar patterns of countries.

Figure 16a Changes in assessment of the quality of measures in place (general) from the mapping exercise for the coverage of registration.

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[37] Including a change of 0.5 for SPOC/interinstitutional coordination.

[38] A stronger change than 2 is very seldom, therefore we did not make this a separate category. This was only the case for PL and LV where there is a 3 point increase in the policy area for registration and for PL in the policy area of individual assessments.

Figure 16b and 16c Changes in assessment of the quality of measures in place (general) from the mapping exercise for the aspect of individual assessments (b) and JIA (c)
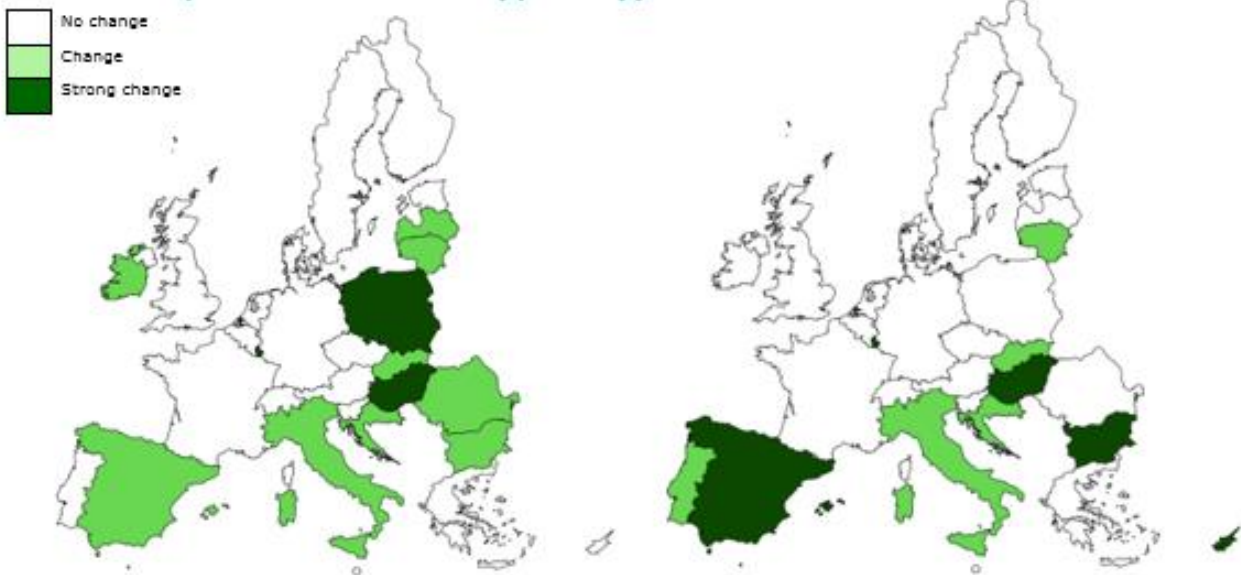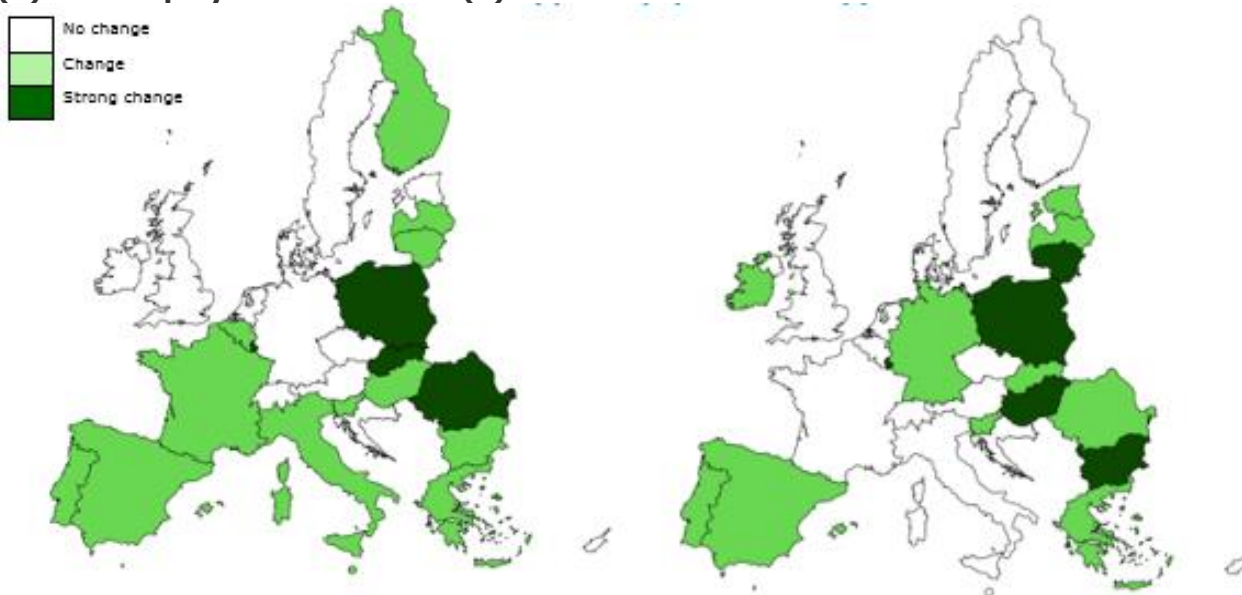

Figure 16d and 16e. Changes in assessment of the quality of measures in place (general) from the mapping exercise for interinstitutional coordination and SPOC (d) and Employer involvement (e).

We can conclude from figure 16 there is a connection between changes in the quality of measures and the decline in LTU-rates, but there are quite a number of exceptions to this pattern. To investigate this link more thoroughly, we calculate correlation coefficients between LTU-rates, expectations in the SWD and policy indicators. In that way it is possible to test for significant relationships. Table 12 and 13 show these relationships respectively for the changes in LTU-rates and changes in the share of LTU out of unemployed. We look at changes in LTU-rates between 2014-2017 because this covers all changes since the baseline (2015H1). Additionally, we look at changes between 2016-2017 because implementation may take time and could therefore be visible in the data only for a later period.

Table 12 shows that where there was no formal coordination in place and therefore improvements for the area of SPOC were expected[39], there is a positive relationship with the absolute change in LTU-rates between 2014 and 2017 and between 2016 and 2017. This indicates LTU-rates declined more for countries that had no formal coordination in place. When looking to relative changes in LTU-rates, these relationships are weak. Countries for which a higher impact was expected because they had no individual approaches in place showed more declining LTU-rates in absolute and relative terms (significant between 2016 and 2017)[40]. So the sign of most of these relationships are according to expected beforehand, but the correlations are often not statistically significant. For the latter, the limited number of observations will play a role.

Table 12 Correlations of SWD-expectations and change in policy areas from mapping with a number of indicators for change in long term unemployment rate

	Changes in long term unemployment rate			
SWD expectations	Change in perc. points 2014-2017	Relative change 2014-2017	Change in perc. points 2016-2017	Relative change 2016-2017
SPOC	0.26	0.01	0.24	-0.04
Individual approaches	-0.27	-0.07	-0.34*	-0.34*
Change in policy area				
Coverage of registration	-0.18	-0.23	-0.11	-0.20
Job integration agreements	-0.43**	-0.04	-0.43**	-0.18
SPOC/interinstitutional coordination	-0.07	0.18	-0.15	-0.12

[39] Expectations are formulated as follows: SPOC: impact is expected to be higher for countries without any formal coordination in place 2= SPOC, 1= Partnership/data exchange, 0= no formal coordination. Individual approaches: impact will be higher on MS without individual approaches in place', 0= no or limited impact 1= medium impact 2= stronger impact. So the SWD-categories are translated in an ordinal scale. For correlation coefficients any scale with comparable intervals, e.g.1-3-5 would lead to exactly the same results.

[40] Impact will be higher on MS without individual approaches in place, 0= no or limited expected impact 1= medium expected impact 2= stronger expected impact. So the SWD-categories are translated in an ordinal scale.

Individual assessment	-0.22	-0.14	-0.17	-0.33*
Closer links employers	-0.28	-0.23	-0.19	-0.27

*Source: Own calculations using data collected in the framework of the EMCO monitoring (based on lfs Eurostat) and data from mapping exercise Task 1. * means statistically significant at 10% level. ** means statistically significant at 5% level. Note: relative change refers to the relative change in LTU-rate. So a reduction from 14% to 7% results in a score of -50%, similar to a reduction from 4% to 2%.*

Table 12 also shows the relationship between change in policy indicators from the mapping exercise and changes in LTU-rates. A relative decline in LTU-rates between 2014-2017 and 2016-2017 is in nearly all case linked to increasing scores in the mapping exercise. This indicates that generally speaking countries that made more change had more declining LTU-rates. However, the small size of the negative coefficient and absence of a significant correlation shows that a number of countries do not fit in this profile (like already indicated in describing the results of figure 16). There are two extra situations where the correlations are statistically significant at 10% level (absolute change 2016-2017 for employers involvement and SPOC).

Table 13 Correlations of SWD-expectations and change policy areas from mapping with a number of indicators for change in share of long-term unemployed

|		Changes in share of long-term unemployed		
SWD expectations	Absolute change 2014-2017	Relative change 2014-2017	Absolute change 2016-2017	Relative change 2016-2017
SPOC	0.11	0.07	0.10	0.08
Individual approaches	-0.02	0.04	-0.30	-0.35*
Change in policy area				
Coverage of registration	-0.24	-0.23	-0.22	-0.23
Job integration agreements	-0.01	0.10	-0.17	-0.13
SPOC/interinstitutional coordination	0.27	0.32*	-0.06	-0.08
Individual assessment	-0.09	-0.01	-0.22	-0.25
Closer links employers	-0.09	-0.04	-0.05	-0.04

Source: Own calculations based on data collected in the framework of the EMCO monitoring (based on lfs Eurostat data) and mapping exercise Task 1

Table 13 shows similar correlations for the **share of long-term unemployed out of all unemployed**. Declines in the share of long-term-unemployed between 2016 and 2017 seem related to expectations in the SWD for the expected impact of individual approaches. Declines in the share of long-term unemployed were stronger for countries where a higher impact was expected. The table shows there are no clear relationships between reported change according to the policy indicators from the mapping exercise and changes in the share of LTU. The correlation coefficients for the period 2014-2017 for the mapping indicators do not consistently have the expected negative sign. All correlations for changes between 2016-2017 have the expected negative sign, but no coefficient is statistically significant.

Although there is a negative link between change in policy indicators from the mapping exercise and changes in LTU-rates, it cannot directly be concluded change in policy caused this. Many other factors could cause declining LTU-rates (i.e. the business cycle[41]). `Therefore we also calculated similar types of correlation coefficients, but corrected for changes in the GDP-growth, so called partial correlations. In general, these correlations are a little bit smaller. So after correction for the business cycle the links with the mappings scores are not larger. We also try to distinguish the business cycle from effects on LTU-rates in section 5 but first we will illustrate the importance of the business cycle for LTU-rates in a more descriptive analysis.

We present time-series showing the development of the long-term unemployment rate and the share of the long term unemployed in total unemployment together with the development of GDP-growth to be able to illustrate and visualise the importance of the business cycle. We start with showing the development of long-term unemployment for the EU as a whole, followed by more detailed findings for individual member states (depicted in Sub-annex 5).

Figure 17 – Development of the LTU-rate, share of LTU in total unemployment and (real) GDP growth rate (EU-28)

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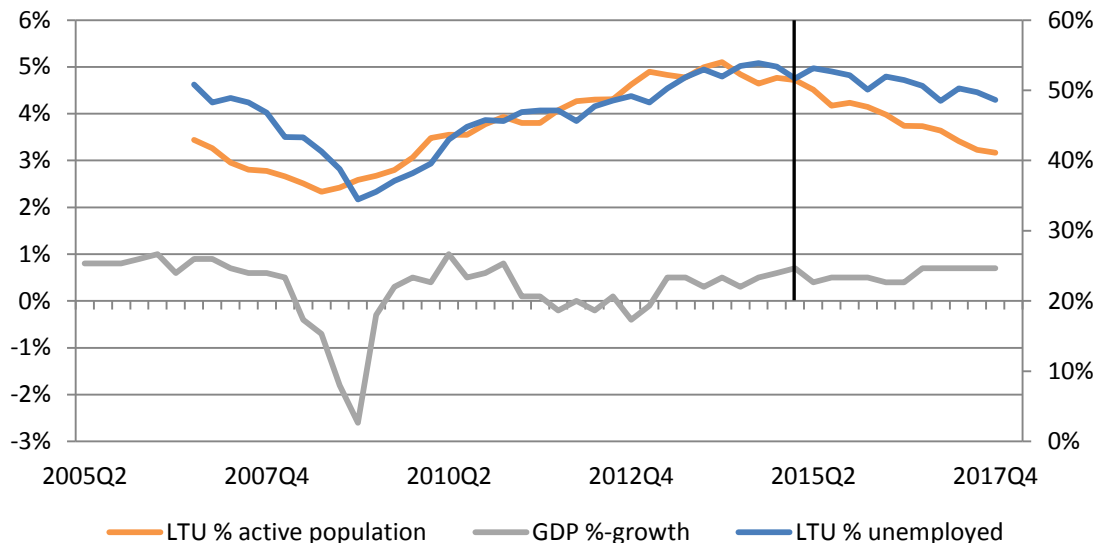
[41] See also section 1 discussing the complexity of many intervening factors explaining trends in result variables like the LTU-rate.

Figure 17 shows the development of long-term unemployment as a percentage of the active population (LTU-rate) and the development of the proportion of long-term unemployment of total unemployed in the EU (EU-28). These result indicators are shown together with the development of GDP-growth over time to show the influence of the business cycle. Any influence of the introduction of measures due to the Recommendation is expected after the vertical black line (after Q2 2015).

The development in the EU as a whole shows characteristics that are found in the analysis of the individual countries as well:

- There is a smaller time lag (less time passes) in the reaction of the share of LTU than the LTU-rate to the business cycle. In the short run, long-term unemployment as a share of unemployed drops when GDP-growth slows down, specifically after the recession of 2009, indicating that more workers are laid-off. In turn, short-term unemployed constitute a greater share of unemployed.[42] However, with a time lag, the share of long-term unemployed increases after a period of business cycle decline.
- Long-term unemployment as a percentage of the active population starts declining from 2014 onwards before the Recommendation was implemented. This could at least partly be attributable to an increase in economic growth from 2013 onwards.

In a separate appendix (sub-appendix 5) the development of both result indicators is shown per country. We group countries by degree of change according to the mapping exercise.[43] Overall, LTU-rates have decreased in recent periods towards the second quarter of 2018[44]. Spain, Greece and Italy still have (very) high LTU-rates above 5% (6%, 14% and 6% respectively).

In the group of countries with no change, LTU-rates decline from 2013 onwards for CZ, UK and NL. In these countries declining LTU-rates go together with positive GDP-growth rates. Only in Sweden and Austria LTU-rates do not decline in spite of positive growth rates. In Austria, LTU-rates have increased after 2015Q2.

For the group of countries with minor change LTU-rates decline together with increasing GDP-growth rates from 2013 onwards. The story is similar for the group of countries with mixed or strong change with the exception of Italy. In Italy, LTU-rates remain stable at a level of 6% after 2013 despite of positive but small GDP-growth rates. Countries with very strong change similarly show declining LTU-rates before the implementation of the Recommendation from 2013 onwards already. Only for Romania, LTU-rates decline after 2015 only in spite of positive (but volatile) growth rates since 2013.

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[42] Krueger et al. (2014) show the job finding rate of LTU is less sensitive to business cycle movements while the labour force withdrawal of LTU is more pro-cyclical. The former meaning that if the business cycle improves, more STU find a job relative to LTU so that the share of LTU in all unemployed increases and vice-versa. The latter meaning that when the business cycle deteriorates, more LTU withdraw from the labour market thereby reducing the share of LTU in total unemployed. Krueger, A., Cramer, J., & Cho, D. (2014(1)). Are the long-term unemployed on the margins of the labor market? *Brookings papers on economic activity*, 229-299.

[43] One group of countries with **no change** where no change means there is no improvement on any of the policy areas from the mapping exercise (AT, CZ, DK, NL, SE, UK). One group with **minor change** where there is only change in one of the policy areas (BE, CY, DE, FI, FR). One group with **mixed change** where there is change in 2 or 3 policy areas (EE, EL, HR, IE, MT, PT, SI). One group with **strong change** where there is change in 4 out of 5 of the areas with maximally one policy area having a stronger increase than 1 point in the scale of the mapping scores (ES, IT, LV, SK) and a final group of **very strong change** with change in at least 4 out of 5 areas and at least 2 policy areas with an improvement of more than 1 point (BG, HU, LT, LU, PL, RO).

[44] *In a very late stage (October 2018) recent quarterly data were released and we incorporated these data in these charts.*

The decline in LTU-rates for all groups is thus likely to be at least partly caused by the business cycle. Any decline in LTU-rates could therefore be caused by economic growth as well specific effects from the Recommendation. This illustrates that it will in general be difficult to disentangle any effects of trends (e.g. caused by business cycles) with effects of the Recommendation. In section 5 we apply a statistical analysis to control for the business cycle.

4.8 Transition rates

The transition rate is the percentage of long-term unemployed people transitioning into employment. The transition rate is an annual average of quarterly transitions (estimated probabilities) of long-term unemployed (12 months and over) transitioning into employment. Recent data from Eurostat are only available for separate age groups 25-54 and 55-74[45]. In the framework of the EMCO monitoring data, data are available for the whole age group 25-64, but data are not available for 2017.

Detailed data on the difference in transition rates between the two age groups (25-54 and 55-74) can be found in sub-appendix 4. The transition rate for the age group 55-74 is different from the age group 25-54. The transition rate from long-term unemployment to employment is in 2017 on average a third lower for long-term unemployed aged between 55 and 74.[46] For the Netherlands and Spain the estimated probability of transitioning from long-term unemployment to employment for people aged 55-74 is often only half of that for people aged 25-54. The danger for long-term unemployed to remain unemployed is thus more imminent for older people. For the rest of the analysis in this section, however, we concentrate on the group aged (25-54) because this is the largest group.

All else equal, transition rates of LTU to employment should improve due to the Recommendation because the Recommendation aims at improving support to LTU in their job search. However, comparable to the situation for the analysis of the LTU-rates and share of LTU discussed before, various other intervening factors can influence the developments in transition rates. Changes in transition rates could also be related to the business cycle, reforms in unemployment schemes, demographic factors and changes in labour market institutions not directly related to the Recommendation. Statistical analysis confirms the relationship between relative growth of transition rates and growth of GDP (a correlation of 0.38 significant at the 10% between relative transition rates changes in 2016-2017 and GDP growth in 2017 and a correlation of 0.46 significant at the 5% level for the period of 2014-2017). For these reasons we do not expect strong links between policy changes and these result variables, but it is still important to look at this because this result variable reflects a crucial goal of the Recommendation. If the results would not even reflect any (small) positive relationships would not be a good indication on effectiveness, which would have to be evaluated together with other evidence from other research activities. In this section we try to asses if there is such a (weak) link. Note that a correlation coefficient represents the movement of one variable together with another variable. It doesn't necessarily reflect a causal link or true relationship but could make a theorized causal relationship more plausible by providing some empirical evidence.

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[45] Source: Eurostat [lfsi_long_e01].

[46] See sub-appendix 5

Table 14 shows transition rates between 2014-2017 and 2016-2017. We look at the difference between 2014 and 2017 because this could reflect changes since the baseline period (2015H1). Next to this, we look at the period 2016-2017 because changes could be stronger in more recent years if the implementation of the Recommendation takes time to be translated into policy. Furthermore, the table shows expectations formulated in the SWD and changes in the mapping scores for different aspects of the Recommendation. We present correlations between changes in transition rates and the expectations in the SWD to see if countries for which an impact was expected show improvements in transition rates while recognizing that expectations were not always fulfilled and expectations in the SWD were not related to transition rates per se (but more to the step before of potential to improve on the quality of policy). Next to this, we present correlations between changes in transition rates and changes in mapping indicators to show if indicated changes in policy measures could be related to improving transition rates.

Transition rates improved relatively the most in Bulgaria, Croatia and Romania. Other countries with increasing transition rates are Cyprus, the Czech Republic, Lithuania, Latvia and Slovenia. Correlations between changes in transition rates and SWD-expectations related to the SPOC are negative and often significant. This indicates that transition rates increase more for countries without a SPOC before the Recommendation for which expected impact of the Recommendation was higher.[47] There seems to be no statistically significant relationship between changes in transition rates and expectations related to individual approaches formulated in the SWD. Most coefficients related to changes in the mapping scores have the expected positive sign, suggesting that as far there is any relationship, it is as expected. In case of registration, all these correlations are significant as well. In case of JIA and SPOC, there are also a few statistically significant results.

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[47] Note how impact is expected to be higher for countries without a SPOC. Because countries with a SPOC are marked with a 2 and those without with a 0 the expected correlation is negative. Countries with a low value do not have a SPOC and are therefore expected to improve more on transition rates than countries that do already have a SPOC and therefore a value of 2. High value are thus expected to be related to low changes in transition rates, hence the negative expected correlation.

Table 14 – relationships between changes in transition rates for 25-54, expectations and changes in policy indicators

	Transition Rates					Staff Working Document expected impact (2015)		Change in mapping indicator (H1 2015 - 2018)				
	2014	2016	2017	% change 1417	% change 1617	SPOC	Individual approach	Registration	JIA	SPOC	Individual assessment	Employer involvement
AT	14	10	10	-29%	0%	1	1	0	0	0	0	0
BE						1	1	0	0	1	0	0
BG	5	6	11	120%	83%	0	0	1	1	1	1	2
CY	9	10	13	44%	30%	1	2	0	0	0	-1	0
CZ	9	13	13	44%	0%	2	2	0	0	0	0	0
DE						2	0	0	0	0	0	1
DK	25	26	21	-16%	-19%	2	0	0	0	0	0	0
EE	16	16	16	0%	0%	1	0	1	0	0	0	1
EL	4		4	0%		0	2	1	0	0	0	1
ES	10	11	11	10%	0%	1	2	1	2	0	1	1
FI	15	10	16	7%	60%	2	0	0	0	0	1	0
FR	14	13	15	7%	15%	1	0	0	0	0	0	0
HR	5	12	12	140%	0%	0	2	1	1	0	0	0
HU	13	12	13	0%	8%	1	2	1	2	1	2	2
IE	10	10	10	0%	0%	2	0	1	0	0	1	1
IT	8	9	9	13%	0%	0	2	2	1	1	1	0

LT	7	9	11	57%	22%	0	0	2	1	0	1	2
LU						1	2	1	2	2	2	2
LV	13	10	18	38%	80%	0	1	4	1	1	1	1
MT						0	1	0	0	0	0	0
NL	13	14	16	23%	14%	2	1	0	0	0	0	0
PL	9	9	8	-11%	-11%	1	2	3	2	3	3	2
PT	14	17	18	29%	6%	1	0	0	0	0	0	1
RO	4	8	10	150%	25%	0	2	2	0	1	1	1
SE	14	16	12	-14%	-25%	1	0	0	0	0	0	0
SI	15	16	22	47%	38%	1	1	0	0	1	0	1
SK	7	10	8	14%	-20%	1	2	2	2	2	1	2
UK	12	11	10	-17%	-9%	2	0	0	-1	-1	-1	0
Correlation pp-change 14-17					-0.45**	0.22	0.33*	0.32*	0.29	0.12	0.22
Correlation pp-change 16-17					-0.30	-0.03	0.35*	0.12	0.21	0.02	0.22
Correlation relative change 14-17					-0.54 ***	0.23	0.35*	0.31	0.32*	0.18	0.19
Correlation relative change 16-17					-0.35*	-0.15	0.39**	0.19	0.20	0.03	0.26

Source transition rates Eurostat: [lfsi_long_e01]. Eurostat dos not report breaks for this variable. Expectations are derived from the SWD (2015) Expectations are formulated as follows: SPOC: impact is expected to be higher for countries without any formal coordination in place 2= SPOC, 1= Partnership/data exchange, 0= no formal coordination. Individual approaches: impact will be higher on MS without individual approaches in place', 0= no or limited impact 1= medium impact 2= stronger impact. So the SWD-categories are translated in an ordinal scale. Note: If for the SWD expectations another scale would be used with similar intervals between the categories (e.g. 1-3-5 instead of 0-1-2), exactly the same correlation coefficients would result. In section 2.2 an explanation is given why SWD-expectations are only available for SPOC and individual approaches.

Another way of presenting the relationship is in figure 18. In this figure countries are colour-coded by the change made in the mapping scores (similar to clustering in figure 16). The dispersion of the five categories illustrates that there is a – weak - link of this clustering with changes in transition rates, which is in line with the results of table 14 above. The "red" countries with small dots with no change are more often found below the 45-line, indicating that at least some of these countries also had no improvements in transition rates (DK, AT, SE). These three countries with no progress already had a favourable starting position in terms of mapping scores for 2015H1. Most countries in the other groups are above the 45degree-line indicating that transition rates improved. But between these groups it is difficult to distinguish different patterns.

Figure 18 Transition rates in 2014 and 2017 color-coded by change in policy indicators [48]
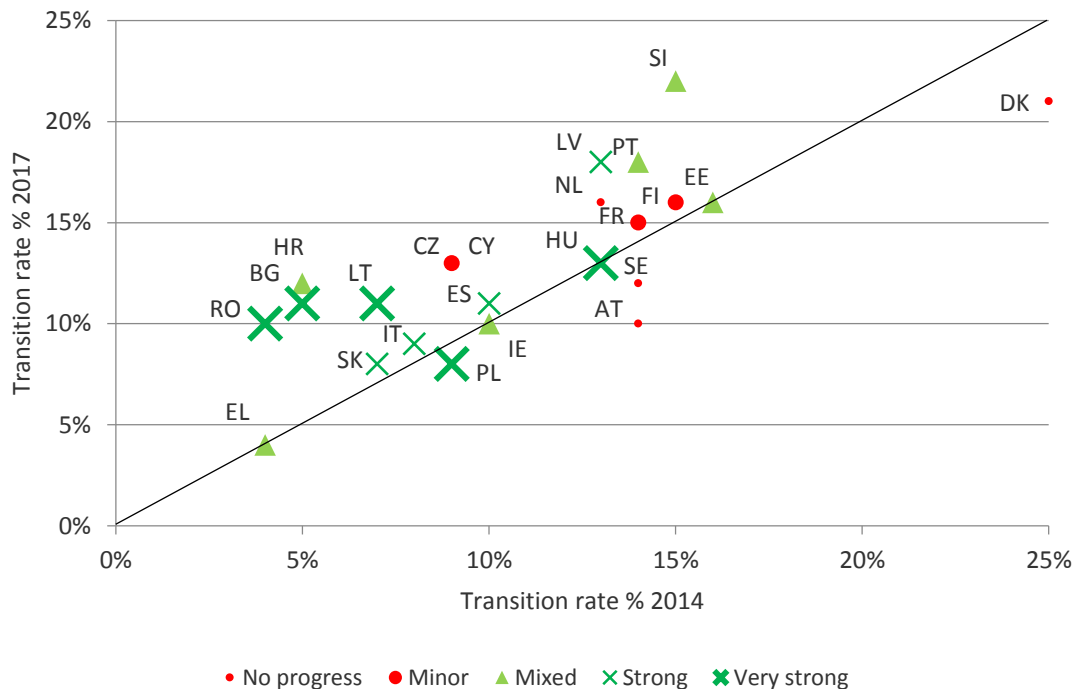
Source: Mapping assignment task 1 & Eurostat

Note: All country labels are located at the upper left corner with the exception of Poland and Ireland in the lower right corner. Countries with no change show no changes in the mapping exercise for any policy area. Countries with minor change show improvement in 1 policy area. Mixed change is change in 2 or 3 policy areas. Strong change is change in at least 4 out of 5 policy areas with at most 1 policy area showing an improvement stronger than 1 point. Very strong change is change in at least 4 out of 5 policy areas with at least 2 policy areas showing an increase stronger than 1 point. See also section 2.1. of this annex for an explanation. The Czech Republic is a country with no change according to the mapping exercise, transition rates are similar to those of Cyprus with minor change.

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[48] Eurostat reports no statistical breaks for the transition rate [lfsi_long_e01].

5. Statistical analysis

In the former section 4 we described trends in the output and result indicators. We tried to make a link to the Recommendation by checking if any changes and break in trends have taken place before and after the baseline period and also if differences between countries in these trends are related to an indicator of perceived policy changes linked to the recommendation. However, there are a number of limitations to directly translate the outcomes in terms of effectiveness of the Recommendation:

- Other factors influence LTU-rates as well (e.g. the business cycle, investment constraints, a low skilled labour force and the unemployment benefits trap).
- Favourable trends in output and result indicators after the baseline period can be part of longer term trends caused by other factors than the Recommendation;
- Countries with change in quality of measures are a selective group in terms of (more unfavourable) starting positions;
- Reversed causality issues. Measures can be intensified as a result of large problems in starting situation (see note above) and/or increasing problems;
- The limited number of observations;
- Limitations in the availability and quality of indicators;
- Missing data.

In this section we will statistically test if a break in trend can be found after 2015Q2. The analysis at least partly deals with the first three issues mentioned above. We look at longer lasting trends in long-term unemployment (25-64) of individual countries and control for GDP-growth. If trends are significantly different after the introduction of the Recommendation we can conclude that this is at least not due to GDP-growth. Because we controlled for GDP-growth it is more likely that differing trends in long-term unemployment are caused by the Recommendation although there could still be other causes that play a role, like human capital developments, other labour market institutions (e.g. social benefit conditions). We did not include a correction for these other intervening factors because of limited data availability and the short time period concerned after the implementation of the Recommendation. Empirical data for other potentially relevant variables are often not available on a quarterly basis or there are large gaps in the data anyhow.[49] Besides, because there are only a limited number of quarters since the introduction of the Recommendation, including more variables would limit the degrees of freedom of the estimation too much. The descriptive analysis above already showed GDP-growth is an important variable directly influencing LTU-rates. We also have quarterly data for this variable. For these reasons we only corrected for GDP growth as intervening factor.

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[49] Job vacancy statistics or expenditures on R&D for all NACE Rev. 2 activities are only available for a selected number of countries in Eurostat (CZ, DE, LV, LT LU, HU, NL, SI, SK). Educational attainment as a proxy for a skilled labour force is only available on a yearly basis. The OECD publicly provides data on the net replacement rate for long-term unemployed but only on a yearly basis and up until 2015 (OECD Benefits and Wages statistics: http://www.oecd.org/els/benefits-and-wages-statistics.htm). The OECD also provides data on strictness of employment protection but only up to 2013 (OECD Employment Protection Database: http://www.oecd.org/els/emp/oecdindicatorsofemploymentprotection.htm). Various labour market characteristics such as trade union density or minimum wages have data for 2016 and 2017 but for a limited number of countries only (OECD Employment Database: http://www.oecd.org/employment/emp/employmentdatabase-labourmarketpoliciesandinstitutions.htm)

We used two types of testing (chow break test and a test if a dummy after 2015Q2 is significant). Data used covers 2005Q2 to 2017Q4. See the technical annex for a more detailed explanation of the methods used. There are no models presented with the share of LTU of all unemployed as dependent variable. The relation between GDP-growth and changes in the share of LTU of all unemployed is ambiguous and could not be estimated.[50] Table 15 therefore only includes break testing for the LTU-rate (25-64).[51]

Table 15 results Chow and dummy tests

Country	Chow-break	Dummy coefficient significant break	Size dummy coefficient and significance	Change mapping[52]
AT	no	No	0.02	No change
BE[+]	-		-	Minor change
BG	no	Yes	-0.24*	Very strong change
CY	no	No	-0.02	No change
CZ	no	No	-0.06	No change
DE	no	No	0.04	Minor change
DK	no	No	0.03	No change
EL	Yes (0.06*)	Yes	-0.42**	Mixed change
ES	Yes (0.02**)	Yes	-0.36***	Strong change
FI	no	No	-0.01	Minor change
FR	no	No	-0.04	Minor change
HR	no	Yes	-0.65**	Mixed change
HU	no	No	-0.07	Very strong change
IE	no	No	-0.27	Mixed change
IT	no	No	-0.09	Strong change
LT	no	No	-0.31	Very strong change
LV	no	No	0.06	Strong change
NL	Yes (0.02**)	Yes	-0.15***	No change
PL	no	No	-0.02	Very strong change
PT	Yes (0.04**)	Yes	-0.24**	Mixed change

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[50] Estimated coefficients were either negative or positive and insignificant.

[51] A more extensive overview of the results and underlying models is presented in sub-appendix 6.

RO	no	No	-0.04	Very strong change
SE	no	No	-0.03	No change
SI	no	Yes	-0.21*	Mixed change
UK	no	No	-0.05	No change

*Note: *, ** and *** denote significance at respectively a 10%-, 5%- and 1%-level. [+]For BE, no model could be estimated that explained the data (zero R-squared).*

Source: Own calculations with Eurostat data. EE, LU, MT and SK are not included in the table because of missing data.

Table 15 shows that after 2015Q2 LTU-rates changed for reasons other than GDP-growth in NL, PT, HR, SI, EL, BG and ES. In all of these cases, the break had the expected negative sign (indicating a downward break in LTU-rates after 2015Q2).

Is there any connection of the countries with a downward break in trend with the expected impact beforehand and indicators for policy change? The clearest connection seems to be with the expectations beforehand on the SPOC. SWD reported no formal coordination in BG, HR, EL and (only) partnership/data exchange in ES, PT, SI and a SPOC for only NL. The link with other expressed impact expectations and the change in policy areas in the mapping is weaker. Linking the break in trend directly to the Recommendation would become more robust if countries with significant results would (mainly) be found in the group of countries with a (large) positive change in quality of measures. The countries for which a break was found are not consistently found in the group of countries with stronger change in the indicators for quality of measures. Quite a number of these countries fall in the category "mixed changes". For Bulgaria and Spain, the significant break coincides with very strong or strong change in policy measures according to the mapping. For Greece, Croatia, Portugal and Slovenia, a significant break is accompanied by mixed changes in the policy areas from the mapping. For the Netherlands the significant break coincides with no changes in the policy areas from the mapping.

6. Conclusion

In this Annex we have assessed the development of a number of indicators related to the Recommendation. We followed a certain logic by starting to look at indicators for changes in policy fields related to the Recommendation, followed by output and result indicators.

Indicators for relevant policy measures, the mapping, and the PES-survey, point to some progress in policy fields related to the Recommendation. This progress is stronger for countries which had a less favourable starting position in terms of quality of measures in the mapping. Change in the policy area of SPOC/interinstitutional coordination is partially related with impact expectations beforehand in the Staff Working Document (SWD) of the Commission accompanying the Recommendation. This connection is weaker for the policy area of individual assessments, but in this policy area, the SWD-expectations more explicitly take into account the role of profiling. Change in mapping scores in the policy field of registration is clearly related to the initial situation on registration rates in 2014.

It cannot directly be concluded that these favourable developments in relevant policy areas can be attributed to the Recommendation. It is possible that these developments are part of a more general trend and would also have taken place without the Recommendation. In the PES Questionnaire a direct question on the role of the Recommendation in LTU-policy prioritization can be found. Most PES choose for "moderate" in answering this question: One third (10) choose "no/very small", 15 "moderate" and 3 "significant".

In a next step we have assessed the developments in a number of output and result variables: to what extent do we see favourable trends since the baseline? For a few indicators we have also assessed a longer time period to test if these more recent trends fit into a longer lasting time trend, and to what extent any break in trend has taken place since the baseline.

Output indicators (like the registration rate, JIA-participants, activity rates, ESIF-participants) should be relatively more affected by policy making. For some of these indicators there is a trend of progress. However, this is not always the case. For some indicators a time lag in the data is a serious bottleneck to test if changes have taken place. The analysis shows the following developments of output indicators:

- For the European Union as a whole the registration rate slightly decreased in recent years. For the individual member states the situation is mixed, but a few more countries show a decrease in registration rate rather than an increase although the changes are often rather small.
- The expenditures on active labour market policy do not point to an increase, although the latter suffers from the limitation of a strong time-lag in the data. One trend which is in line with the Recommendation is that the increasing relative importance of category 1 (services) can be interpreted as in line with the Recommendation. On the other hand, expenditures on category 4 (employment incentives) are not relatively growing stronger than for category 6 (public works/direct job creation), which would be in line with the importance attached to employer involvement in the Recommendation. However, it must be stressed that we only have data until 2016 to test these trends.

- Activation rates between 2014 and 2016 and 2015 and 2016 point to increase for a majority of (available) countries. We lack data for 2017, but if we assume the lifelong learning indicator for LTU from the LFS is a proxy for one element, participation in ALMP-training, then the participation has increased between 2016 and 2017. The implementation of the Recommendation will take time. So, the more recent data we have the better the possibilities we have to test if we can detect relevant changes in output and result indicators.
- For long-term unemployed participants in ESIF, data on new entrants are available for 2016 and 2017 (although provisional), pointing to a (strong) increase in participating long term unemployed. However, this strong increase has to do with the budgetary cycle which started in 2014. Therefore, it is also important to look more specifically at the share of long term unemployed in the total participants. This indicator shows strong diversity between individual countries. In some countries this share has increased strongly, while in other countries this has decreased between 2015 and 2017.
- The EMCO monitoring report offers data on participation in 2017 in JIA or an individual action plan if a JIA was not in place. In the individual country fiches of this report, for some countries a comparison is made with the participation in 2016. Among these, we have selected the countries where the instrument did not reach the whole population of LTU and no substantial changes were mentioned in the measurement method and the instrument itself between 2016 and 2017. For most of these selected countries the reach has increased (ES, LU, MT, PL, IE), while in some other countries the reach decreased (especially DE and to a minor extent BE). For Slovakia there is an increase in reach in spite of a revision signaled in the country fiche from IAP to JIA. Administrative data from the EMCO monitoring show a number of indicators of employment exit rates for those with a JIA. However, each of these indicators suffer from a number of limitations. For a number of these indicators, it is difficult to have a proper benchmark to judge if the scores are favourable or less favourable. Another indicator which uses a benchmark – all LTU versus those with a JIA – only considers differences in exit destinations out of unemployment for both groups, so does not include comparisons in the proportion of both groups that remain unemployed. Taking into account this limitation, there are no systematic indications that those with a JIA have better transitions into employment. There are a few more countries for which this is the case, but certainly not for all and the differences in exit rates between all LTU and those with JIA is often quite small.

Results indicators like the transition rates and the LTU-rate are more influenced by other intervening factors. So we have to be even more careful in conclusions based on trends in result variables than in output variables. The developments were the following:

- Transition rates of long term unemployed into employment and LTU-rates have improved since 2014 for most countries. In most cases correlation-coefficients have the expected sign showing that improvements in LTU-rates and transition rates into employment are positively related to changes in mapping scores. But in many cases these correlation coefficients are rather small and not statistically significant. For the transition rates there are some more statistically significant results.

- In order to correct for the important intervening factor of the business cycle, some more explorative statistical analyses on the result indicator LTU-rate has been carried out. The LTU-rate shows for some countries a break in trend after 2015H1 after a correction for the business cycle. But these analyses suffer from a number of limitations, one of which is that all kind of other factors not taken into account can also play a role. Another remark to be made is that the countries for which a break was found are not consistently found in the group of countries with stronger change in the indicators for quality of measures. One might expect beforehand, that the countries with a break in trend would be strongly concentrated in the group of countries with (strong) change in quality of measures.

So some output indicators (like long term unemployed participation in lifelong learning, JIA participants in some countries) are moving favourably, while others, mainly the registration rate and ALMP-expenses, show little progress. Result variables move favourably, but the development of these variables is for an important part in parallel with the business cycle. After a correction for this for the LTU-rate, at least for few countries, there is a favourable break in trend after the baseline, but these are not specifically countries with larger policy changes in the mapping. More in general we find only weak linkages between policy changes and changes in result and output variables. But the complexity of potentially many intervening factors can play a role here, especially with regards to the result variables. So both the qualitative and quantitative information in this section give some indications of an added value of the Recommendation, but at the same time also input why this added value should not be overrated. Any more final answer on the added value can only be given by bringing together the evidence from the various research activities.

Finally, a note on the reach of target groups. The EMCO monitoring provides quite some information on over- or underrepresentation according to gender, age and educational background in registration rates and JIA- (and IAP-users). These differences are rather small. We lack systematic information on other dimensions (like country of birth) or representation of subgroups within active labour market policies. However, in the latter case, the time lag in the data is an even stronger bottleneck. The implementation of the Recommendation will take time. The more recent data will be available, the better the possibilities to test if relevant changes in these kind of output data have taken place.

Sub-appendix 1: Flags for breaks in trend Eurostat data

The following table gives an overview of flags for "break in trends" for underlying data from Eurostat for a number of crucial indicators used in this Annex.

Table A1.1. Flags for breaks in trend (Eurostat)

Country	Quarterly data 25-64 LTU-rate (2005Q2-2018Q2)	Quarterly data share LTU 25-64 (2005Q2-2018Q2)	Yearly data LTU-rate 25-64 (2013 – 2017)	Yearly data share of LTU 25-64 (2013-2017)
AT	2007Q1	2007Q1		
BE	2011Q1, 2017Q1	2011Q1, 2017Q1	2017	2017
BG	2008Q1, 2010Q1, 2011Q1	2008Q1, 2010Q1, 2011Q1		
CY	2009Q1	2009Q1		
CZ	2011Q1	2011Q1		
DE	2010Q1, 2011Q1	2010Q1, 2011Q1		
DK	2016Q1, 2017Q1	2016Q1, 2017Q1	2016, 2017	2016, 2017
EE	-	-		
EL	2009Q1	2009Q1		
ES	-			
FI	2008Q1	2008Q1		
FR	2014Q1	2014Q1	2014	2014
HR	2006Q2	2006Q2		
HU	-	-		
IE	2007Q1, 2017Q3, 2018Q1	2007Q1, 2017Q3, 2018Q1	2017	2017
IT	-	-		
LT	-	-		
LU	-	-	2015	2015
LV	-	-		
MT	-	-		
NL	2010Q1, 2010Q2, 2011Q1	2010Q1, 2010Q2, 2011Q1		

PL	2008Q1, 2010Q1	2008Q1, 2010Q1		
PT	2011Q1	2011Q1		
RO	2010Q1	2010Q1		
SE	2005Q2	2005Q2		
SI	-	-		
SK	2011Q1	2011Q1		
UK	2007Q1, 2008Q1	2007Q1, 2008Q1		

Sub-appendix 2: PES-survey

Table A2.1 refers to two questions directly related to the current state of the art of the implementation of the Recommendation: if a JIA is offered (by the PES) and if the PES (probably in combination with another institution) is appointed as a SPOC. For both aspects a majority of PES have chosen a positive answer. A few southern European PES report a "No" on both aspects (Portugal, Cyprus and Greece). Several countries in the "No-group" for JIA offer individual action plans for each LTU rather than JIA (Bulgaria, Czech Republic, Greece, Poland, Portugal and Sweden). JIAs and IAPs (Individual Action Plans) are similar tools that offer for a personalised and more intensive approach, but an IAP is often offered to a broader group of clients and misses one or more characteristics to be considered JIA. Several countries (BG, CZ, EL, FR, NO, PL, PT and SE), offer individual action plans for each LTU rather than job integration agreements. The Cypriot PES said it currently had no capacity for offering this sort of service to the LTU. The Lithuanian PES has no experience of offering a JIA for any groups of unemployed. Only Cyprus and Lithuania report no on offering JIA or IAP.

Table A2.2 presents an overview of some questions with regards to new measures starting from 2015, based on the PES-survey. The footnote in the table with the questions used illustrates that this concerns new measures and is less targeted towards improvements in existing measures (except for France which indicates a reinforcement in the field of SPOC in 2015 and the changes in the field of employer involvement).

With regard to the area of the Recommendation of building closer links with employers for integrating the LTU into the labour market, over three quarter of PES responding (19 out of 24) said that cooperation with employers on the integration of the LTU into the labour market has changed in at least one of six elements mentioned. Most mentioned changes are financial incentives (18), work place mentoring and training (14) and job placements (14). All in all this means that in the PES-survey most changes are detected in the areas of coverage of registration and closer links of employers.

Table A2.1 Countries where the PES is appointed as SPOC and the PES offers JIA according to the PES-survey

Country	SPOC	JIA	IAP
AT	Yes	Yes	
BE-Flanders	Yes	Yes	
BE-Brussels	Yes	Yes	Yes
BE-Wallonia	Yes	Yes	
BE- East Belgium			
BG	Yes	No	
CY	No	No	No
CZ	Yes	No	Yes
DE	Yes	Yes	
DK	Yes	Yes	
EE	Yes	Yes	
EL	No	No	Yes
ES	No	Yes	
FI	Yes	Yes	
FR	Yes	No	Yes
HR	Yes	Yes	
HU	Yes	Yes	
IE	Yes	Yes	
IT			
LT	Yes	No	No
LU	No	Yes	
LV	Yes	Yes	
MT	No	Yes	
NL	Yes	Yes	
PL	Yes	No	Yes

PT	No	No	Yes
RO	Yes	Yes	
SE	Yes	No	Yes
SI	Yes	Yes	
SK	Yes	Yes	
UK			

Source: PES-Survey. JIA: Question 5): Do you offer a JIA (A 'job-integration agreement' is understood to be a written agreement between a registered long-term unemployed person and a single point of contact, having the objective of facilitating that person's transition into employment on the labour market. It should detail explicit goals, timelines and the obligations which the registered long-term unemployed person must meet, and the service provider's offer to the long-term unemployed person). SPOC: Question 6.1): Which institution(s) is responsible for arranging and offering "Single point of contact" services and support to LTU in your country? (The responsibilities for arranging and offering SPOC services and support to LTU can be related to employment-oriented services (e.g., ALMP measures), complementary social services and benefits) (1=PES is only; 2= PES with other; 3=no institutions appointed as SPOC). This is translated to Yes= any SPOC; No= no institutions appointed as SPOC).

Table A2.2 Are there new measures in place for any of the five subareas since 2015? (PES-survey)

Country	Registration	Prevent deregistration	JIA	SPOC	New arrangements for SPOC	Changes in field of employer involvement
AT	No	No				No
BE- Flanders	No	Yes	Since 2015	Since 2017		No
BE- Brussels	Yes	Yes				-
BE- Wallonia	No	No				Yes
BE- East Belgium						-
BG	Yes	Yes				Yes
CY	Yes	No				Yes
CZ	No	No			Since 2016	Yes
DE	No	No				Yes
DK	No	No	Since 2015			No
EE	No	No				No

EL	No	Yes				No
ES	No	No	Since 2015			Yes
FI	No	No				Yes
FR	Yes	Yes		Reinforced in 2015		Yes
HR	No	Yes	Since 2015	SPOC since 2016	Since 2015/2016	Yes
HU	Yes	Yes				Yes
IE	No	Yes				Yes
IT						-
LT	Yes	Yes				Yes
LU	Yes	Yes				Yes
LV	No	Yes				Yes
MT	Yes	Yes				Yes
NL	No	No				Yes
PL	No	No				No
PT	No	Yes				Yes
RO	Yes	Yes	Since 2017	SPOC since 2017		-
SE	No	No				Yes
SI	Yes	Yes	Since 2017		Since 2017	Yes
SK	No	No	Since 2017			Yes
UK						-

Source: PES survey and report about the survey. Questions: Has your PES taken any specific measures to increase registration of jobseekers and inactive people (capable of work not seeking employment or not registered with the PES)? / Has your PES taken any measures to prevent deregistration of the long-term unemployed who became discouraged? / Do you offer a JIA: if yes: please indicate when it started. / PES is the only institution for arranging and offering SPOC/PES with other institution: if yes: since when? / What arrangements has your PES introduced alone or with other institutions/actors to ensure a single and coordinated support to LTU via the SPOC and since when? The column with changes in the field of employer involvement are "yes" if a change in at least one of six elements mentioned has taken place.

Sub-appendix 3: EMCO-framework

The most important source of secondary data is the EMCO monitoring framework. This framework is developed by the Employment Committee (EMCO) to monitor the implementation of the Recommendation. The framework consists of a number of indicators for which EMCO collects yearly data for every member state. EMCO uses several data sources (like the European Union Labour Force Surveys and the European Union Statistics on Income and Living Conditions - SILC, but also administrative data) to collect the data. In table A3.1 we have given a full overview of data from the EMCO-monitoring. In September 2018 new data have become available, with also some new indicators. We have classified the indicators in output, result and context indicators.

Table A3.1 Classification of indicators from EMCO framework

Indicators from EMCO framework	Output	Result/ impact	Context
Long term unemployment rate of adult (25-64) working age population (as % of active population 25-64) - Also split by educational level, gender and age subgroups (25-55 and 55+)		X	
Share of adult working age population (25-64) long-term unemployed as a percentage of the total adult working age population (25-64) unemployment		X	
Activation rate of adult registered long-term unemployed (LMP cat.2-7)	X		
Activation rate of adult registered long term unemployed (LMP category 4 – employment incentives)	X		
Transition rate of adult long-term unemployed to employment - Also split by age (25-55 and +55), gender and qualification level		X	
Transition rate of adult long-term unemployed to inactivity - Also split by age (25-55 and +55), gender and qualification level		X	
Non-transition rate of adult long-term unemployed (remaining long-term unemployed) - Also split by age (25-55 and +55), gender and qualification level		X	
Hiring rates by for long-term unemployed by duration of unemployment - Also split by gender and duration of unemployment		X	
Long term unemployment rate of adult working age population by duration (12-18m, 18+)		X	
Share of LTU registered with public employment services (25 – 64) - also split by gender	X		
Number of registered adult (aged 25-64) long-term unemployed with a duration of unemployment up to 18 months / total number of registered		X	

adult (aged 25-64) long term unemployed			
Transition into employment within 6 and 12 months of unemployment as a share of all PES registered transitions into employment - Also split by age group, gender and qualification level		X	
AROP rate of LTU working age adults (25-64)			X
Material deprivation (MD) rate of LTU working age adults (25-64)			X
In work poverty rate for working age adults (25-64)			X
Housing cost overburden rate among LTU working age adults (25-64)			X
Unmet need for medical care of LTU working age adults (25-64)			X
Use of formal childcare for children less than 3			X
Participation in education and training for LTU working age adults (aged 25-64)(in %)	X		X
Net replacement rates for the LTU (in %)			X
Share of LTU working age adults (25-64) receiving any benefits			X
Share of social benefits in total disposable income of LTU working age adults (25-64)			X
Vacancy rate			X
Use of Job integration agreements (JIA) (=number of adult registered long term unemployed with duration of unemployment more than 18 months having a job integration agreement / number of adult registered long term unemployed with duration more than 18 months)	X		
Use of Job integration agreements within 18 months (= number of registered adult long term unemployed with duration 12-18 months having a job integration agreement / number of registered adult long term unemployed with duration of 12-18 months)	X		
Regained employment for LTU (= number of adult (aged 25-64) registered long term unemployed who entered employment in the reference year after a job integration agreement/ total number of adult (aged 25-64) registered long term unemployed having a job integration agreements in the reference year) - Also split by educational level, gender and age subgroups		X	
Number of adult (aged 25-64) registered long term unemployed with duration of unemployment more than 12 months having a job integration agreement / Number of adult (aged 25-64) registered long term unemployed with duration more than 12 months	X		
Previously LTU still in employment 12 months from obtaining a job after having a job integration agreement (= number of previously adult (aged		X	

25-64) registered long-term unemployed who are in employment 12 months after obtaining a job after having a job integration agreement / total number of adult (aged 25-64) registered long-term unemployed obtaining a job after having a job integration agreement)			
LTU still in unemployment 12 months after a job integration agreement (= number of adult (aged 25-64) registered long-term unemployed who are in unemployment 12 months after having a job integration agreement / total number of adult (aged 25-64) registered long term unemployed having a job integration agreement)		X	
Previously LTU still in employment 6 months from obtaining a job after having a job integration agreement (=number of previously adult (aged 25-64) registered long-term unemployed who are in employment 6 months after obtaining a job after having a job integration agreement / total number of adult (aged 25-64) registered long-term unemployed obtaining a job after having a job integration agreement)		X	

Sub-appendix 4: Differences in transition rates

Table A4.1 Relative difference between transition rates for people aged 25-54 and people aged 55-74

Relative difference between transition rates for people aged 25-54 and 55-74					
Country	2011	2014	2015	2016	2017
AT	-35%	-50%	-29%	-20%	-10%
BG	-20%	0%	-33%		-36%
CY		-56%	-45%	-50%	-23%
CZ	-55%	-33%	-64%	-54%	-38%
DK	-29%	-36%	-10%	-31%	-10%
EE	9%				
EL		-50%	-67%		-50%
ES	-55%	-60%	-50%	-55%	-55%
FI	-33%	-67%	-36%	-20%	-38%
FR	-43%	-50%	-36%	-46%	-40%
HR					
HU	-44%	-31%	-45%	-50%	-46%

IE	-33%	-60%	-33%	-20%	-20%
IT	-36%	-38%	-33%	-33%	-44%
LT	-13%		-18%	-44%	-45%
LV	-20%	-62%		-10%	-50%
MT					
NL	-50%	-62%	-67%	-57%	-50%
PL	-38%	-44%	-33%	-56%	-38%
PT	-25%	-29%	-35%	-35%	-50%
RO	-29%			-25%	-40%
SE	-53%	-36%	-44%	-50%	
SI	-25%	-53%	-60%	-25%	-23%
SK	-50%	-57%	-50%	-40%	-25%
UK		-33%	-9%	-27%	-40%

Source: own calculation with Eurostat data.

Sub-Appendix 5: Time series ltu-rates, share of long-term unemployed in total unemployment and GDP-growth
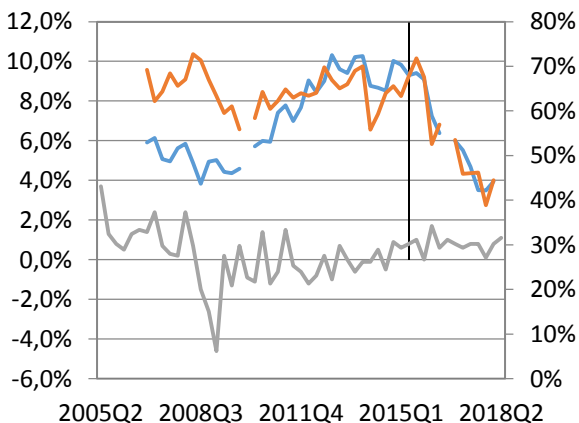
Figure A5.1 – Countries with no change[53]

Legend: ■ 2015Q2 — LTU-rate (lhs) — GDP-growth (lhs) — Share of LTU (rhs)

AT

CZ

SE

UK

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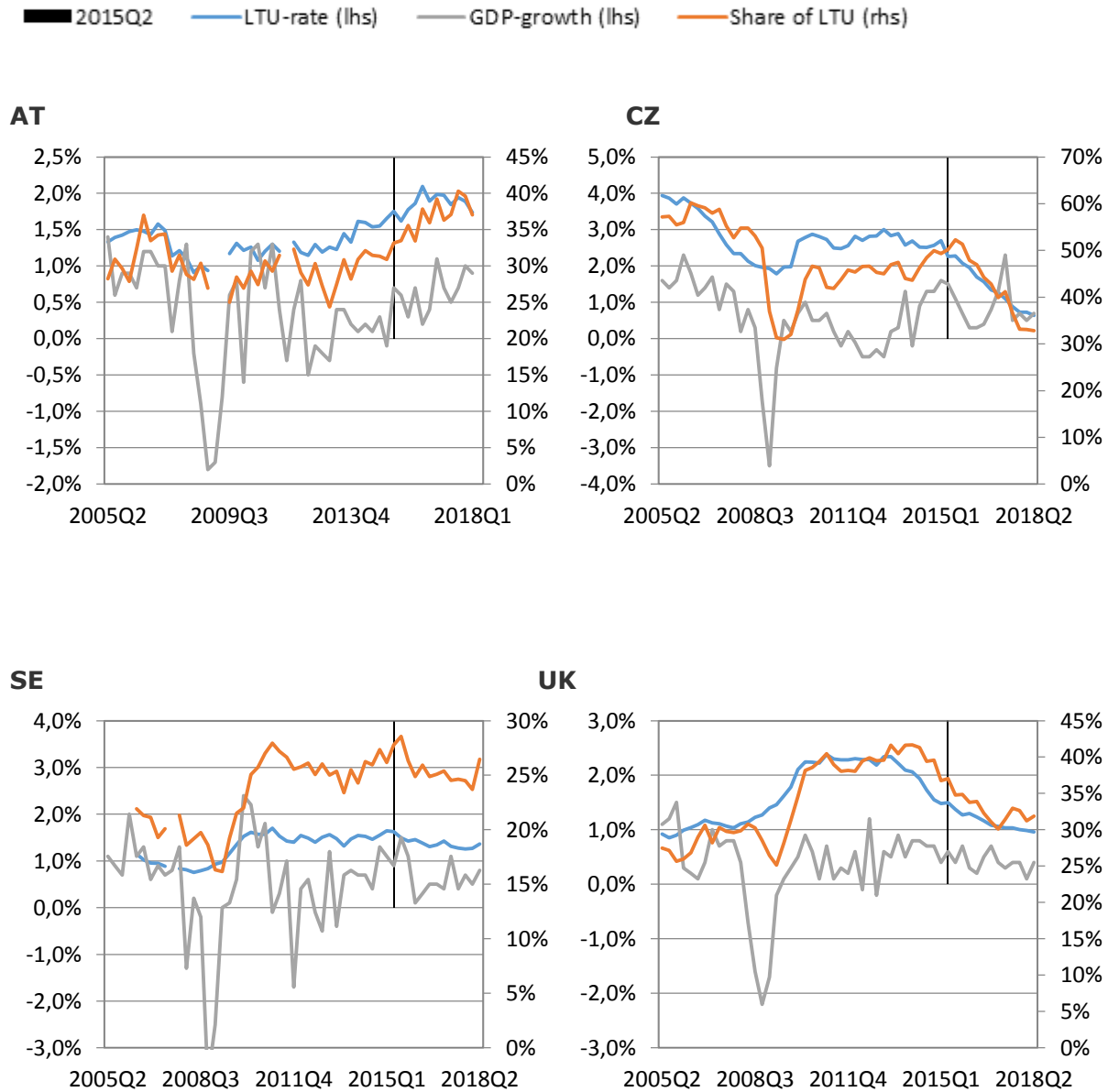
[53] Not enough data for Denmark. One group of countries with **no change** where no change means there is no improvement on any of the policy areas from the mapping exercise (AT, CZ, DK, NL, SE, UK). One group with **minor change** where there is only change in one of the policy areas (BE, CY, DE, FI, FR). One group with **mixed change** where there is change in 2 or 3 policy areas (EE, EL, HR, IE, MT, PT, SI). One group with **strong change** where there is change in 4 out of 5 of the areas with maximally one policy area having a stronger increase than 1 point in the scale of the mapping scores (ES, IT, LV, SK) and a final group of **very strong change** with change in at least 4 out of 5 areas and at least 2 policy areas with an improvement of more than 1 point (BG, HU, LT, LU, PL, RO).

NL

Figure A5.2 – Countries with minor change[54]

BE
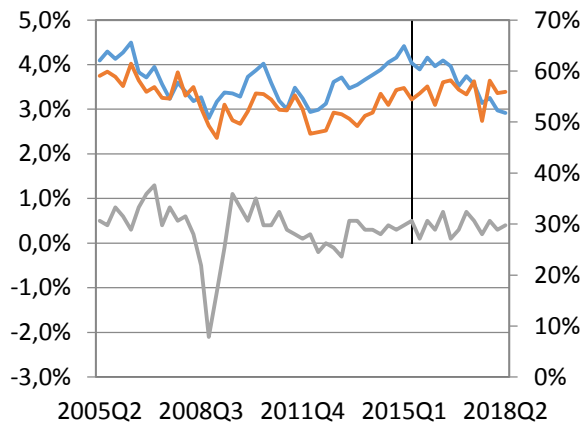
CY
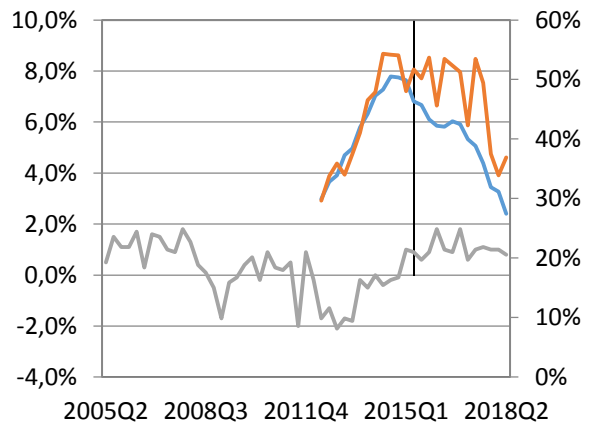
DE

FR

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[54] One group with **minor change** where there is only change in one of the policy areas (BE, CY, DE, FR, FI).
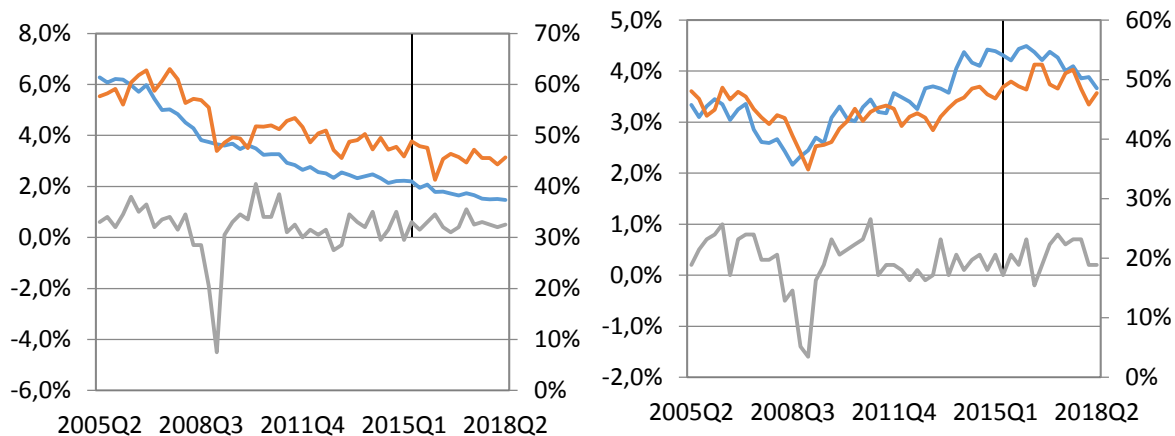
FI
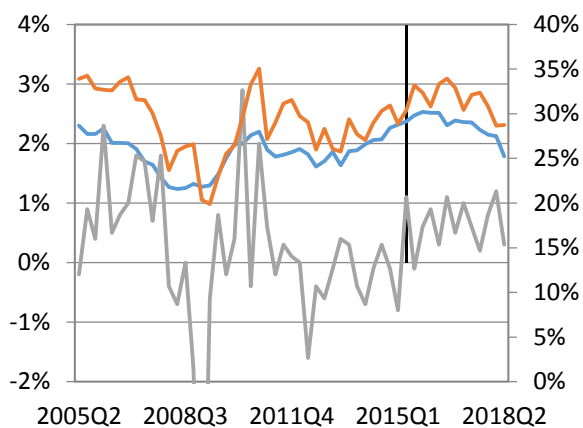
Figure A5.3 – Countries with mixed change[55]

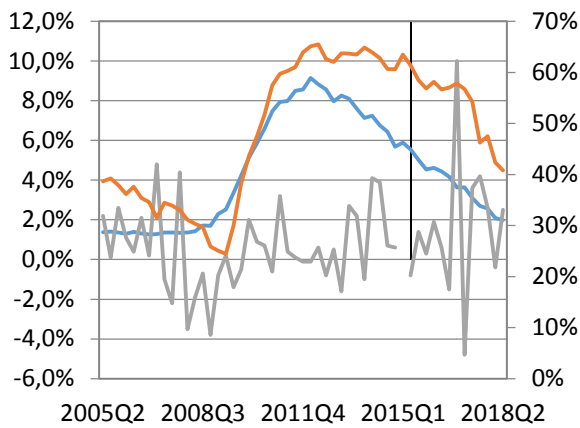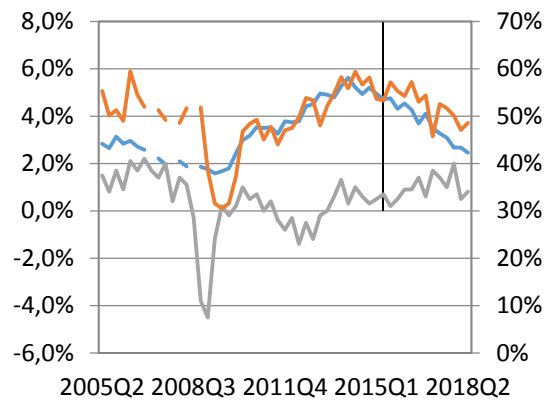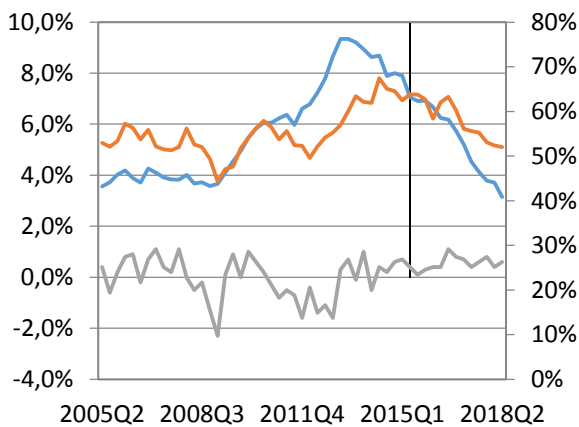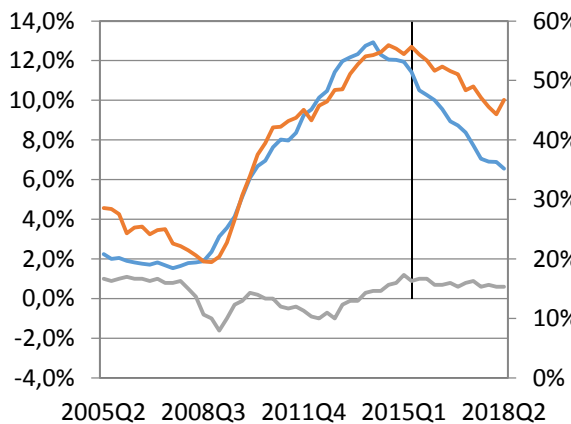Legend: 2015Q2 — LTU-rate (lhs) — GDP-growth (lhs) — Share of LTU (rhs)

EL
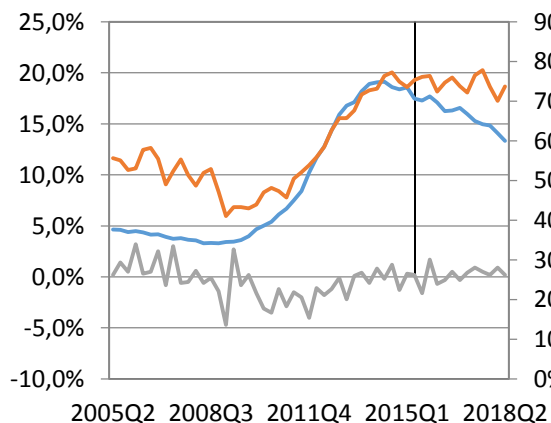
HR

[55] Not enough data for Estonia and Malta. One group with **mixed change** where there is change in 2 or 3 policy areas (EE, EL, HR, IE, MT, PT, SI).

IE

SI

PT

Figure A5.4– Countries with strong change[56]

■ 2015Q2   —— LTU-rate (lhs)   —— GDP-growth (lhs)   —— Share of LTU (rhs)

ES

IT

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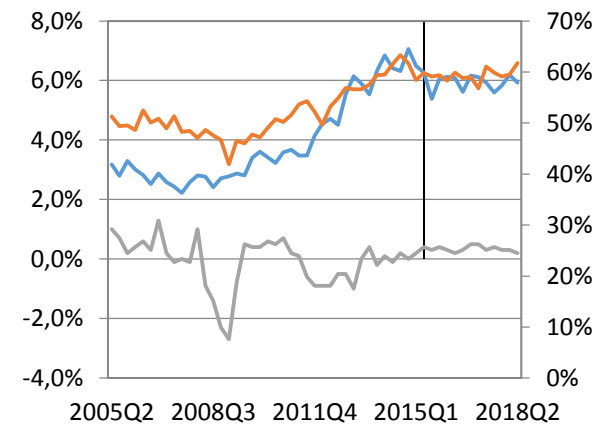
[56] Not enough data for Slovakia. One group with **strong change** where there is change in 4 out of 5 of the areas with maximally one policy area having a stronger increase than 1 point in the scale of the mapping scores (ES, IT, LV, SK)
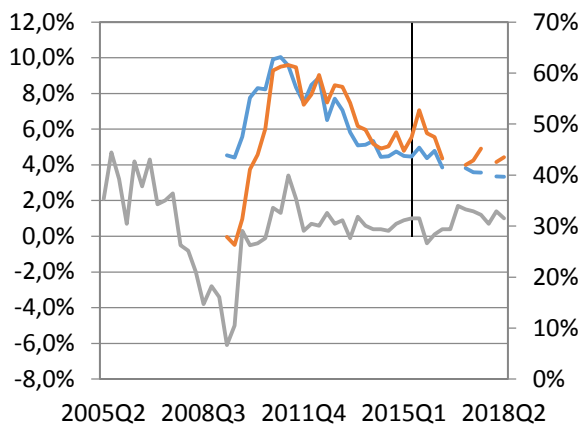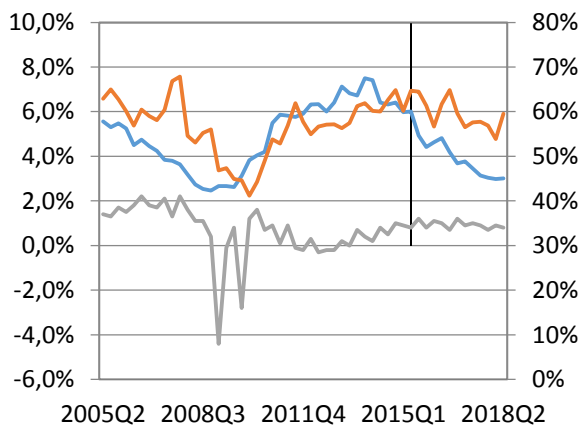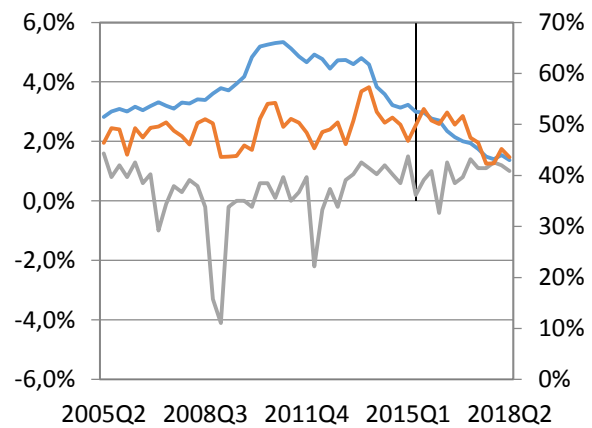
LV

Figure A5.5– Countries with very strong change[57]

BG

HU

LT

PL

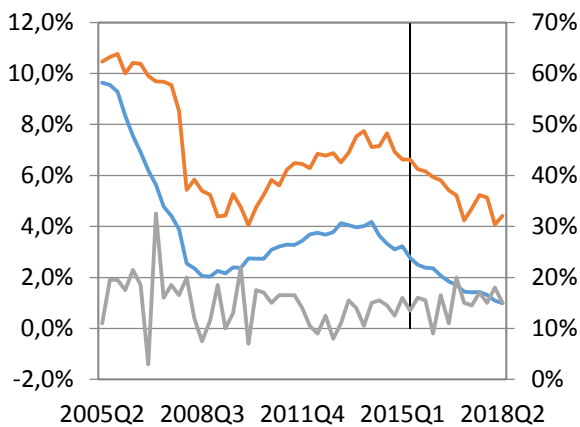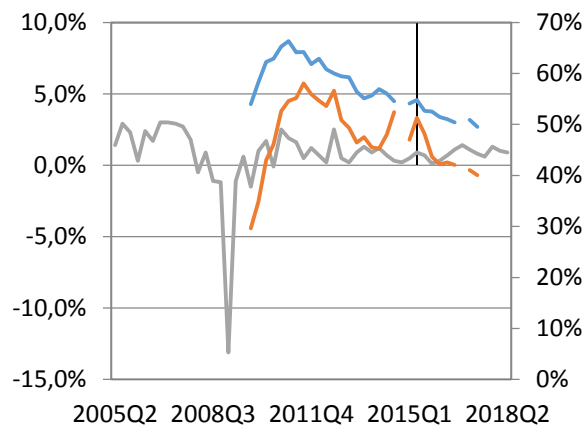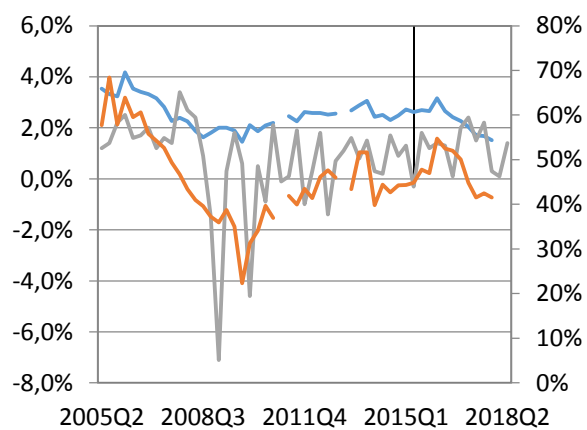[57] No data for Luxembourg. A last group with **very strong change** with change in at least 4 out of 5 areas and at least 2 policy areas with an improvement of more than 1 point (BG, HU, LT, LU, PL, RO).

RO

Sub-appendix 6: Technical annex chow test

Theory

Time-series data could demonstrate a structural break due to a policy change or any other sudden shock. In theory, the Recommendation could cause such a structural break. For this research, the second half of 2015 was agreed upon as the date after which the Recommendation could have had any effects. In this report the data is tested for a structural break after the Recommendation is implemented. Two tests are carried out.

The first test involves testing whether the independent variables have a different impact on the dependent variable after introduction of the Recommendation. For that purpose two models are tested, one for the period before the Recommendation and one thereafter. If after the implementation, the independent variables have a significantly different impact on changes in long-term unemployment this could be due to policy-effects of the Recommendation. See any literature on the chow-test for a deeper understanding of this testing-procedure.[58]

The second test uses in the regression a dummy to test for a structural break. We try to fit a dummy for the period after the implementation of the Recommendation. In a regular regression the dummy changes the intercept of the fitted line. When used with differenced variables, the dummy adds to every difference, as a result of which the slope of the fitted line shifts. We expect the dummy to be negative. In that case, there is less of a (positive) trend in long-term unemployment which could be due to policy effects of the Recommendation.

Both tests presuppose a model that describes the influence of cyclical and structural factors on long-term unemployment. An example of a cyclical factor is GDP-growth while an example of a structural factor is an active labour market policy.[59] If two separate models for the sub-periods before and after the Recommendation fit the data better than one model for both periods, a structural break occurred. We use the baseline model of equation A6.1. There is only one cyclical variable in the model because of limited availability of the data.[60] This cyclical variable is aggregate demand or GDP. A higher aggregate demand creates more jobs hence less unemployment and long-term unemployment. Equation A6.1. is given by:

$$LTU_{it} = \alpha_{it} + \beta_1 \ln GDP_{it} + \varepsilon_{it} \quad \text{(Equation A6.1)}$$

where LTU_{it} represents the LTU-rate in country i at time t. Any problems with non-stationary data are solved by taking differences of variables. Furthermore, aggregate demand could influence long-term unemployment with a delay. The estimated model could therefore be described as:

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[58] For example: Chow, G. C. (1960). Tests of equality between sets of coefficients in two linear regressions. *Econometrica: Journal of the Econometric Society*, 591-605.

[59] See the use of these factors in other studies: Hanclova, 2012 (Factors influencing the long-term unemployment level and development in the European Union), https://www.researchgate.net/publication/306017968_Factors_influencing_the_long-term_unemployment_level_and_development_in_the_European_Union or EC, 2012 (Structural unemployment and its determinants in the EU countries), http://ec.europa.eu/economy_finance/publications/economic_paper/2012/pdf/ecp_455_en.pdf

[60] There are only ten quarters of data after the second quarter of 2015.

$$LTU_{it} - LTU_{i(t-1)} =$$
$$\alpha_{it} + \beta_1 GDPgrowth_{it} + \beta_2 GDPgrowth_{i(t-1)} + \beta_3 GDPgrowth_{i(t-2)} + \beta_4 GDPgrowth_{i(t-3)} + \varepsilon_{it}$$
(Equation A6.2)

If this model describes the effect of aggregate demand growth on long-term unemployment it can be used to carry out the tests. The first (Chow-) test expands the model by adding interaction terms for the period after the recommendation. This is shown in equation A6.3 by the variable *Rec* which equals one for the period after the Recommendation and zero before. For simplicity only one lag is included in the representation of A6.3. However, the models are tested per country for up to four lags of GDP-growth.

$$\Delta LTU_{it} = \alpha_{it} + \beta_1 GDPgrowth_{it} + \beta_2 GDPgrowth_{i(t-1)} + \beta_3 Rec + \beta_4 Rec * GDPgrowth_{it} + \beta_5 Rec *$$
$$GDPgrowth_{i(t-1)} + \varepsilon_{it} \qquad \textit{(Equation A6.3)}$$

When β_3, β_4 and β_5 together are significantly different from zero either the effect of GDP-growth on LTU is different after the implementation of the Recommendation or there is a different trend. In both cases a structural break has occurred. The reliability of this test relies on normal distributed residuals and homoscedasticity over the sub-samples. Only a model estimated for Poland showed heteroskedasticity. The second test estimates an equation as in A6.4:

$$\Delta LTU_{it} = \alpha_{it} + \beta_1 GDPgrowth_{it} + \beta_2 GDPgrowth_{i(t-1)} + \beta_3 Rec + \varepsilon_{it} \qquad \textit{(Equation A6.4)}$$

Here again, *Rec* is a dummy that equals one for the period after the Recommendation and zero before. If the coefficient of the dummy *Rec* is significantly different from zero there is a structural break. With a negative coefficient for the dummy, changes in the long-term unemployment rate are smaller or more negative after the introduction of the Recommendation. The trend in long-term unemployment changed in favour of lower long-term unemployment rates. This could be due to the policy effects of the Recommendation.

Results

Data used covers 2005Q2 to 2017Q4[61]. Several versions of the model are tested for every country. The results of the best-fitting model are presented in table A6.1. The best-fitting specification was decided on by looking at the R-squared statistic plus the significance and size of coefficients. Every model was tested for heteroskedasticity. [62] Only the model for Poland showed clear signs of heteroskedasticity. In most countries, GDP-growth a year ago leads to a reduction in the contemporary LTU-rate. Only in the case of Denmark and Latvia, positive changes in GDP lead to increases in long-term unemployment. This counterintuitive result could be caused by the low number of observations for these countries, respectively 16 and 30. For some countries a structural break was found. Because we controlled for GDP in the model this effect is less likely to be a business cycle effect, so can point to a possible effect of the Recommendation.

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[61] EE, LU and MT are not included in the analysis because of missing quarterly data for the LTU-rate (25-64). SK is not included because of missing quarterly data for GDP-growth in chain linked volumes, percentage change on previous period. An overview of Eurostat reported statistical breaks (b) for the LTU-rate (25-64) can be found in the first column of Sub-Appendix 1.

[62] With three versions of the Breusch-Pagan and Cook-Weisberg test. Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient variation. *Econometrica: Journal of the Econometric Society*, 1287-1294.

However, before stating any strong conclusions on this, it should be noted that a lot of other aspects could play a role, especially when the R-squared of a model is low. In the text we also make a link with the perceived change in quality of measures. The result would become more robust if countries with significant results would (mainly) be found in the group of countries with a (large) positive change in quality of measures. There is however, hardly any link.

Table A6.1 Results Chow and dummy tests

Country	GDP	L.GDP	L2.GDP	L3.GDP	L4.GDP	R2	Obs.	Chow-break	Dummy coefficient
AT		-0.08**				0.12	45	no	0.02
BE						0.00	50	-	-
BG	-0.10*				-0.18***	0.28	47	no	**-0.24***
CY	-0.20**			-0.20***		0.63	22	no	-0.02
CZ					-0.12***	0.41	47	no	-0.06
DK	0.22**		0.16*			0.43	16	no	0.03
FI				-0.06***		0.32	48	no	-0.01
FR		-0.12*			-0.13**	0.16	47	no	-0.04
DE					-0.05*	0.08	47	no	0.04
EL	-0.15***				-0.20***	0.45	47	**Yes* (0.06)**	**-0.42***
HR					-0.02*	0.07	40	no	**-0.65***
HU	-0.08***				-0.09***	0.30	47	no	-0.07
IE			-0.04**	-0.04**		0.16	48	no	-0.27
IT					-0.11	0.05	47	no	-0.09
LV			0.22**			0.21	30	no	0.06
LT					-0.15***	0.41	26	no	-0.31
NL					-0.11***	0.21	47	**Yes** (0.02)**	**-0.15***
PL				-0.15***	-0.15***	0.29	47	No	-0.02
PT		-		-0.15***		0.37	48	**Yes**	**-0.24***

	0.22***						**(0.04)**	
RO	-0.05*				0.07	46	No	-0.04
SI				-0.12***	0.20	41	No	**-0.21***
ES	-0.33***			-0.36***	0.59	47	**Yes** **(0.02)**	**-0.36*****
SE				-0.04***	0.26	44	no	-0.03
UK				-0.07***	0.24	47	no	-0.05

*Note: *, ** and *** denote significance at respectively a 10%-, 5%- and 1%-level. For BE no model could be estimated that explained the data. The columns for GDP-growth and R^2 correspond to the model of Equation A6.2. The column for the Chow break corresponds to the Chow-test of Equation A6.3. The dummy-coefficient corresponds to the dummy test of Equation A6.4.*

Sub-appendix 7: the relation between the LTU-rate and the share of LTU in unemployment

In the set of indicators we both have the LTU-rate and the share of LTU in unemployment. One might ask which one would be better to select for a result indicator to do more sophisticated analyses on. However, in this respect it is good the realise that there is a strong relationship between these two indicators. All other things being equal, a higher LTU-rate leads to a higher share of LTU in total unemployment. If no such relationship is observed in practice, other aspects influencing the share of LTU in unemployment are of more importance. Figure A7 shows the existence of this relationship across countries. Countries with higher LTU-rates generally have higher shares of LTU in unemployment. Furthermore, the correlation coefficient between the LTU-rate and the share of LTU in unemployment is 0.70 which is significant at the 1-percent level. There is thus a positive relation between the LTU-rate and the share of LTU in unemployment across countries observed in practice.

**Figure A7 LTU-rate and share of LTU in unemployment 2017 Q4 (age 25-64)**
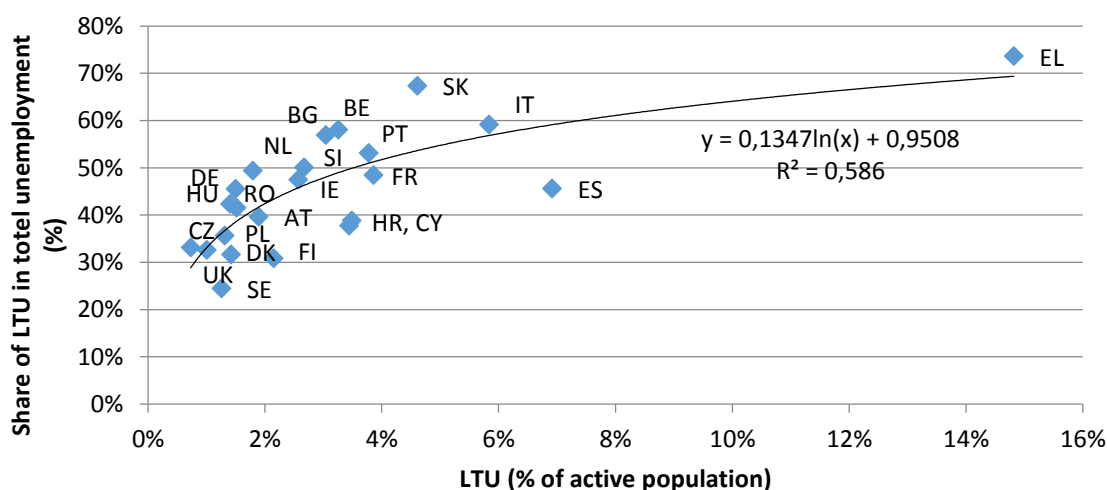
Source: own calculations with Eurostat data

In general, countries with higher long-term unemployment rates have higher shares of LTU in total unemployed. If two countries have similar LTU-rates but different shares of LTU in total unemployed this could be a signal that their ability to prevent people from falling into LTU differs. With Finland and the Netherlands having similar LTU-rates, Finland seems to be more successful in tackling long-term unemployment because its share of LTU in total unemployed is lower. Likewise, with Denmark and Germany having similar LTU-rates, the share of LTUs in total unemployment suggests that Denmark is more effective in tackling long-term unemployment.

Sub-appendix 8: regional difference in LTU-rates and LTU-rate changes

LTU-rates differ per region within countries. Figure A8.1.presents the LTU-rate per NUTS2-region for EU member states in 2017. The graph shows that some countries with high average LTU-rates have regions where long-term unemployment is relatively low (i.e. SK, IT and ES). The dispersion of LTU-rates is generally higher in countries with higher average LTU-rates (EL, IT and ES). For the UK, LTU-rates are relatively comparable across regions even though the UK has many regions. For AT and BE on the other hand, the dispersion of LTU-rates is relatively high. In Belgium, the regions Brussels, Hainaut and Liège stand out for high LTU-rates. In general, NUTS-regions in the federal region of Wallonia have higher LTU-rates than in Flanders. For FR, all NUTS-regions with LTU-rates over 10% are overseas departments.[63]

Figure A8.1 LTU-rates per NUTS2-region[64] in 2017
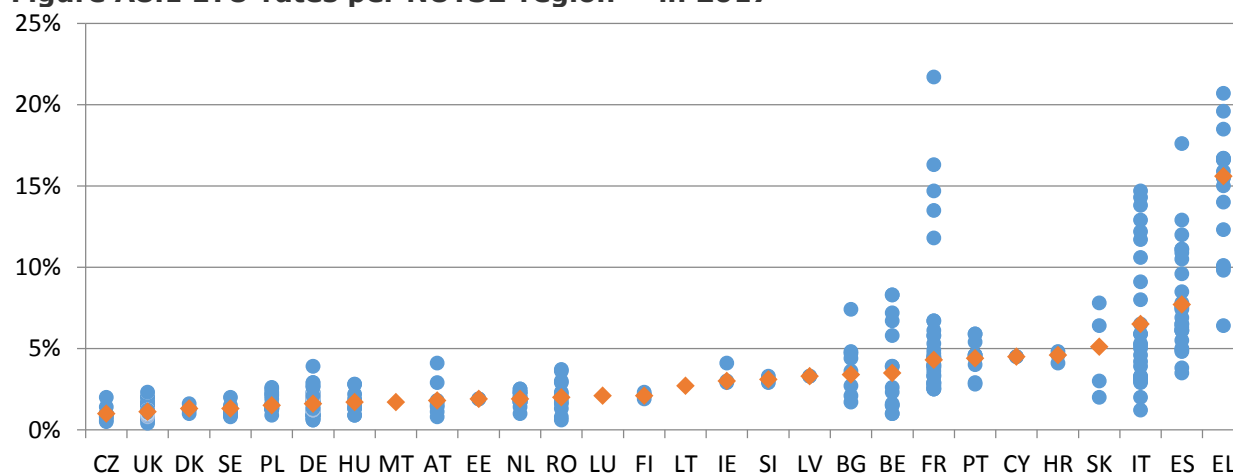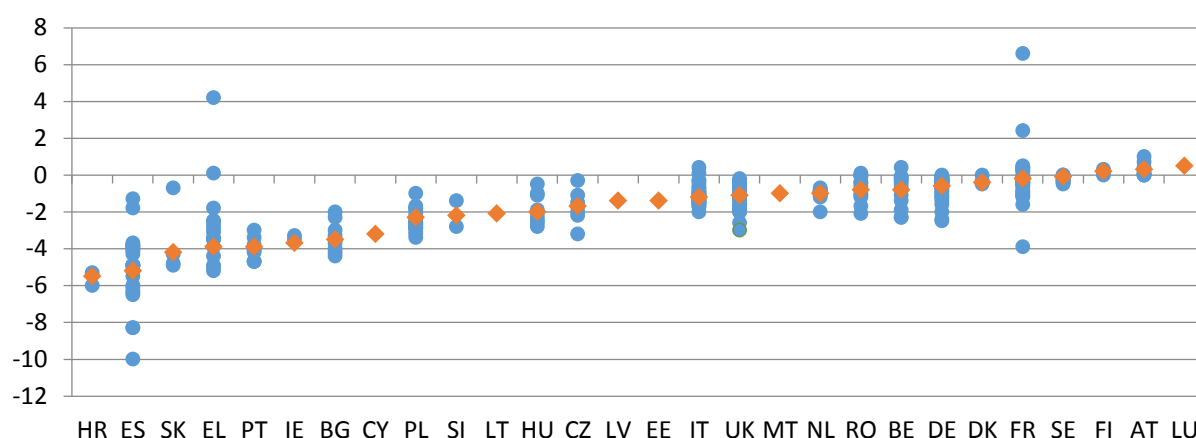

Source: Eurostat

Note: orange diamonds mark average LTU-rates per country

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[63] These are: Guadeloupe, Martinique, Guyane, La Réunion and Mayotte.

[64] Important to note is that several French overseas-departments are NUTS-regions. The NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the economic territory of the EU. The current NUTS 2016 classification is valid from 1 January 2018 and lists 133 regions at NUTS 1, 311 regions at NUTS 2 and 1373 regions at NUTS 3 level.

Developments of LTU-rates differ across regions as well. Figure A8.2 shows the percentage point change in LTU-rates per NUTS-region over the period 2014-2017. In general, countries on the right-hand side of figure A8.1. are on the left-hand side of figure A8.2, meaning that countries with high LTU-rates in 2017 have seen large declining LTU-rate over the previous period. Some regions stand out for having a positive change in LTU-rates. First, these are most regions of FI, AT and LU although this is of a lesser concern as figure A8.1. shows LTU-rates are among the lowest for these countries in 2017.[65] Then there are the Molise and Marche region in Italy (+0.4 & +0.1), the Lorraine, Bretagne, Aquitane, Auvergne, Provence-Alps and Corse in European France (between +0.2-0.5), Guyana and Mayotte in overseas France(+2.4 & +6.6), Dytiki Makedonia in Greece (+4.2) and Liège in Belgium (+0.4). These regions stand out for going against the trend of declining LTU-rates in their countries.

Figure A8.2 Percentage point change in LTU-rates per NUTS-region from 2014 to 2017[66]

Source: Eurostat & own calculations
Note: orange diamonds mark average LTU-rates per country

Sub-appendix 9: seasonality of the LTU-rate

Table A9.1 shows the difference between the seasonal averages of the LTU-rate per country. The strongest seasonal differences are found in Estonia, Cyprus, Latvia and Poland. For other countries seasonal differences are less pronounced and often less than 0.1 percentage point.

Table A9.1 seasonality of the LTU-rate.

	Seasonal averages (1998-2017) LTU % of active population (25-64) NC				
	Q1	Q2	Q3	Q4	(Q4-Q2)/Q2
EU	0.039	0.038	0.036	0.038	0%
BE	0.037	0.037	0.036	0.036	-2%

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[65] For SE all changes in LTU-rates were negative although formatting of the graph causes dots to overstep the horizontal axis.

[66] Eurostat reports statistical breaks in the data for LU in 2015, DK and PL in 2016, BE and IE in 2017.

BG	0.050	0.048	0.046	0.048	-2%
CZ	0.026	0.025	0.025	0.024	-6%
DK	0.020	0.017	0.016	0.017	2%
DE	0.033	0.034	0.033	0.033	-5%
EE	0.075	0.076	0.069	0.058	-24%
IE	0.048	0.045	0.045	0.044	-2%
EL	0.105	0.100	0.102	0.106	6%
ES	0.073	0.069	0.068	0.071	3%
FR	0.036	0.034	0.033	0.036	3%
HR	0.074	0.068	0.067	0.070	2%
IT	0.046	0.043	0.040	0.046	6%
CY	0.061	0.049	0.057	0.056	13%
LV	0.060	0.059	0.057	0.064	8%
LT	0.055	0.053	0.054	0.055	4%
HU	0.037	0.036	0.035	0.035	-2%
NL	0.021	0.020	0.018	0.019	-5%
AT	0.015	0.014	0.014	0.014	-1%
PL	0.036	0.039	0.037	0.036	-7%
PT	0.060	0.057	0.057	0.058	1%
RO	0.027	0.025	0.024	0.024	-4%
SI	0.036	0.034	0.034	0.036	5%
SK	0.079	0.078	0.075	0.075	-4%
FI	0.020	0.019	0.019	0.020	2%
SE	0.014	0.013	0.013	0.013	-1%

| UK | 0.016 | 0.016 | 0.016 | 0.015 | -3% |