Institute for Employment Research

The Research Institute of the Federal Employment Agency

IAB 50 Years

IAB-Forschungsbericht 6/2017

Results from the project work of IAB

What harmonised and registered unemployment rates do not tell

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ISSN 2195-2655

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Content

Abstract

The most commonly used statistical sources for the analysis of unemployment are registered unemployment (RU) at the national level and internationally harmonised unemployment data provided by the European Labour Force Survey (EU-LFS) according to the International Labour Organisation (ILO) standard. The logic behind both unemployment statistics is to count people "without work" only when they are “actively looking” and “available for work”. This logic does not coincide necessarily with the understanding of unemployment in the general public. That's why governments and Public Employment Services (PES) are often blamed to "hide" unemployed individuals participating in active labour market measures or being temporarily ill.

Our methodological study provides an in-depth analysis of the discrepancies between registered unemployment (RU) and internationally harmonised unemployment (LFS-U) in a comparative view. For ten selected EU-countries (Austria, Finland, France, Germany, Ireland, Netherlands, Poland, Spain, Sweden and the UK) we show in which countries the registers are more restrictive than the survey and vice versa. We then identify the populations groups which help to understand the discrepancies between both figures in most countries (young and older people, marginally employed, participants in active labour market programmes) and extend the view to additional indicators of non-employment. Finally, we explore differences in the calculation of the length of individual unemployment spells between both data sources and show that neither register based national nor survey based international statistics adequately reflect the long-term exclusion from regular, genuinely market-based employment.

Zusammenfassung

Zur Messung der Arbeitslosigkeit werden überwiegend zwei statistische Quellen herangezogen: die registrierte, auf administrativen Daten basierende Arbeitslosigkeit (RU) sowie die international gemessene Erwerbslosigkeit (LFS-U), die auf Selbstauskunft in der Europäische Arbeitskräfteerhebung basiert. Letzterer liegt eine einheitliche Definition von Erwerbstätigkeit und Erwerbslosigkeit in der Arbeitskräfteerhebung (Labour Force Survey, kurz EU-LFS) aller europäischen Länder zugrunde. Die Logik hinter beiden Arbeitslosenstatistiken ist, Menschen „ohne Arbeit“ nur dann als arbeitslos bzw. erwerbslos zu zählen, wenn sie "aktiv suchen" und tatsächlich auch dem Arbeitsmarkt "zur Verfügung stehen". Diese Logik stimmt nicht notwendigerweise mit dem öffentlichen Verständnis von Arbeitslosigkeit überein. In der Öffentlichkeit ist deshalb oft von Statistiktricks und „versteckten Arbeitslosen“ die Rede.

In diesem methodischen Beitrag untersuchen wir komparativ Unterschiede im Verhältnis von national gemessener und international harmonisierter Arbeitslosigkeit in zehn EU-Staaten: Österreich, Finnland, Frankreich, Deutschland, Irland, Niederlande, Polen, Spanien, Schweden und Großbritannien. Wir zeigen, in welchen Ländern die Registerdaten restriktiver sind als die Befragungsdaten und umgekehrt. Wir identifizieren Bevölkerungsgruppen, die im Wesentlichen für die Diskrepanzen in beiden

Statistiken verantwortlich sind (junge und ältere Personen, geringfügig Beschäftigte, Teilnehmer an arbeitsmarktpolitischen Maßnahmen) sowie Personen, die nicht als arbeitslos/erwerbslos sondern als inaktiv eingestuft werden. In einem weiteren Schritt widmen wir uns der Berechnungsweise der Dauer von Arbeitslosigkeit (Langzeitarbeitslosigkeit und chronische Arbeitslosigkeit) und zeigen, dass weder nationale Arbeitslosenstatistiken noch die internationale Erwerbslosenstatistik den langfristigen Ausschluss von regulärer Beschäftigung angemessen wiedergeben.

1 Introduction

Unemployment is by far the most frequently reported indicator of labour market performance in the mass media of virtually every country in the world. Changes in their counting method evoke a lot of suspicion publicly as these changes are often considered as mere “statistical tricks” to palliate unemployment figures. National governments or statistical offices have been repeatedly charged of “manipulating” unemployment levels by removing certain groups that participate in measures of public or private labour market programmes from the unemployment statistics.

The concept of unemployment is something everyone seems to understand. To disclose how many people actually have an employment problem is probably what is usually expected from unemployment statistics on the part of the public and the media. But neither the national nor the internationally used concept of unemployment meets this expectation. Its measurement is not yet straightforward and rests on a number of arbitrary choices. People without work are only classified as unemployed when they are available and actively looking for work. People who are temporarily ill, attending a job training or participating in language or integration courses are not considered as available and do therefore not show up in the unemployment statistics. This is why unemployment statistics are often criticised for failing to mirror the “true” extent of unemployment.

In contrast to the accusation of "dressed-up" unemployment figures in the mass media, research speaks of "hidden unemployment" for another reason. Evidence of program substitution (i.e. the phenomenon that people who, due to stricter rules, are no longer eligible for one insurance program select themselves into another program) has been found in several studies (Lammers et al., 2013). Particularly, program substitution between the disability insurance and unemployment insurance system impact on “open” and “hidden” unemployment differently across countries (e.g. Autor/Duggan, 2003, Clasen et al., 2004, Konle-Seidl et al., 2014). Disability benefits have often become an option for displaced or long-term unemployed workers during economic downturns and in times of major structural changes. These developments were more pronounced in European countries such as the Netherlands, UK, Sweden, Denmark and Norway in the 1980s and 1990s. They are still a major topic in the US where disability benefits function as a kind of unemployment insurance especially in the geographical "disability belts". These are the coal areas in Appalachia, the textile area in the Deep South, and along the Arkansas-Missouri border characterized by permanent job destruction in the last decades (Zeit online, Dec 27, 2016). At the time of the last US presidential election (November 2016), the unemployment rate was down to 4.6 percent reaching nearly prerecession levels but the number of SSDI (Social Security Disability Insurance) recipients reached its historical height with 9 million disabled people or 5.2 percent of the working age population.

Different data sources measure different facts, and different purposes build on different criteria for employment and unemployment. The most commonly used statistical

sources for the analysis of unemployment are registered unemployment (RU) at national level according to national definitions and rules and based usually on register data as well as harmonised unemployment data provided by the European Labour Force Survey (EU-LFS) according to the International Labour Organisation (ILO) definition. Looking at the ratio of the number of unemployed in both statistics there were considerable differences across countries in the past. For the year 2003, Melis and Lüdeke (2006) found ratios between 0.54 and 1.27 for seven countries. Ratios above 1.0 imply higher figures of registered unemployed than LFS-unemployed and indicate that the LFS definition of unemployment is stricter, ratios below 1.0 indicate that national statistics are more restrictive. We use the ratios for 2014 in ten selected countries (Austria, Germany, Finland, France, Ireland, Netherlands, Poland, Spain, Sweden and the UK) as starting point for a detailed analysis of persons covered or not by national as well as the international unemployment statistics in order to assess their information value.

The aim of our methodological analysis is twofold. First, we aim to contribute to the understanding of the differences and complementarities between the two main official figures for unemployment in an international comparative view, trying to shed more light on country differences in the relation between registered unemployment and LFS and changes of this relation over time. Second, we have a closer look on the comparability of the harmonised unemployment rates introduced to provide truly comparable data in the sense of being independent of the national administrative and legislative framework.

In particular, we try to answer the following questions:

1. How to explain country differences in the ratio between register unemployment (RU) and unemployment based on the European Labour Force Survey (LFS-U) and their evolution over time?

2. Are internationally standardized unemployment rates really comparable?

3. Do conventional statistics adequately reveal long-term exclusion from regular employment?

The paper is organized as follows: The first part recalls what unemployment statistics should and what they really measure. We compare the definitions underlying RU and LFS unemployment and we look particularly at the treatment of groups of people who usually make a difference in the respective statistics: younger and older persons, persons in minimal part-time employment as well as jobless people participating in labour market measures. We further assess recent efforts to improve the ILO and national statics to better capture "disguised" or "hidden" unemployment. In this context, we look on systematic country differences regarding "inactive" persons not seeking and/or not available and not wanting to work because of disability or (early) retirement. Finally, differences in the calculation of the length of individual unemployment spells are analysed to uncover “hidden” facts in measuring long-term.

The paper is based on data from national sources (statistical offices and Public Employment Services) and from EUROSTAT. In particular, we use data from the European Labour Force Survey and the Labour Market Policy Database. Country-specific details on register unemployment is provided by national experts based on a standardized questionnaire circulated amongst our comparison countries. To explore long-term exclusion from regular work comparable longitudinal register data from Germany, Denmark and Finland are used.

2 What should and what do unemployment statistics measure?

2.1 What should unemployment statistics measure?

The question, what should exactly be measured in a labour market statistic is crucial for the assessment of its quality. Should any kind of economic activity be recorded, or only work providing a living wage? Should the unemployment statistics reflect the entire job deficit, hence cyclical and structural imbalances on the national labour market, or, should it capture only jobless people actively seeking (any kind of) work and shortly available for work? Should participants in active labour market policy programmes be counted as unemployed, or are only those unemployed who are actually without employment in the open labour market?

What the public generally expects from unemployment statistics is that they disclose how many people actually have an employment problem. But this is easier said than done, because reality is complex, the measurement difficult and the data a sensitive political issue. The question therefore is, how adequate are the framework and the instruments of labour market statistics to measure labour market reality?

2.2 What do register and LFS statistics measure?

Registered unemployment (RU) figures are administrative data which refer to the number of persons registered as unemployed with a public employment office (PES). RU figures are most relevant for national monitoring since they are submitted to the definitions and legal basis adopted in each country. National unemployment records thus frequently hinge on deviant definitions and peculiar administrative decisions that make the register unemployment rate an arbitrary indicator and unfit for international comparison.

In principle national registers apply the same three criteria used by the LFS for the measurement of harmonised unemployment. In both statistics the criteria "being without work", "actively seeking work" and "availability for work" are similarly conceptualized but operationalized differently. National register unemployment rates additionally reflect a multitude of institutional configurations and contexts, above all the impact of labour market regulation and income replacement benefits on labour market behaviour. National RU statistics are more influenced by a socio-political than a mere economic logic. In the German Social Code, for example, unemployment is the lack of

regular work providing a living wage. Thus, persons employed less than 15 hours a week could still register as unemployed while in the LFS they are counted as employed. In the LFS, a person is defined as economically active, if he or she contributes to the macroeconomic value added, thereby generating income. Employment of one hour per week is already sufficient to meet this criterion. According to this concept unemployment is the total lack of work.

In RU statistics, a person without work has to register with the national Public Employment Service (PES) to be counted as unemployed, whenever they want to benefit from public support such as unemployment benefits and/or employment services to find a job or to participate in a labour market policy measure. The registration also enables the PES to calculate the levels of unemployment and the monitoring of active labour market policy (ALMP) measures.

The standardized ILO unemployment rate is based on the self-reporting of respondents to a sample survey, the EU-Labour Force Survey following a common framework regulation with common variable definition, common explanatory notes and common regulation regarding the definition of unemployment which is also used in the US Current Population Survey (CPS). In the US, no RU statistics exists. The core idea behind the ILO concept is that "those who want to work have to look for it". Only active forms of job search like contacting an employer directly or a public or private employment agency with the purpose to find work, or submitting resumes or filling out applications are deemed to connect job seekers with potential employers. Hence, only those looking actively for work are counted as unemployed. If a person is not or only passively searching for a job this person is classified as "inactive" (Table 1).

The ILO framework divides the adult population into three mutually exclusive broad groups: the employed, the unemployed, and the inactive (i.e. people out of the labour force). Only the first two groups constitute the size of the labour force (= the economically active population). The unemployed cover those persons who are without work and immediately available to start work during the same period and who were actively looking for a job at some time during the preceding four weeks. The unemployment rate is defined as the proportion of individuals without a job, out of the whole economically active population. People neither employed nor unemployed are considered inactive and are excluded from the labour force.

Table 1 shows that under the Labour Force concept of the International Labour Organisation (ILO): each person in the working age population (15- 74 years) can be attributed within a reference period (usually one week) a unique labour force status: gainfully employed, unemployed or inactive (out of labour force).

Table 1
The Labour Force Concept

Employed	Unemployed	Out of labour force (inactive*)
Persons With an employment contract working usually at least one hour per week Self-employed or freelancer, or persons performing their community or military service, or unpaid family members, or (apprenticeship) trainees	Persons Without work contract Not self-employed Available for work Actively looking for work	Persons Without work Not self-employed Not available and/or Not actively seeking for work
Employed	Non-employed	
Active population (labour force)		*Neither employed nor unemployed

The LFS questionnaire follows a hierarchical structure: A person is asked if he/she has worked in the reference period at least for one hour. If not, the person is further asked if he/she were available for paid employment or self-employment before the end of the two weeks following the reference week and if she/he has been searching actively for work in the last four weeks. If the answer for one or both criteria is negative the person is asked for the reasons for non-search of work or non-availability: Education or training, looking after children or incapacitated adults, having other personal and family responsibilities, belief that no work is available (discouraged), own illness or disability, retirement or others. Yet, the LFS unemployed are persons aged 15-74 who were without work during the reference week, but who are currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months.

3 Country differences in the relation between RU and LFS unemployment

3.1 The ratio between RU and LFS-U

The unemployment rates recorded nationally can differ substantially and to a varying extent from the rates received from the internationally harmonized measurement. This is reasonable as both statistics differ in both, the collection methods as well as in the underlying concept of unemployment. The different operationalization of the three unemployment conditions ("without work", "active search, "availability for work") leads to different results across countries. This means, that restrictions imposed by national statistics to count a person as “registered unemployed” are only in theory the same restrictions imposed by the LFS definition.

We can however use the ratio of the number of unemployed in both statistics as a proxy to assess the information value of national statistics. A ratio below 1 means,

that national statistics report less unemployed than the international ILO unemployment statistics. Table 2 gives a more detailed picture on differences in the total numbers of RU and LFS unemployed in our ten selected countries. There are two country clusters. In the first cluster RU is higher than LFS unemployment. This applies to Austria (AT), France (FR), Finland (FI), Germany (DE), Ireland (IE), the Netherlands (NL) and Poland (PL). Spain (ES), Sweden (SE) and the UK belong to the second cluster where LFS unemployment is higher than RU. In these countries registers are more restrictive than the survey (see also Figure A1 for the EU-27 in the Annex).

Table 2
Relation registered unemployed (RU) / LFS unemployed in selected EU countries, 2014

	AT	FI	FR	DE	IE	NL	PL	ES	SE*	UK
RU/ LFS-U	1.3	1.4	1.2	1.4	1.6	1.3	1.2	0.8	0.9	0.5

Source: Eurostat- EU-LFS, Labour Market Policy (LMP) Database; Statistical offices in UK, Spain, Italy and Ireland; * Sweden (registered unemployed + ALMP participants)

3.2 Reasons for country differences

Reasons for the discrepancy in the ratios of national and LFS-based unemployment include differences in the operational definitions of the criteria "without work", active search" and "availability". Other reasons are the treatment of participants in active labour market policies, the treatment of young job searchers (students) and older workers (early retirement regulations, exemptions from active job search) as well as institutional regulations facilitating the exit out of the labour force.

3.2.1 Operational definitions of employment and unemployment

Being "without work" in the ILO framework means that persons working one hour in the reference week are excluded from the unemployment counts. Yet, persons working in (small) part time jobs are not included in the harmonised unemployment figures because they are "technically" employed. In eight of our ten comparison countries the unemployment criteria "without work" is less strictly interpreted as in the ILO framework (Table 3).

Immediately "available for work" is also more or less strict defined. In some countries persons who are sick and thus "not currently" available are de-registered as unemployed. Single parents who cannot find childcare facilities are not registered as RU in some but not in all countries. To be counted as unemployed seems at a first glance stricter in the registers than in the LFS where availability for (very short) part-time is sufficient. In the Netherlands registered unemployed have to look for an employment of at least 12 hours a week, in Spain of at least 20 hours and in Poland, Ireland and Sweden availability for full time is expected. At a second glance, however, some of these countries (Finland, Sweden) allow people to register as unemployed even when they combine salaries from part-time work with (partial) unemployment benefits. From a conceptual perspective, cumulating benefits with income from work contributes to a

redefinition of the frontier between unemployment and employment by creating a number of intermediate situations between these two states.

Countries also differ with respect to "active job search". While the ILO statistics cover the actual search behaviour, national statistics rather reflect how many persons comply with the obligation to actively search by registering with the local employment office, even if their job search intensity is low or suspended temporarily. Since the "activation turn", however, more and more PES use individual action plans to "activate" job-seeking. In this context the frequency of interviews in the employment offices has increased and the requirement of active job search efforts is monitored more closely (Konle-Seidl, 2012).

Table 3
Rules on RU in selected EU countries

Country	Without work	Available immediately and…
AT	RU can have a "mini-job" up to a defined earning threshold (425,70 € in 2017)	no further restrictions
DE	Working less than 15 hours a week or up to 18 hours for voluntary work	looking for work of at least 15 h/week
ES	Work less than 1h/week	looking for work of at least 20 h/week
FI	Working less than 4 h/week	no further restrictions
FR	Less than 1 /week for category A unemployed;	depending on the category; No restrictions for cat. A unemployed
IE	JSA (Jobseeker Allowance) recipients (not RU) may be working up to three days/week	looking for full-time work
NL	Working less than 12 h/week	looking for work of at least 12 h/week
PL	Working less than 1h/week	looking for full-time work
SE	Part-time workers (> 8 h/week) can register with the PES but are counted as part-time unemployed and not as RU	looking for full-time work
UK	JSA (Jobseeker Allowance) recipients may be working for up to 16 h/week	no further restrictions

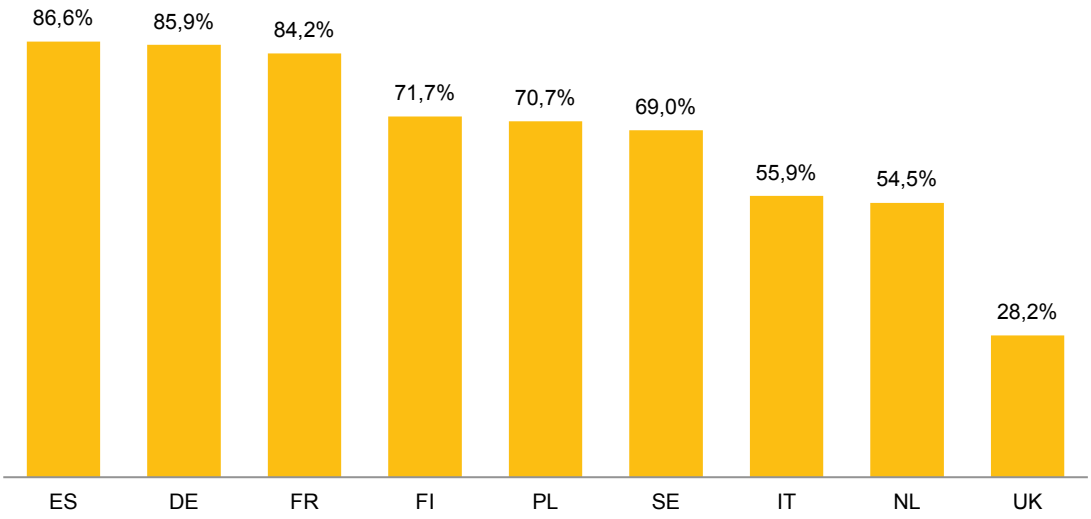
Source: LMP Database

3.2.2 Unemployment benefit systems

While the receipt of an unemployment or other social benefits is (theoretically) irrelevant for the classification in the LFS, the number of RU is strongly connected to the structure (eligibility, generosity, coverage and benefit duration) of the benefit system.

Country differences in the ratio between both statistics are thus closely linked to benefit claim. The UK is the most striking case in this respect as only the claimants of unemployment benefits (JSA) are counted as unemployed in the national statistics. When unemployment benefit coverage rates are high and benefit receipt is made conditional on activation requirements like in Germany, the registration rate is also high (Figure 1). By contrast, low benefits and low coverage rates usually discourage registration.

Figure 1
Share of ILO unemployed registered at a public employment office



Source: LFS 2014, own calculations; data for AT and IE not available

There are also punitive factors influencing RU figures. A workfare regime which forces all claimants to participate after a defined time of receiving unemployment benefits results in a higher number of registered jobseekers with the PES. In Hungary, for example, nearly 50 per cent of all jobseekers do not get any unemployment or social benefits implying low registration rates. After the introduction of the workfare regime, however, the number of jobseekers at the Hungarian National Employment Service (NES) was around a third higher as on the basis of the ILO definition (Artner, 2016).

Unemployment Insurance (UI) is designed to financially support unemployed individuals while they search for a job. Some countries permit UI recipients to work part-time while continuing to receive partial or full benefits. The possibilities to cumulate benefits with income from work, however, differ across countries. In the Nordic countries (Finland, Sweden) unemployed who could not find full-time employment receive partial unemployment benefits on top of wage income without any deductions. In contrast, mini-jobbers in Germany could also register as unemployed if they work less than 15 hours per week but they can keep income from such a mini-job only up to an earnings disregard limit of 165€.

Combining part-time work with unemployment benefits is often viewed as a way to reduce the disincentive effect of UI and to encourage workers to take on part-time

work as a stepping stone towards full-time employment. A recent Finnish study, however, shows that more generous benefits might also reduce the incentive to take on subsidized part-time or temporary employment (Kyyrä/Pesola, 2017).

3.2.3 Treatment of participation in ALMPs

Participation in active labour market policies (ALMP) breaking individual unemployment spells explains to a great extent the gap between RU and LFS-U. In the LFS, participants in ALMPs can either declare to be employed (e.g., if employed and receiving a wage subsidy), inactive (e.g., not available if participating in full-time vocational training program) or unemployed (e.g., if participating in a short-term measure). Hence, ALMP participation does not necessarily break individual unemployment in LFS statistics but usually it does so in register statistics. Participants in ALMPs are not counted as unemployed in most EU-countries. The unemployment spell is always broken through ALMP participation in Finland, Germany, Spain and Sweden. Some exceptions exist in France and Poland. In Austria, the unemployment spell is suspended but not broken if the time participating in a measure is less than 28 days. In Ireland and the UK registered unemployed are those who receive benefits. As long as the benefits are paid during a measure, the unemployment spell is not broken in these two countries (Table 4).

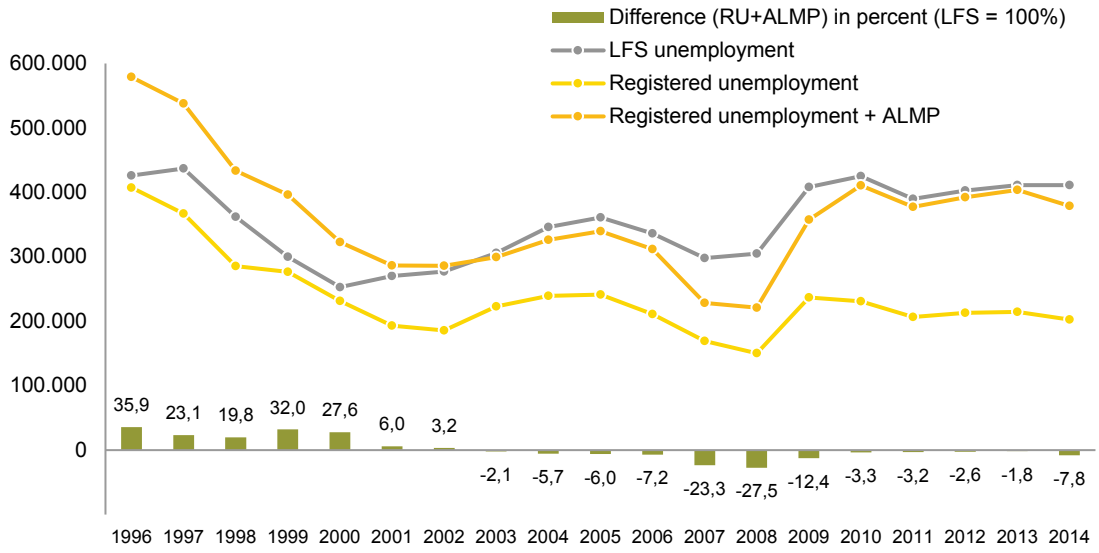
Table 4
Treatment of ALMP participation in national unemployment statistics

Unemployment status	AT	DE	ES	FI	FR	IE	NL	PL	SE	UK
broken	Activation periods > 28 days	Always	Activation including a job contract	Always	Usually broken	n. a.	Always	All except one measure	Always	n. a.
suspended	Activation periods <= 28 days		All other measures							

Source: LMP Database

To illustrate the huge gap between RU and LFS-U we take the Swedish example. Since 2010, the number of LFS unemployed in Sweden is twice as high as the RU. When taking into account RU and ALMP participants the gap could almost be closed (Figure 2).

Figure 2
Sweden: High ALMP participation explains huge RU/LFS-U gap



Source: Eurostat, AMS Sweden

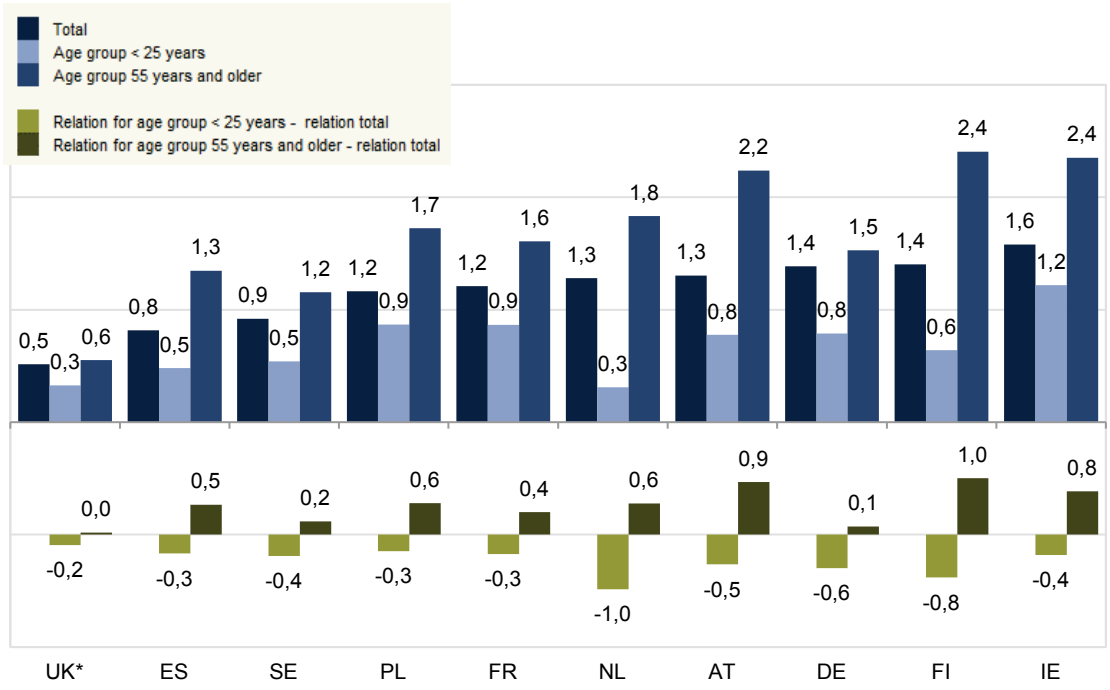
3.2.4 Younger and older age groups

In all countries discrepancies between both statistics arise especially at the beginning and at the end of the working life. With respect to young people (15-24 years) all countries follow the same main pattern. The relation RU/LFS unemployed for young people is lower than across all age groups. The difference between the two ratios is highest in the Netherlands and Finland (Figure 3). This is mainly due to the fact that in these countries many students are working part-time or even full-time while being in education. Job searching students are classified as unemployed in the LFS, but they are usually excluded from registering as unemployed in national statistics. Another reason is, that young people looking for an apprenticeship training are often counted separately and are therefore not included in the national unemployment register. Finally, young labour market entrants are usually not eligible for unemployment benefits and have therefore no strong incentives to register with the PES.

In contrast to the younger age groups, the number of registered unemployed in the age groups 55 - 64 are in all countries - the UK claimant count is an exception - higher than the LFS-unemployed. In some countries like Germany or Austria older unemployed can claim unemployment benefits for a longer period than younger unemployed. Having the possibility to claim benefits for a longer time may result in higher RU figures – compared to unemployment in the LFS. People may stay registered although they have stopped active searching. On the other hand, older unemployed might be obliged to take the earliest possible date to apply for pensions. In this case the RU spell ends but LFS unemployment is still possible. In Austria, Finland, the Netherlands and Ireland the number of RU for the older unemployed are about twice the LFS unemployed (Figure 3). This has already been the case a decade ago, although older unemployed have, at some stage, been exempted from having to look

for work in many countries, including the Netherlands, Finland, France, Germany, and the UK. With a tendency towards increasing the age at which older workers are excused from job search requirements or towards abolishing the exemption entirely, as the Netherlands did in 2004, Germany (partially) in 2008 and France in 2012, the number of registered older unemployed has increased further. The discontinuation of exemption rules and early retirement pensions (like unemployment pension in Finland in 2013 and invalidity pensions in Austria in 2014) is echoed in the changing ratio between RU and LFS-U. In Finland, RU in the age group 55 plus is now 2.4 times higher than the LFS unemployed. Between 2012 and 2014 register based unemployed included around 14,000 to 17,000 such long-term unemployed aged 60 or older, who could previously have started unemployment pension (Statistics Finland, 2015).

Figure 3
Relation RU/LFS-Unemployed – Age groups 15-24 and 55-64, 2014

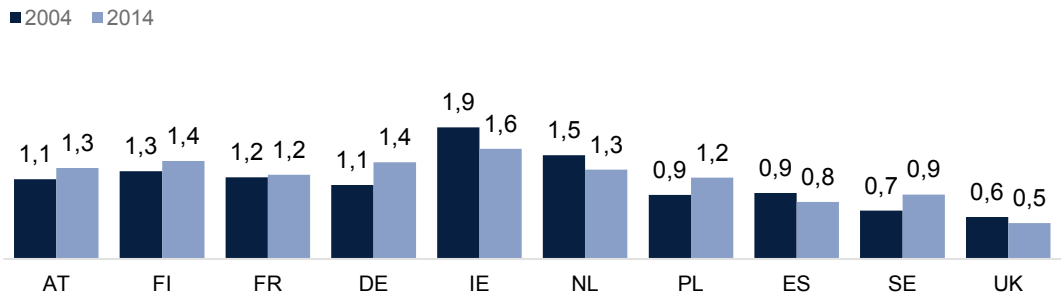


Source: Eurostat, statistical office in UK, own calculations

3.3 Changes over time

Changes in the RU/LFS-U relation are mainly related to the above mentioned changes in social security legislation aimed at activating older workers. Legislative changes vary, however, across countries. In Finland, for example, all eligibility criterions of age, ability to work and availability to the labour market have no exits anymore. Moreover, fully laid-off individuals have been registered as unemployed jobseekers for the first time. Together with the discontinuation of unemployment pension for older workers this has increased the number of unemployed jobseekers in the registers since 2013, widening the gap between RU and LFS-U (Figure 4).

Figure 4
Changes over time – the relation registered unemployed (RU)/LFS unemployed, 2004 and 2014

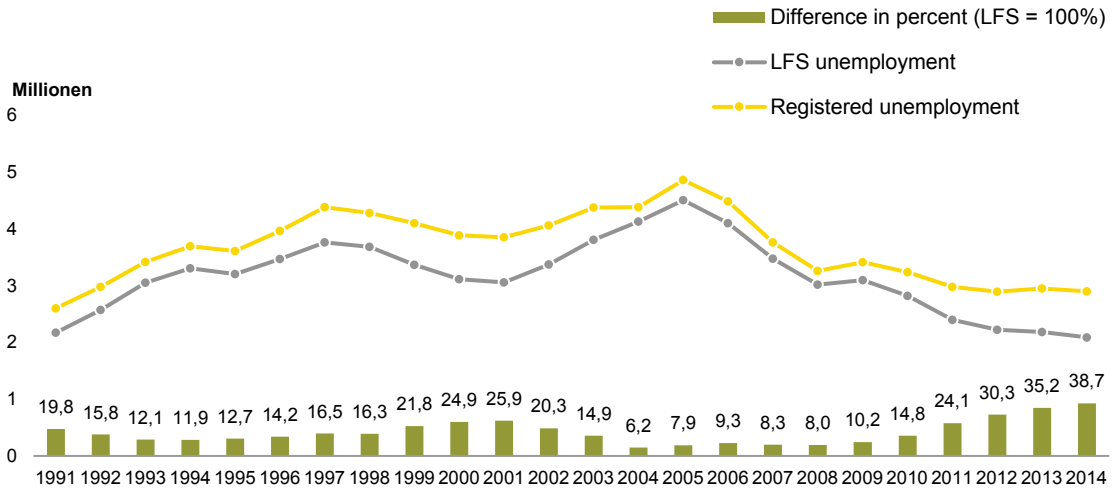


Note: PL: Data from 2005 instead of 2004; SE: RU data 2014 including measure participants

Source: Eurostat- EU-LFS, Labour Market Policy (LMP) Database; Statistical office in UK

In Germany, the gap between RU and LFS-U has been narrowing first - between 2002 and 2008. The reason was a stronger orientation towards the requirement of "active" forms of job search. "Passive" jobseekers registered with the PES only to secure social rights such as entitlement to pensions were deleted from the unemployment count. The "clearance" of the unemployment statistics in conjunction with a stronger activation of the unemployed decreased the number of RU in 2003 by about 120.000 persons (Konle-Seidl, 2009). However, since 2009 the gap between both statistics is widening again (Figure 5).

Figure 5
Germany – Changes in the RU/LFS-U relation over time

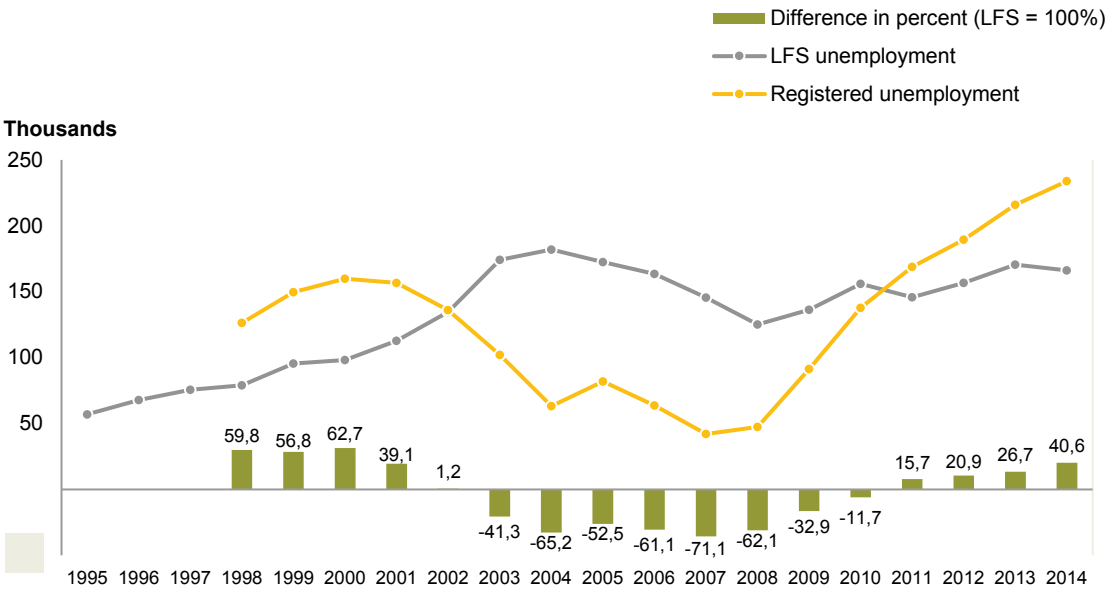


Source: Eurostat, EU-LFS, Statistik der Bundesanstalt für Arbeit

A major reason for this evolution is the already mentioned elimination of exemption rules from job search for older jobseekers in 2008, the so-called *"58er Regelung"* according to § 428 SGB III for UI recipients. Although in 2012 the rule was modified

again[1], the statistical shift of the group of 58+ unemployed from inactivity (*Stille Reserve*) to open unemployment is clearly visible in register statistics. The number of 58+ registered unemployed increased on balance by 212 209 persons (- 354.263 according to § 428 SGB III and + 142.054 according to SGB II) in 2015 compared to 2009 (Figure 6).

Figure 6
Germany – Changes in the RU/LFS-U relation for older unemployed (60-64 years)



Source: Eurostat, EU-LFS, Statistik der Bundesanstalt für Arbeit

4 Supplementary indicators to capture "disguised" unemployment

4.1 Efforts to improve international statistics

The strict distinction between employment, unemployment and inactivity in the LFS definition barely reflects reality as there are individuals situated in between employment and unemployment and in between unemployment and the economically inactive (out of labour force) state. Labour market activity might rather be viewed as a continuum of labour market states. Analysts have argued that any attempt to dichotomize the non-employed into "unemployment" and "out-of-the-labour-force" by distinguishing, for example, between "active" and "passive" jobseekers is unlikely to fully capture the complexity of the labour force activity. By analysing transition rates to employment based on longitudinal panel data, Brandolini et al. (2006) identify two major groups among the "inactive". The first group are people "attached to the labour market seeking and willing to work" like the unemployed but unlike them, their last

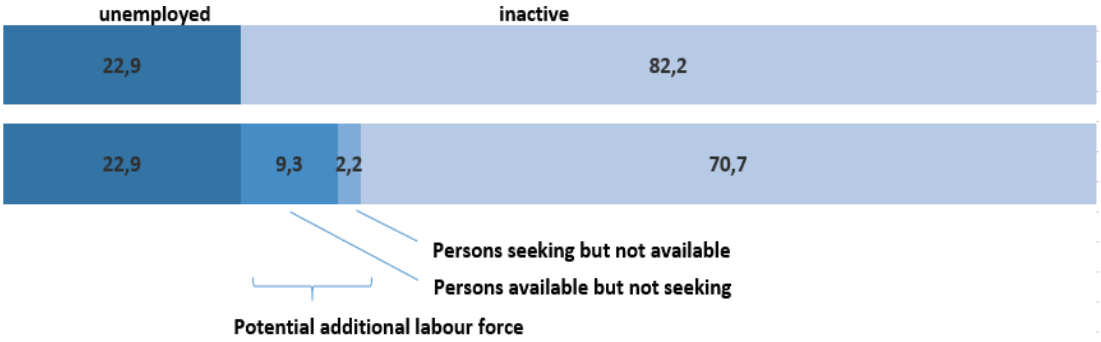
[1] In 2012, unemployed receiving welfare benefits (Hartz IV) and completing their 58th year are exempted from job search when not having been offered a job after a period of 12 months of unemployment (§ 53a SGB II).

search action was not recent enough to meet the ILO definition of unemployment. This group shows similar characteristics as the unemployed. People not seeking in the last four weeks but willing to work includes, among others, discouraged jobseekers and persons prevented from job-seeking due to personal or family circumstances. A second group, the "unattached to the labour market" are people "neither searching for work nor willing to work". They show indeed a behaviourally distinct attitude in their labour market dynamics.

Hence, the statistical definition of ILO unemployment does not fit people's perception of joblessness, either. Comparing the status of unemployment according to the strict definition of the "ILO status" variable and the "main activity status" variable in the LFS shows indeed considerable differences. There are far more self-reported unemployed than ILO unemployed. In 2005, about 27% of those classified as inactive according to the "ILO status" perceived themselves not as "inactive" but as "unemployed" when they are asked for their self-defined "main activity status" (Eurostat, 2007).

Due to these shortcomings of the conventional labour force framework, statisticians have altered the concept. Discouraged workers and other inactive persons with attachment to the labour force have been re-defined as forming intermediaries between unemployment and the economically inactive population. This led to an adjustment by using supplementary indicators to capture the "additional potential labour force (see Regulation 1897/2000 of the EU-Commission). The additional potential labour force concept includes a third category, persons working part-time but want to work more (underemployed part-time workers).

Figure 7
Concept of the "potential additional labour force"

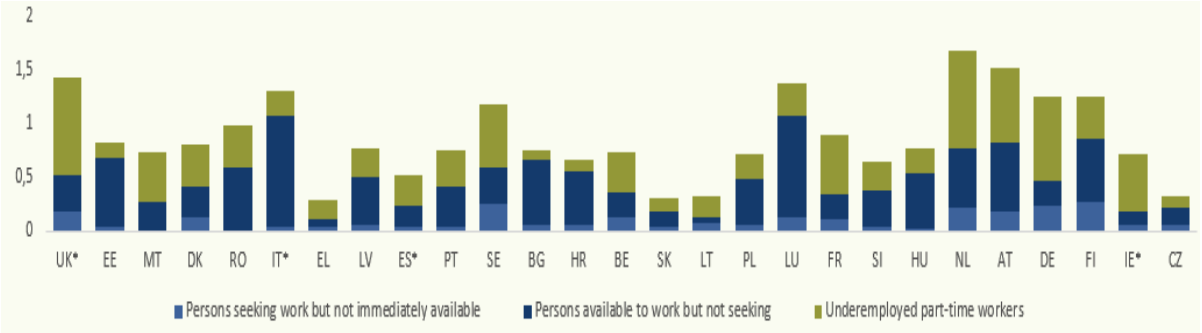


* All numbers in million, data for 2015
Source: Eurostat

The EU "potential additional labour force" takes people into account who are not recorded as unemployed because of their limited availability to start a new job, or because they are available to work, but don't seek it (Figure 7). The number of both groups combined (11.5 million in 2015) is even higher than the number of long-term unemployed in the EU-28. In 2015, 2.2 million jobless persons were seeking a job but were not immediately available for work, and 9.3 million were available for work but were not seeking compared to 22.9 million open unemployed in the EU-28 and 70.7 million working age inactive persons not wanting to work (Eurostat, 2016).

Figure 8 shows that there are considerable country differences concerning the "potential additional labour force". Compared to the number of unemployed the additional labour force (LFS additional) is particularly high in Austria, Finland and the Netherlands.

Figure 8
Types of unemployment not covered by LFS-U in relation to LFS-U



Source: EU-LFS

The supplementary indicators seem to capture more precisely labour situations on the periphery of the official ILO unemployment concept. They fill much of the gap between ILO unemployment and self-declared unemployment. Of all persons who spontaneously report they are unemployed, 88 percent are either ILO unemployed or in one of the supplementary indicators in 2010. Most of the remaining 12 percent self-reported unemployed are jobless people who are neither looking nor available for work (De la Fuente, 2011).

4.2 Efforts to improve national statistics

Like in the case of ILO unemployed the shortcomings of RU figures led to an extension of the official RU statistics. Extended unemployment statistics try to uncover "hidden unemployment" or “underemployment”. The main group of "hidden unemployed” in registers are individuals involved in various kinds of labour market programmes, such as short-time work, training and retraining, and early retirement. Extended statistics exist under different headings and different conceptualizations in Germany, Austria, Ireland, Finland, France, Denmark and Sweden.

In addition to the monthly RU figures, the German PES publishes data on "underemployment" taking into account people who are not counted as unemployed because they participate in active labour market policies, are temporarily sick or because special rules are applied for older workers. In January 2017, the number of underemployed was by 952.357 higher than the total number of unemployed (2.777.387) resulting in an underemployment rate of 8.3 percent compared to the official RU rate of 6.3 percent (BA, 2017).

In Ireland, data on ALMP participants are published in a separate annex table along with the monthly Live Register. In Sweden there are now two unemployment figures published monthly by the Swedish PES, the RU as open unemployment and the RU+ ALMP participants’ statistics. The latter is nearly twice the RU number (see Figure 3

above). A similar but more differentiated concept is being applied by the French statistical office DARES. Category A covers registered unemployed who are without work and actively seeking, category B covers those who are working 78 hours or less per month and category C those working more than 78 hours per month. Categories D and E cover jobseekers not looking actively for work because they are participating in measures or they are in subsidized employment. In Finland, the jobseeker register of the Ministry of Economic Affairs and Employment (MEE, 2016) includes detailed information on the labour status of different groups like unemployed, laid off, those on reduced working time and in subsidised employment as well as unemployed pensioners.

Due to peculiarities of national registers, more and more European countries rely on survey figures following the standardized ILO concept as the only source when publishing monthly unemployment rates.

5 Limits to the comparability of LFS unemployment rates

Despite the efforts to better capture disguised unemployment by introducing supplementary indicators, the monthly published unemployment figures by Eurostat have remained unchanged. The ILO concept (without supplementary indicators) is still used in 123 countries worldwide. The European Union as well as the OECD and the United Nations use these figures for international comparisons as the concept explicitly pursues the goal of providing internationally and inter-temporally comparable labour market data, irrespective of national peculiarities and national social legislation.

A closer look at country differences suggests, however, that survey responses are strongly influenced by institutional status ascriptions which puts the independence and comparability claim into question. Generosity and access to income replacement schemes other than unemployment benefits impair not only the comparability of national unemployment rates but also that of the internationally standardized rates because they likely affect respondents' replies in the labour force survey. People with similar characteristics are more likely to identify themselves as "permanently sick or disabled" than "unemployed" in countries where "disability" is a socially recognized and financially supported status (Erlinghagen and Knuth, 2010).

The conditions for entitlement and the magnitude of the coverage by benefit schemes clearly make a difference with respect to the labour market status. Permanently disabled are the biggest group among the economically inactive persons in the EU-27 (De la Fuente, 2011, table 4). Despite major reforms in the disability system and the phasing out of early retirement options in several EU countries in the last decade, the share of people (15-64) declaring not to be seeking work because of disability is still above

the EU average in the Netherlands, Finland and Sweden[2]. Early retirement is still a salient feature in France, Finland, Austria and Poland. In France, the entitlement to unemployment benefits rises to seven years after age 58. The use of unemployment insurance benefits, thus, is still very attractive for older French workers as they can use them for bridging the transition period to retirement. In contrast, other countries (Netherlands, Germany) have already shortened the entitlement period in the mid-2000s. More recently, Finland has decided to phase out the receipt of unemployment pensions for older workers and Austria has restricted the widespread use of invalidity pensions for early retirement in 2014. These rather recent reforms are not yet reflected in respondent's answers in the 2014 LFS (Table 5).

Table 5
Reasons for inactivity, 2014

Country	Inactive	Reason for inactivity in % of all inactive	
	in % of Population 15-64	(Early) retirement*	Permanently disabled*
AT	27,5	45,6	6
DE	25,6	n. a.	n. a.
ES	29,0	21,9	10,7
FI	29,0	35,8	16,1
FR	32,8	39,2	7,4
IE	31,4	15,5	10,9
NL	24,5	25,7	16,8
PL	33,7	33,9	14,7
SE	22,5	31,4	19,5
UK	26,2	n. a.	n. a.

Note: Statutory pension age for women is 60 in Austria, Poland and France
Source: EU-LFS, own calculations; *self-perceived labour situation ("MAINSTAT").

The fact that individuals in similar circumstances are in different social benefit systems and, in statistical terms, therefore have different employment statuses (unemployed or inactive) causes considerable distortions especially in the international measurement of long-term unemployment. Countries with a relatively low share of long-term unemployed have markedly higher shares of people being retired or inactive for health reasons (Konle-Seidl et al., 2014). Substitution effects, i.e. the rise in disability rolls and the decline in unemployment, have also been evident in the US for several decades now. In contrast to disability reforms in European countries, the lack of major

[2] In Sweden, for example, on any given day in 1990, an average of 15 per cent of workers was absent from work yet paid. The share was as high as 30 per cent in the case of women working in the public sector. In the Netherlands where a comprehensive invalidity scheme for people unable to work (WAO) was set up in 1978, twelve per cent of the labour force was classified as unfit to work and received 70 per cent of its last wage. The scheme was not confined to early retirements. Fourteen per cent of those unfit for work were less than 35 years old (Sengenberger, 2011).

reforms in the US keeps disability rolls rising which fuelled the recent discussion on "hidden" unemployment in the US (Burkhauser et al., 2016).

6 Hidden facts in measuring long-term unemployment

6.1 Why long-term unemployment is usually lower in register statistics

Statistics on RU as well as on LFS-U classify individuals with periods of unemployment of more than one year as long-term unemployed. National registers, however, do usually report lower shares of long-term unemployed than the EU-LFS do. In Germany, the difference was about 10 percentage points until 2010. According to the BA statistics, which follows legal requirements, around 37 per cent of the unemployed in 2013 were unemployed for one year and longer. The share of long-term unemployed based on the EU-LFS was significantly higher at 44 percent.

The main reason for these differences is the treatment of ALMP participation (see chapter 3.2.2 Unemployment benefit systems). Participation in ALMP, job search without reported unemployment and periods of non-employment for up to six weeks end the unemployment spell in the registers but usually not in the international unemployment statistics. After such interruptions, unemployment often continues but the individual unemployment spell starts again at zero. Alternative calculations counting the participation in ALMP measures as periods of unemployment shows that the gap between German register long-term unemployment and LFS-U can be narrowed on average by 8 percentage points (Rothe, 2015).

6.2 “Hidden” facts in harmonized unemployment statistics

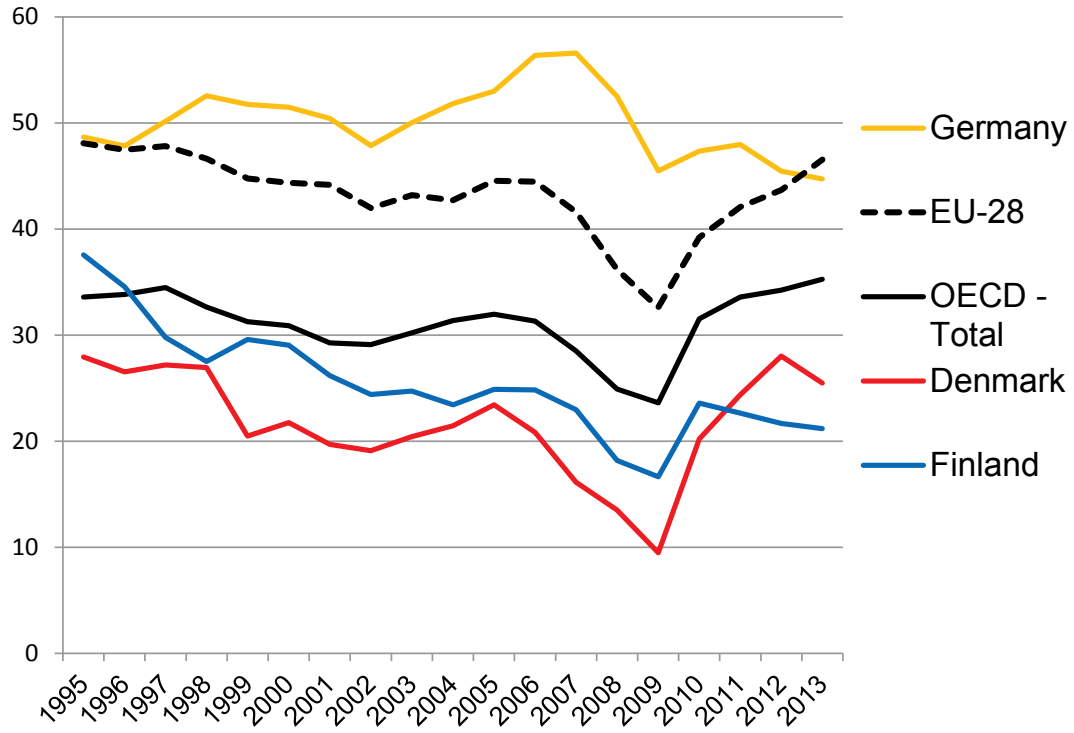
In contrast to most register statistics, participation in ALMPs usually does not break unemployment spells in LFS statistics. Subsidized employment, however, is recorded as employment and not as ALMP participation. Individuals in subsidized employment (which is categorized in Cat. 4 and 5 in the Labour Market Policy database) are usually rated as employed if the interviewed persons declares that he or she has been working in the reference week. In countries with high shares of subsidized work, like Denmark or Sweden (~ 2% of the labour force), the harmonized LFS statistics thus underrate the exclusion from unsubsidized, market based work strongly.

Long-term unemployed in the ILO framework are defined as those who have been unemployed for 12 *consecutive* months or more. The term “consecutive" implies that those who have worked or have been inactive for a short period between two unemployment spells interrupt their spell and they are excluded from the measurement. It is very common that several unemployment spells follow each other with shorter or longer intervals of temporary employment. Yet, unemployment often continues without proper regular employment between unemployment spells. This suggests that the harmonized LFS statistics do not reveal the long-term exclusion from regular, non-temporary employment, either.

A more realistic picture on the amount of people without a proper job in the longer term requires a tracking individuals over longer periods. However, the analysis of the phenomena of "chronic unemployment" in a comparative perspective is difficult as there is a lack of harmonized longitudinal data. The rotational framework of the cross-sectional LFS and the (partially longitudinal) European Union Statistics on Income and Living Conditions (EU-SILC) provide only limited possibilities to track individuals. Therefore, the use of longitudinal register data has so far been rather uncommon in the research of unemployment.

Aho et al. (2016) compare trajectories of "chronically unemployed" (CU) over a period of ten years based on comparable longitudinal register data for the first time. Chronically unemployed are defined as individuals who have been at least two calendar years outside of open market employment and/or in employment for less than 30 days per year. The labour market situation of individuals in Denmark, Germany and Finland followed up for over ten years is analysed three years before the first incidence of (chronic) unemployment and the respective labour market situation five years later. Against this background, it's interesting to compare CU rates with LFS long-term unemployment rates. Figure 9 shows that the incidence of ILO long-term unemployment over the last twenty years has been consistently higher in Germany than in Finland or Denmark.

Figure 9
Long-term unemployment (ILO definition) in Denmark, Germany and Finland in % of total unemployment, 1995 - 2013



Source: Eurostat/EU-LFS

At the same time the share of CU is similar in all three countries. In 2013 the share of CU was accounted or about one third of total unemployment in all three countries

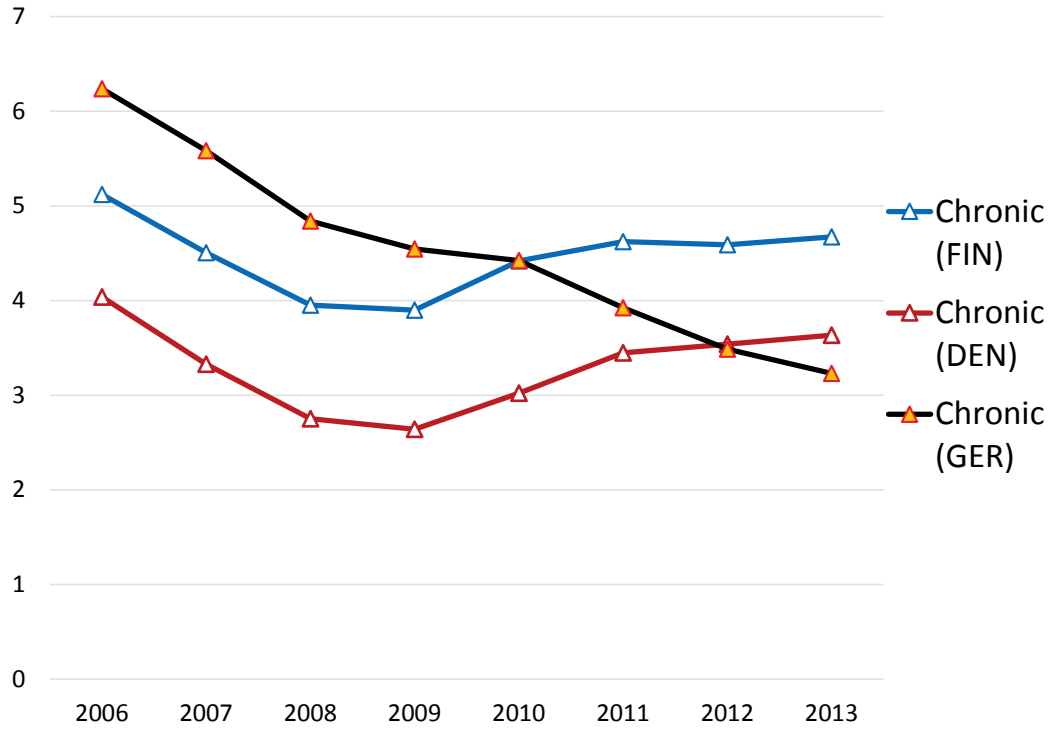
despite a much higher share of long-term unemployed in Germany. Even more striking is the difference in the ratio of chronic and long-term unemployment when measured in absolute terms. Table 6 shows that the ratio in Finland (3.0) is more than twice the German ratio (1.4) and also much higher than the Danish one (1.8).

Table 6
Chronic unemployment vs. long-term unemployment – in thousands, 2013

	Germany	Denmark	Finland
Chronic Unemployment (CU)	1,322	93	140
LTU (ILO definition)	963	52	46
CU / LTU	**1.4**	**1.8**	**3.0**

Source: Eurostat, IEB, Statistics Finland, Statistics Denmark

Figure 10
Evolution of chronic unemployment over time in Denmark, Finland and Germany, 2006 – 2013, in % of total labour force



Source: IEB (Germany), Statistics Finland, own calculations

The comparison between the three countries suggests that the international statistics on long-term unemployment clearly underrate long-term exclusion from regular work, especially in countries where the recurrence of unemployment spells among certain groups and/or the share of subsidized (part-time and temporary) employment is high

such as in Denmark and Finland. This has to be taken into account when comparing and monitoring the unemployment performance across countries.

7 Summary

The most commonly used statistical sources for the analysis of unemployment are registered unemployment (RU) at the national level and internationally harmonised unemployment data provided by the European Labour Force Survey (EU-LFS) according to the International Labour Organisation (ILO) standard. The logic behind both unemployment statistics is to count people "without work" only when they are “actively looking” and “available for work”. This logic does not coincide with the understanding of unemployment among the general public. The public view is that everybody who is without work should be counted as unemployed, independent of whether he or she is actively looking for work or not. That's why governments and PES are usually blamed to "hide" unemployed individuals participating in a training or an integration course or being temporarily ill. About one quarter of those being categorised as "inactive" in the LFS because of failing one of the conditions specified by the strict ILO standard perceive themselves as unemployed. As they show a similar behaviour as the unemployed, Eurostat has re-defined these groups as "disguised unemployed" forming intermediaries between unemployment and the economically inactive population and introduced supplementary indicators to disclose discouraged workers and other inactive persons with attachment to the labour force. However, they are not used by EUROSTAT when publishing the monthly unemployment figures for the EU-28.

In national registers, the operational definitions of the same unemployment criteria depend to a large extent on peculiar political decisions. Across countries, the group of people "without work" is more or less narrowly defined. Several countries (e.g. Sweden or Finland) include, for example, part-time workers looking for full-time work in the registers, especially when they are allowed to combine income from work with partial unemployment benefits. The structure and specifics of the social benefit systems impact RU figures heavily. This holds, for example, for the definition of the "ability to work" and the generosity and access to the unemployment but also to alternative categories of benefits.

By comparing the ratio of the number of unemployed in national RU statistics and the international harmonized statistics (LFS-U) we tried to assess the information value of national statistics in selected EU countries. Only in three (Spain, Sweden, UK) out of ten comparison countries (Austria, Germany, France, Finland, Ireland, Netherlands, Poland, Spain, Sweden, UK) register unemployment is more restrictive than survey unemployment. In the UK, for example, only people receiving unemployment benefits are counted as unemployed. Over time, registers have become less restrictive in several countries as more groups qualify now for an unemployment status. The general trend to activate the non-employed are reflected in unemployment statistics. This holds, for example, for a stricter monitoring of active job search and the exclusion of "passive" job seekers from the unemployment counts. Especially the activation of older workers has major repercussions in RU as they were statistically shifted from

inactivity (hidden unemployment) to open unemployment due to the elimination of exemption rules from job search and the closing of early retirement pathways. These shifts are clearly reflected in RU statistics (e.g. in Germany, Finland and the Netherlands) widening the gap between RU and LFS-U.

To ensure comparability of labour market indicators over time and across countries, statisticians developed the ILO standards. The ILO concept explicitly pursues the goal of providing internationally and inter-temporally comparable labor market data irrespective of national peculiarities and national social legislation. A closer look at country differences for the reasons of inactivity suggests, however, that survey responses are not independent from national social legislation and institutional status ascriptions, questioning the comparability of the ILO statistics. That people without work are in different social benefit systems (unemployment or disability systems) and therefore employment statuses (unemployed or inactive) causes considerable distortions in the international measurement of unemployment, a fact so far not being addressed by labour statisticians.

This "hidden fact" particularly affects the measurement of long-term unemployment. Countries with a relatively low share of long-term unemployed have markedly higher shares of people being retired or inactive for health reasons. Another fact that is often neglected in comparative studies refers to the treatment of subsidized employment. Although – and in contrast to national RU statistics - ALMP participation does not necessarily break individual unemployment spells in harmonized unemployment statistics, an important category of ALMP – namely subsidized employment - is recorded in the LFS usually also as employment. In countries with high shares of (permanently) subsidized work like in Denmark or Sweden (~ 2% of the labour force), the harmonized LFS statistics underrate long-term unemployment.

Finally, the harmonized LFS statistics do not reveal the long-term exclusion from regular, non-temporary employment, either. Shorter or longer intervals of temporary employment and participation in ALMP measures interrupt unemployment spells which are defined as long-term unemployment spells only when they consist at least of 12 *consecutive* months. But unemployment often continues without proper regular employment between unemployment spells. In countries where the recurrence of unemployment spells is high, the measurement of long-term unemployment clearly underrates "chronic unemployment". This has to be taken into account when comparing and monitoring the unemployment performance across countries based on ILO statistics.

8 Conclusion

Our methodological paper has shown that a status such as unemployment is not a "given fact". It's the result of a complex interaction between employment opportunities and incentives to (not) actively look for work, personal characteristics relevant to employability, and institutional gatekeeping at the entrances to alternative categories of benefits. It's therefore not that easy to uncover how many people actually have an

employment problem. Conventional unemployment statistics (can) reflect only part of a complex reality. The most obvious shortcomings of the strict measurement of job search behaviour in the ILO statistics have led to a stronger differentiation of the "economically inactive" population by publishing supplementary indicators. On the national level, statistical offices and the PES are also offering an ever broader range of unemployment measures. Beyond the single RU figure, additional statistics on "underemployment" (Germany), different categories of unemployed (France), or on unemployment including persons in ALMP (Sweden and Austria) are produced to uncover "hidden unemployment".

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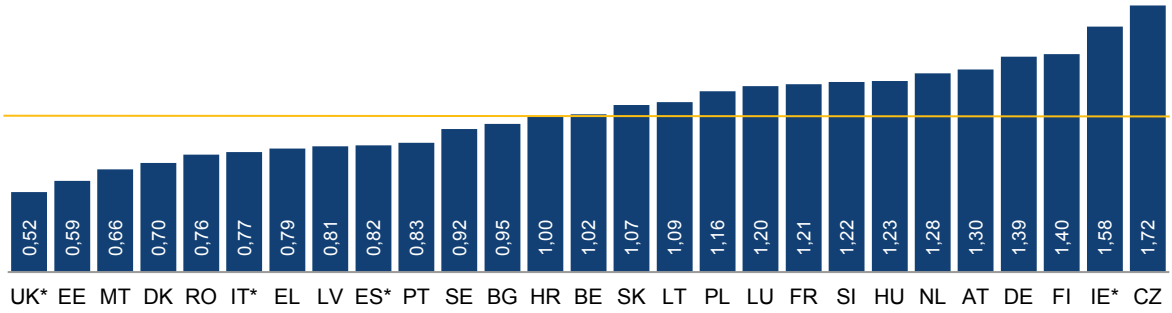
Annex

Figure A1
Relation registered unemployed (RU) / LFS unemployed

EU-27, 2014

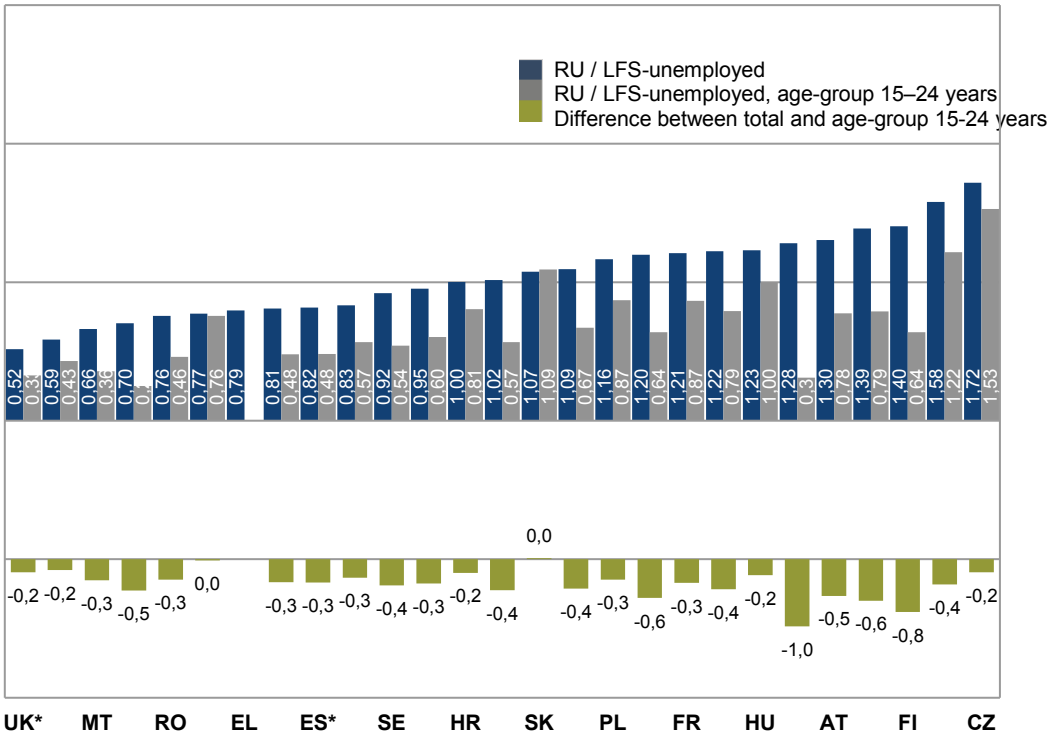


Note: For CY no data available; data for Italy refers to 2013

Source: Eurostat- EU-LFS, Labour Market Policy (LMP) Database; Statistical offices in UK, Spain, Italy and Ireland

Figure A2
Relation Registered unemployed (RU) / LFS-unemployed - age group 15- 24 years

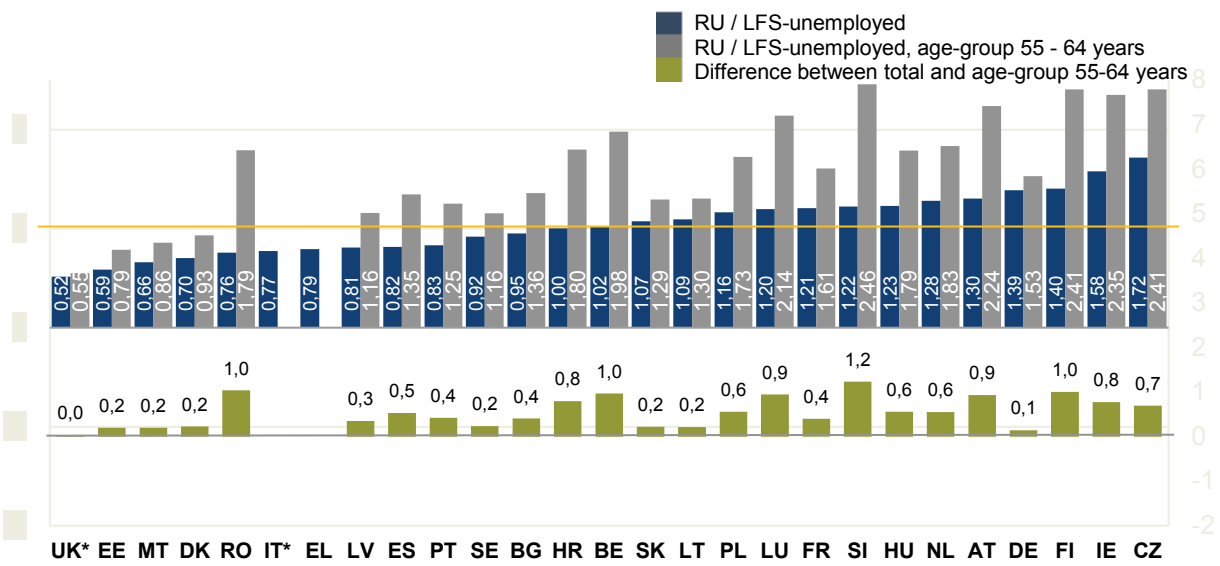
EU27, 2014



Source: Eurostat- EU-LFS, Labour Market Policy (LMP) Database; Statistical offices in UK, ES, IT, IE

Figure A3
Relation registered unemployed (RU) / LFS unemployed, age-group 55 - 64 years

EU-27, 2014



Note: For CY no data available; data for Italy refers to 2013, IT and EL RU-data 55+ not available
Source: Eurostat- EU-LFS and Labour Market Policy Database; Statistical offices in UK, and Italy

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IAB-Forschungsbericht 6/2017

July 11, 2017

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ISSN 2195-2655

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