



# Chronic Unemployment: A New Concept for Capturing Weak Labor Market Attachment<sup>1</sup>

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## ABSTRACT

In this article, we develop, unfold, and explore the concept of 'chronic unemployment' to capture a segment that is weakly attached to the labor market because of repeated spells of unemployment, interrupted only by shorter intervals of temporary employment, inactivity, and/or participation in active labor market policy measures (ALMP). We do this to capture this segment more adequately than conventional long-term unemployment statistics. We analyze unemployment trajectories of chronically unemployed individuals across different labor market and welfare regimes over more than 10 years based on longitudinal and comparable register data in Denmark, Germany, and Finland. We find that in these developed welfare states, unemployment of a more chronic character is a much wider problem than what conventional statistics reveal, and that sustainable integration into gainful employment at the open labor market is a distant goal for a considerable share of the group.

## KEYWORDS

*Active labor market policy / chronic unemployment / inequality / labor market exclusion / long-term unemployment / longitudinal register data / weak labor market attachment*

## 1. Introduction

Long-term unemployment (LTU) and even exclusion from steady employment are recognized as severe and persistent problems of the labor market in advanced welfare states. A part of the unemployed is outside regular paid employment for years, and some have never found a stable foothold in the labor market. However, the phenomenon of 'chronically unemployed' have so far received less attention in

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both comparative research and in politics. Only a few studies analyze the individual distribution of lifetime unemployment. These studies suggest that there is both a general increase in unemployment risks for all workers *and* a stronger concentration of unemployment risks for specific groups, for example, low-skilled workers over time. For example, Hansen and Lorentzen (2018) witnessed a sharp drop in the number of middle-aged Norwegian employees in stable employment by analyzing work trajectories of three cohorts over a period of two decades (1994–2014). Schmillen and Möller (2012) show for Germany that unemployment was highly concentrated in a small part of the population for earlier birth cohorts (1950–1951). For later cohorts and particularly since the late 1970s, there has been a shift of employment risks to younger workers, mainly among the low-skilled (Rhein & Stüber 2014), and the responsibility for unemployment has been individualized (e.g., Hobbins 2016). The consequences of increased risks of unemployment are not only financial for the individual, but also psychological since job insecurity has been found to be associated with poor mental health (Vulcan et al. 2015).

Acknowledging that the increased risk individual workers are facing is related to the profound restructuring of European labor markets with temporary employment on the rise (Gialis 2019), growing compositional differences between regular and non-standard jobs (Emmenegger et al. 2012) and increased differentiation of labor market experiences related to skill levels (Gallie 2002), we are interested in analyzing whether chronic unemployment (CU) has become a structural feature of labor markets in developed welfare states. Our starting point is the observation that there are considerable segments of the labor force that seem to be excluded from steady employment at the primary labor market, but they are not properly recorded as long-term unemployed in conventional statistics, defined as 12 months continuous unemployment (Aho 2004; Aho & Mäkiäho 2016). We therefore believe that there is a strong need to develop and conceptualize a weak attachment to the labor market to better grasp the phenomenon.

First, LTU and labor market detachment increases inequality by causing scar effects (Mooi-Reci & Ganzeboom 2015), which are long-lasting micro-level negative consequences. Scarring effects have been found in relation to future earnings (Fervers 2021; Gangl 2006), future unemployment, and economic inactivity (Ralston et al. 2021). Second, adverse consequences of unemployment have been found in relation to well-being (Howley & Knight 2022; Mousteri et al. 2018), health more generally (Krug & Eberl 2018), and even generalized social trust (Azzollini 2023). Therefore, it is highly problematic that conventional (long-term) unemployment statistics underestimates the magnitude of unemployment and labor market exclusion. We therefore believe there is a strong need to develop and conceptualize persistent unemployment and labor market exclusion. Our prime contribution to the literature is thus such a conceptualization and its empirical application in three countries.

Related to the conceptualization, we focus on individuals weakly attached to the labor market because of repeated spells of unemployment, interrupted only by shorter intervals of temporary employment, inactivity, and/or activation measures. To address this problem and to adequately capture the long-term exclusion from permanent employment over longer periods of time, we introduce the concept of ‘chronic unemployment’ (CU). We investigate empirically the individual risk of being without stable employment

over a longer period (2000–2014/2015) before, during, and after the global financial crisis in 2007–2008 in three countries: Denmark, Germany, and Finland. Furthermore, we analyze to what extent chronically unemployed persons can gain foothold on the labor market. Here, we also consider the ambiguous role of active labor market policies (ALMP). On the one hand, ALMP is part of the CU problem as time spent in ALMP measures is an integral component of our CU concept. On the other hand, participation in certain ALMP measures might play a role by supporting the chronically unemployed to move into stable employment.

Therefore, we address the following questions:

- Is CU a common feature of labor markets in advanced welfare states (Denmark, Finland, and Germany), or are there clear differences in the scope and the dynamics of CU across countries?
- Which individual and socio-demographic factors affect the risk of becoming chronically unemployed?
- To what extent does chronically unemployed people leave CU and move to stable employment, and what role does participation in ALMP measures play in this process?

Our article contributes to the literature on unemployment in various ways. First, we conceptualize weak labor market attachment more adequately than conventional statistics of LTU. Second, our empirical analysis is based on comparable and very detailed longitudinal register data, which allows to track individuals over longer time spans. The administrative datasets also allow us to analyze the role of ALMP participation on individual unemployment careers. Hence, we can account for the Janus-faced role of ALMP. On the one hand, ALMP participation usually breaks individual unemployment spells in register statistics. However, unemployment often continues without proper regular employment after participation. We address this phenomenon explicitly by integrating time spent in activation in our definition of CU. On the other hand, ALMP participation might provide a ‘cure’ for the individual by enhancing the transition from CU to stable employment. We therefore also contribute to the discussion on cross-national variation of ALMP in comparative social policy research (Clasen et al. 2016). To the best of our knowledge, our approach using longitudinal register data is unique in the comparative research of unemployment.

The article is structured as follows: In the next section, we expand on our conceptual framework of CU in more detail, zoom in on objectives of different ALMP interventions included in our empirical analysis, and outline our reasoning for choosing Germany, Denmark, and Finland as units of study. In Section 3, we describe our data. In Section 4, we analyze first the magnitude, structure, and dynamics of CU and then provide evidence on how much and what type of activation measures the chronically unemployed participate in. In a next step, we apply a probit regression to analyze the transition from CU to stable market employment controlling for several explanatory variables such as gender, age, education, and nationality. Here, we also consider the role of ALMP interventions to investigate whether participation in certain ALMP measures supports the transition to employment. Section 5 concludes.

## 2. Development of a theoretical concept: Chronic unemployment

### 2.1. The concept of chronic unemployment (CU)

As described previously, we introduce, develop, outline, and analyze the concept of CU. The term has been used previously but sporadically for more than a century (see, e.g., Cooke 1915) in reports and research with several different meanings. Typically, authors use the term as a macro-level connotation to denote a persisting (high) or long-term national unemployment rate (e.g., Çelikay 2022/2023; D'Agostini & Tittton 2020; Sherraden 1985). However, the term has not been properly developed or operationalized previously as a micro-level category based on the length—and not the causes—of the individual lack of open (unsubsidized) market employment.

To study empirically the extent of the phenomenon across countries, we use the term at an individual level and define a chronically unemployed person as 'out of regular employment for at least two consecutive years because of being unemployed or participating in ALMP measures for more than 6 months each year and being employed for less than 30 days each year'. This means that the person is statistically not 'inactive' but mainly in the labor force. Hence, our concept of CU focuses on the share of 'active' people without genuine market-based employment and does not refer to the detachment of the 'inactive' working age population from the labor market.

We do this because the phenomenon of being excluded from steady and genuinely market based (unsubsidized) employment is not adequately reflected in conventional statistics.<sup>1</sup> There, long-term unemployed people are usually defined as those who have been *continuously* out of work for 12 months or longer, while available and searching for a job. The term *continuously* implies that those having worked for a short period of time, been short-term ill, or participated in ALMPs between two spells of unemployment are statistically excluded from the count. Participation in ALMP usually breaks individual unemployment spells in register statistics. Often, this only restarts the counting of statistical unemployment duration, while unemployment continues without proper regular employment between such spells (Konle-Seidl & Lüdeke 2017).

We have chosen to define CU as more than two consecutive calendar years out of proper market employment, while being mainly in the labor force. However, setting the criteria of CU to two years is not theoretically founded—nor is the conventional definition of LTU as 12 months. Empirical observations show that the probability of re-employment decreases gradually with the length of unemployment, providing no criteria to observe when unemployment has become 'chronic'. The maximum duration of unemployment insurance benefit entitlement, which is generally two years or even less,<sup>2</sup> can be interpreted as the point where unemployment becomes an extraordinary social problem. In fact, our criteria are not exactly two years, but two *calendar years* (individually varying from at least 24 up to 35 months). The reason for this is that we use partially yearly data. Decisive for the purpose of the measurement is that figures are comparable over time and between countries and can be interpreted as an indicator of too long a duration of unemployment.

According to the labor force concept of the ILO, early retirement, disability benefit receipt, and (long-term) health problems are still important reasons of 'inactivity' even though their relevance as an exit route out of the labor market has declined in recent

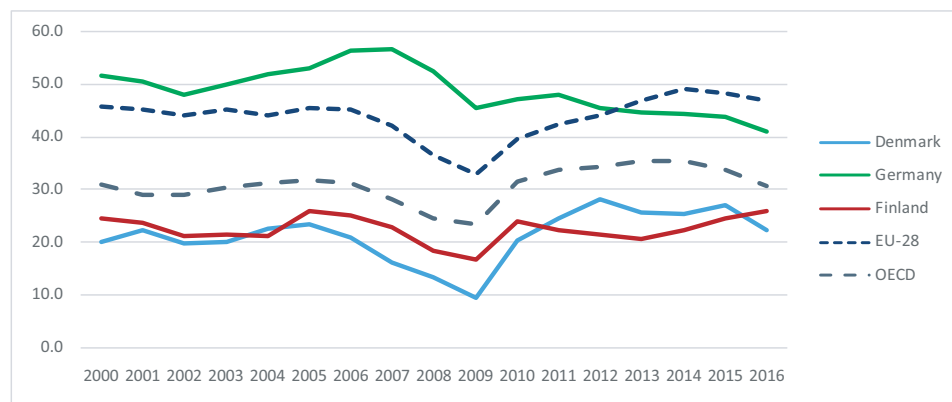
years. Strikingly, countries with a relatively low share of long-term unemployed among all non-employed such as Denmark have still markedly higher shares of people been retired or ‘inactive’ for health reasons (Konle-Seidl & Rhein 2018). This substitution phenomenon, however, is beyond the scope of our analysis.

## 2.2. Selection of country cases

With our CU concept, we not only want to adequately measure the long-term exclusion of individuals from steady employment in one country but also to compare the phenomenon across different welfare states and labor market regimes. Our strategy has been to select countries who exhibit variation in relation to labor market institutions and the intensity and use of ALMPs. However, our selection strategy also entails pragmatic aspects, namely the availability of high-quality individual register data on a population basis which is available and prepared for scientific use in the Nordic countries and in Germany.

In comparative welfare state research, differences between countries in their labor market and welfare institutions are often categorized into a typology of welfare regimes that are correlated with country-clusters (Esping-Andersen & Regini 2000). Denmark and Finland belong to the Nordic welfare state cluster with traditionally low shares of LTU and high spending on ALMPs. Finland was severely affected by the global financial crisis and the levels of LTU did increase considerably from 2009 and onwards (Figure 1). This is also the case for Denmark where the LTU rate increased in the years following the Great Recession by nearly 13 percentage points (2009–2015) starting from a very low level (Figure 1). In terms of labor market institutions, Denmark is renowned for its flexicurity model combining flexibility of the labor market (low regulation of dismissal rules and high job mobility) with the social safety net of the traditional Scandinavian welfare state (universal/social democratic) and high spending on active labor market policies. This kind of policy has been recommended at EU level (European Commission 2007).

**Figure 1** Long-term unemployment (ILO-definition) 2000–2016, share of total unemployed.



Source: EU-LFS.

Germany is an example of the continental cluster with persistently high LTU rates and a declining ALMP spending profile since the early 2000s. In contrast to Denmark and Finland, LTU in Germany decreased slightly between 2009 and 2015 (Figure 1). Positive labor market performance shocks (likely caused by labor market reforms of the mid-2000s) are identified, for example, by Gehrke *et al.* (2019) as the key driver for the ‘German labor market miracle’ during the Great Recession.

While we acknowledge that labor market institutions such as employment protection legislation or the prevalence of non-standard employment, in particular temporary employment, might influence the scale and dynamics of CU across countries, it is beyond the scope of this article to analyze their impact empirically.

### 2.3. The ambiguous role of active labor market policy (ALMP)

Since ALMP is part of our CU definition, we here unfold how and why this is so. Conceptually, a chronically unemployed person is defined as being outside of regular or open market employment but belonging mainly to the labor force. ALMP participants belong—like the unemployed—to the labor force. This means that ALMP participation prolongs CU spells if there is no ‘cure’, that is, no transition to employment after participation. ALMPs have at times been used as alternatives (‘camouflage’) by hiding a part of open unemployment. This was, for example, the case in Sweden in the 1990s, in the Netherlands in the 1990s, in Finland during the public ‘employment obligation’ between 1987 and 1993 (Aho & Arkil 2008), and in Germany after the reunification in the 1990s. In the Danish case, it is well known that the expansion of participation in ALMP was one of the major drivers behind declines in open unemployment in the 1990s (Bredgaard & Jørgensen 2000; Oorschot & Abrahamson 2003).

Nonetheless, the actual aim of ALMP is to ‘cure’ unemployment by removing obstacles to labor market participation and strengthening the qualifications of the jobless. The employment impact of ALMP has been widely evaluated during the last couple of decades. Evaluation studies show that measures such as occupational training and employment subsidies to private enterprises have a moderate but positive effect on subsequent employment of participants in many countries (see, e.g., the results of the meta-analysis conducted by Card *et al.* 2018). However, it has also been shown that many traditional ALMPs, especially those targeted at vulnerable groups, have no or even adverse employment effects (Holm *et al.* 2017).

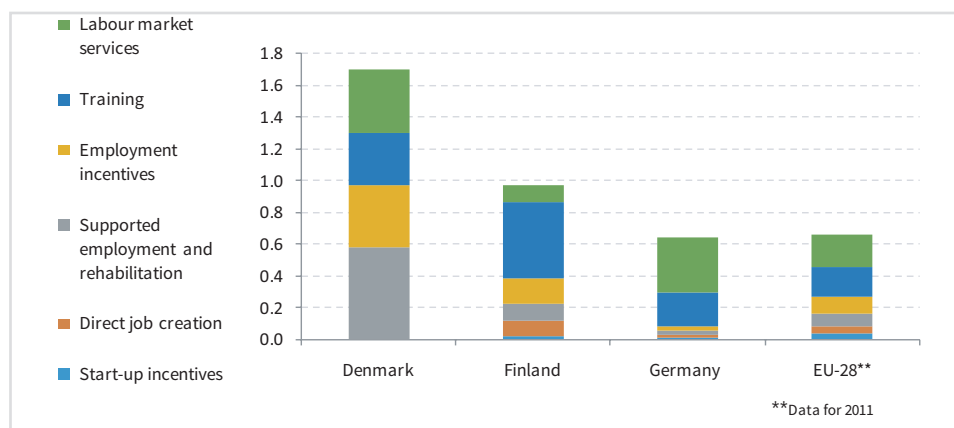
Although we consider explicitly the ambiguous role of ALMP conceptually and we empirically look at the role of ALMP measures in the analysis of transitions to stable employment (see Section 4.4), a limitation of our study is that it has not been designed as a stringent effect study of the outcomes of specific active labor market measures. Therefore, our aim is not to perform an analysis of the effect of participating in ALMP measures.

### 2.4. Comparing ALMP repertoires

To understand ALMP interventions in their context, we now have a closer look at content, aim, and target groups of programs included in our empirical analysis in Section 4.

First, we start with comparing ALMP spending profiles in the three countries. The [Labour Market Policy \(LMP\) database](#) of the European Commission's (since 2005 jointly launched by Eurostat and OECD) provides data on expenditures and participants of ALMP measures in European countries. These data are collected on a yearly basis and are widely used for monitoring and evaluation of the EU guidelines. The LMP database groups interventions into six broad categories: labor market services, training, employment incentives, supported employment and rehabilitation, direct job creation, and start-up incentives. The spending profile for the year 2013 shows considerable variation across our three comparison countries. In Denmark, 40% of ALMP expenditures were spent for 'supported employment and rehabilitation' (mainly for so-called flex-jobs) accounting for 0.56% of GDP. Spending in this category is just about 10% in Finland (0.12% of GDP) and still minor in Germany (0.02% of GDP). The main spending category in Germany is labor market services, including job search assistance, counseling, and job placement. In Finland, the main spending category is training (Figure 2).

**Figure 2** ALMP expenditure by type of program, 2013 in percent of GDP.



Source: Own elaboration based on [European Commission-LMP Database](#) (2023).

The broad LMP categories listed in Figure 2 have been established mainly for administrative purposes. They are often ambiguous and may cover quite different kinds of interventions, a fact that has been often ignored in cross-country quantitative research (Clasen et al. 2016). For our cross-country analysis, we therefore compare in detail objectives, content, and target groups of ALMP interventions. To ensure, as far as possible, that interventions we are measuring are empirically comparable, we put the selected interventions in context by making use of the qualitative reports of the LMP database ([EU Commission, LMP Country qualitative reports](#)).

For example, the category 'labour market services' combines tighter behavioral requirements with more intense support for job search. This category includes job search assistance, counseling, and job placement and has been the dominant spending category through the 2000s in Germany and in Denmark but has been less prominent in Finland. In Finland, the main spending category in 2013 was 'training'. This



category covers both investments in improving human capital by upskilling jobless people, career counseling, and work trial programs to orientate the unemployed on their path toward employment. We therefore separate ‘occupational training’ from ‘other training/coaching/work trial’ in our empirical analysis (see Table 4). The LMP category ‘employment incentives’ includes mainly employment subsidies with limited duration to private sector employers who recruit unemployed people for regular jobs. In the category ‘supported employment and rehabilitation’, we include not only subsidized employment for long-term unemployed and other vulnerable groups but also relatively generous employment programs in the public sector—labeled as ‘direct job creation’ in the LMP database—because these measures have a rather similar function. Direct job creation also includes so-called ‘workfare’ measures that refer to public employment programs carried out in exchange for benefit receipt. We therefore introduce a category ‘work activities’ for so-called ‘one-euro-jobs’ in Germany and ‘rehabilitative work experience’ in Finland. One-euro-jobs have been widely used as a mixture of workfare to test the availability of benefit recipient *and* as a measure to prevent social exclusion for individuals with several employment barriers (Hohmeyer & Wolff 2012). The rehabilitative work activity in Finland is formally aimed to improve the well-being of participants and to find ways toward increased employability. Participation has been generally expected from *passive* long-term benefit receivers because municipalities can save in benefit cost by putting unemployed to *activation* funded by the central government (Karjalainen & Karjalainen 2011). Participants in these programs are not paid a wage. One-euro jobbers receive their welfare benefit plus one to two euros per hour worked. Participants in rehabilitative work activity receive flat-rate benefits added with nine euros per participation day. This type of workfare programs has been extended during our observation period massively in Germany while the generous job creation scheme (‘*Arbeitsbeschaffungsmaßnahmen*’) has been removed completely. In Finland, participation in work activity has continuously increased since its introduction in 2001, while the more generous subsidized job programs in public and third sectors have also remained important during our observation period.

Denmark records the highest level of spending in the LMP database category ‘supported employment and rehabilitation’. Spending in this category is not recording work-focused support for the unemployed but refers mainly to permanent wage subsidies for people with reduced work capacity, so-called ‘flex-jobs’. Flex-jobs function as an alternative to disability pensioning. Flex-jobbers are paid regular wages by their employer for the number of hours they work, and the payment for the rest of hours (up to full-time employment) is given as a transfer income. The flex-job scheme has expanded rapidly since its introduction in 1998. In 2012, 2.3% of the labor force were in flex-jobs. Based on evaluation results,<sup>3</sup> the government changed the flex-job program in 2013. Since the reform, flex-jobs for people under 40 years of age are temporary (with reassessment every five years) and not permanent anymore. Across our three comparison countries, the flex-job scheme is thus rather unique, as it creates an intermediate labor market segment separate from open market employment. Due to the magnitude of the scheme, it is a matter of definition, whether to include flex-jobbers in our definition of CU. In our empirical analysis, we therefore show results for Denmark both including and excluding flex-jobbers as chronic unemployed.



## 2.5. The definition of chronic unemployment (CU)

With the previous argumentation about the concept of CU and the different types of ALMP described just before in mind, this is our definition of CU:

Chronic unemployment (CU): Time in labor force (= employment + unemployment + ALMP participation) > 183 days & open employment < 30 days per year over at least two successive years.

In other words, this means that a chronically unemployed person is out of regular employment for at least two consecutive years while being unemployed or participating in ALMP measures for more than 6 months of each year and being employed for less than 30 days of each year. This definition implies that chronically unemployed people have less than one month (30 days) of employment yearly in total over the course of a period of at least two years, but they are still mainly part of the labor force and have thus not retired or been granted disability pension.

## 3. Data

Comparative research on transitions from and into (long-term) unemployment is usually based on harmonized survey data, mainly the European Labour Force Survey (EU-LFS) and the European Union Statistics on Income and Living Conditions (EU-SILC). Both data sets, however, provide only limited possibilities to explore the individual unemployment problem in the long run. Although EU-SILC has a longitudinal component for most countries,<sup>4</sup> small sample sizes and the short length of the panel limit the dataset. EU-LFS has a larger sample size but is cross-sectional and focuses mainly on the situation of the sample members at the time of the interview.

In contrast, our study is based on extensive and rich longitudinal register datasets, which merge information from different administrative registers. They contain precise and extensive information on individual employment, unemployment, and inactivity spells as well as detailed information on participation in active labor market programs covering long periods. We are thus able to follow the individual labor market careers. Albeit data are not harmonized, we carefully examined underlying definitions, for example, on unemployment or employment, and made sure that the data is well comparable between the three countries. Such administrative data are supposed to guarantee higher validity since they avoid problems related to survey data such as missing values or response bias (Fervers 2021).

For Finland, we use the FLEED dataset maintained by Statistics Finland for the years 2000–2014. It is a representative sample covering one-third of the total working age population. This data is combined with detailed and comprehensive data from registers of public employment services (called therefore FLEED+). It contains very detailed information on the labor market history of individuals (employment, unemployment, and participation in ALMP measures).

The data used for Germany is a 2% random sample of administrative data (IEB V12.01) for the years 2000–2015. It covers employed, registered unemployed, participants



in ALMP measures and participants in vocational/apprenticeship training, marginal as well as subsidized employment (Ganzer et al. 2017). The Integrated Employment Biographies (IEB) make it possible to trace the employment history of a person to the day.

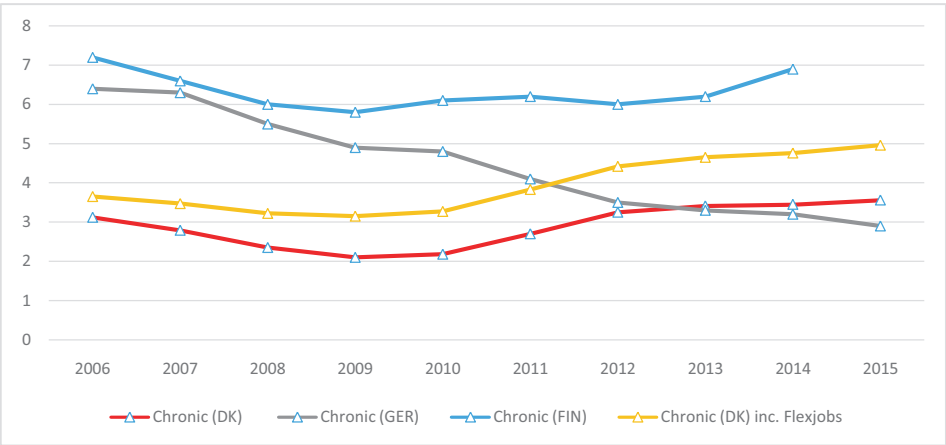
For Denmark, we use administrative data of the whole adult population from the DREAM database (administered by the Danish Ministry of Employment) for the years 2000–2015. This database contains detailed information on all Danish citizens, with a particular focus on benefit reciprocity, including their participation in ALMP programs as well as employment. Most information is on a weekly basis allowing for calculation of the duration of employment and unemployment spells.

4. Analysis

4.1. Magnitude of chronic unemployment

We start our analysis by addressing the first research question about how common CU is in the three countries and whether there are differences between the countries. Therefore, we depict the evolution of CU in all three countries over time as a percentage of the total labor force. We focus here on the total labor force, since this indicator is not affected by economic conditions and the business cycle as opposed to the unemployment rate which fluctuates rapidly with a changing business cycle. For Denmark and Germany, we have data until 2015.<sup>5</sup> For Finland, we have data up until 2014 (Figure 3).

Figure 3 Evolution of CU over time, in percent of total labor force.



Source: IEB, DREAM Database and FLEED+, own calculations.

Figure 3 shows that CU constitutes a significant share of the labor force in all the countries. Finland has the highest share of CU throughout the observation period. The rate fluctuates between 6% and 7% of the labor force. This reflects the fact that in Finland, unemployment in general was at much higher level than in the two other compared countries through our observation period. Germany had almost the same starting point as Finland in 2006

but has experienced a large and consistent decrease of CU from 2006 to 2015. Denmark had the lowest share of CU in 2006 and retains this position until 2011–2013 depending on whether flex-jobs are included or not. As can be seen from the two graphs for Denmark, flex-jobs severely affect the rate for Denmark. If flex-jobbers are included as a part of the CU population, the rate is 5% for Denmark in 2015. Excluding them from the definition the rate is 3.6% in 2015—a level very close to Germany (2.9% of the labor force).

Moving on, Table 1 illustrates the advantage of using our statistical definition of CU as opposed to the standard measure of LTU in the European Labour Force Survey. When comparing the absolute numbers on LTU and CU for 2013, it becomes very evident that the statistical measure of LTU tends to underestimate the level of exclusion from stable employment. This is true for all three countries. In Germany, more than 1.3 million persons were chronically unemployed in 2013, compared to 963,000 persons classified as long-term unemployed, so CU exceeds LTU by a factor 1.4. In Denmark, excluding flex-jobbers from the definition, there are 85,000 chronically unemployed, and if included, there are 128,000 chronically unemployed in 2013. CU exceeds LTU by a factor of either 1.4 or 2.5. In Finland (178,000 to 46,000), CU exceeds LTU even by a factor of 3.9.

**Table 1** Chronic unemployment vs. long-term unemployment—absolute numbers for 2013

	Germany	Finland	Denmark	Denmark inc. flexjobs
(1) chronic unemployment (in 1000)	1347	178	85	128
(2) long-term unemployed, ILO-classification (in 1000)	963	46	52	52
(1) / (2)	1.4	3.9	1.6	2.5

Source: EU-LFS, IEB, DREAM Database, and FLEED+, own calculations.

## 4.2. Individual and socio-demographic characteristics

We now turn to the second research question about the individual and socio-demographic characteristics of chronically unemployed to explore which groups are particularly affected by CU. From the administrative registers, we have access to information about gender, citizenship, age, and educational level as well as the work and employment history of everyone. Here, we have made descriptive analyses for the chronically unemployed at the end of the year 2013 (Table 2).

**Table 2** Chronic unemployment as a percentage of total unemployment at the end of 2013

	Finland	Germany	Denmark excluding flex-jobbers	Denmark including flex-jobbers
Total	36.1	37.9	27.2	35
Males	35.6	37.6	29.2	38
Females	36.9	38.3	25	31.7
16–24 years	16.4	14.3	14	14.4
25–34 years	26.8	30.4	25.4	27.6

(Continued)



Table 2 (Continued)

	Finland	Germany	Denmark excluding flex-jobbers	Denmark including flex-jobbers
35–44 years	33.5	41.0	32.9	39
45–54 years	38.7	46.9	32.3	43.3
55–64 years	55.7	46.0	26.2	44.1
Foreigner	36.7	34.2	33.5	34.9
Finnish/German/Danish	36.1	38.7	26.1	35
No voc. Training	46.4	42.9	31.4	36.5
Voc. Training	33.9	38.0	23.1	33.9
University	28.9	26.2	18.7	31.8

Source: IEB, DREAM Database, and FLEED+, own calculations.

The results of Table 2 can be summarized as follows. Gender does not matter much for the prevalence of CU in Finland and Germany, since the percentage of male and female chronically unemployed are very much alike. However, in Denmark, more males than females are chronically unemployed. As to age, CU tends to be less widespread among the young unemployed in the three countries. Migrants (foreigners) are only slightly more affected by CU than natives in Finland and even less in Germany. For Denmark, results change depending on inclusion/exclusion of flex jobbers as CU. The CU level is almost identical for Danish citizens and foreigners if flex-jobs are included in our definition. However, if excluded, foreigners are overrepresented among chronically unemployed by staggering 7.4 percentage points. Furthermore, differences between educational levels are pronounced. More than 40% of the unemployed without vocational training belong to the CU population in Finland and Germany. The CU share is considerably lower among those with vocational training and even lower among university graduates. This pattern, however, is much less pronounced in Denmark with chronically unemployed constituting less than 40% in all three educational categories, and as little as 18.7% among university graduates if flex-jobbers are not counted as CU.

Our data also provides interesting information on the employment and unemployment history of the CU population. In all three countries, the vast majority of the chronically unemployed was not in continuous employment before the onset of a CU episode. Our descriptive analysis reveals that less than one-third of those becoming chronic unemployed have been mainly in employment before. Of the CU population at the end of 2013, in Finland, only 32% were mainly employed and even less in Germany (23%) and Denmark 18 if flex-jobbers are included or 19% if flex-jobbers are not included during the three years before the start of CU (not shown in tables). Therefore, we assume that the majority of the chronically unemployed probably have had weak labor market attachments for a longer period.

This descriptive analysis has some limitations. For example, we are not able to account for unobserved characteristics such as motivational aspects, and we also lack information on health problems in our register data due to data protection. However, available survey data suggest that health problems are a serious employment barrier in all countries. In Germany, half of the long-term unemployed on welfare benefits have

serious physical or mental health problems (Lietzmann et al. 2019), and in Finland, arguably 20–30% of the unemployed are not fit for open market jobs due to health-related employment barriers (Oivo & Kerätär 2018). In Denmark, people who do not have a job and receiving welfare benefits are classified as either ‘job ready’ or ‘activity ready’. The ‘activity ready’ group suffers from work inhibiting problems (physical, mental, or social problems) which means that they are not immediately available for the labor market. The group of activity ready fluctuated between 30% and 42% of all unemployed in 2011–2019 (VIVE 2022:8). As we are not able to account for the combination of employment barriers either, the picture of those who are chronically unemployed remains incomplete.

4.3. ALMP measures and CU

To learn more about the chronically unemployed, we have also investigated time spent in activation and participation in different types of ALMP measures.

We first identified the number of days spent in ALMP. We then calculated the activation share<sup>6</sup> of the total time spent either in ALMP measures or in unemployment. Table 3 shows the results for both indicators. Denmark stands out according to both indicators, while in Germany, the activation share of the CU population is lowest. Excluding flex-jobbers, the Danish chronically unemployed participated on average 36% of the time in active measures in 2012 and 2013. Including flex-jobbers, the figure rises to 54%. The reason for the sharp increase is that flex-jobbers participate in activation every day throughout the year because flex-jobs in our definition is included as an ALMP measure. In Germany, the CU activation share was only 16%. There, it is also less common that the same person participates repeatedly in different measures. Finland is in between the other two countries with respect to both days in activation and activation share. In Denmark and Finland, the activation shares of CU were clearly higher than those of all unemployed, but in Germany, there was no significant difference in activation shares of CU compared to others (Table 3).

**Table 3** Chronically unemployed at the end of 2013: Average participation in active labor market policy measures in 2012 and 2013

		Total unemployed	Chronic unemployed
Finland	activation share	22%	27%
	activation in days	113	186
Denmark (Flexjob not counted as unemployed)	activation share	30%	36%
	activation in days	109	184
Denmark (Flexjob counted as unemployed)	activation share	39%	54%
	activation in days	154	266
Germany	activation share	15%	16%
	activation in days	66	107

Source: IEB, DREAM Database, and FLEED+, own calculations.  
Note: The figures are averages including persons with zero ALMP days, that is, those who did not participate at all in ALMP measures.



In the next step, we examine in which types of ALMP measures chronically unemployed participate most. We use five ALMP categories, who’s content and aim were described in Section 2.4. Here, we do not calculate participation shares, but individuals (among all unemployed, and chronically unemployed) who have participated in various types of ALMP during follow-up years. Table 4 shows that participation in wage subsidies (hiring subsidies) in the private sector is low in all three countries but employment assistance programs (other training, coaching, and work trial) is more common for the CU population, especially in Denmark. Differences exist with respect to occupational training and qualification and to job creation schemes. In Denmark, the share of CU participating in occupational training measures was higher than in Germany and Finland. Participation in (well-paid) direct job creation in the public and third sector was common among the CU population in Finland while it is practically non-existent in Germany. As already mentioned, in Denmark, there is no direct job creation scheme. However, we include flex-jobs, the main category of supported employment in the private and public sector in Denmark. The proportion of those, who participated in any type of ALMP during the two years follow-up period, was high in all countries and very high in Denmark. In all countries, the share of those that had participated at least once was higher among chronically unemployed than among average unemployed.

**Table 4** Share of chronic and all unemployed that participated in different types of ALMP measures during 2009–2010, in percent

ALMP measure	Germany		Finland		Denmark (excluding flexjob)		Denmark (including flexjob as unemployed)	
	CU	All	CU	All	CU	All	CU	All
Occupational training & qualification	13	11	16	17	42	32	33	29
Other training/coaching/ work trial	30	26	33	26	78	62	58	55
Wage subsidies in private sector	6	7	5	4	4	5	3	4
Direct job creation/ supported employment	1	1	23	12	4	2	34	15
Work activity	31	17	8	4	8	8	6	7
Total participation	62	55	63	51	89	73	92	76

Source: IEB, FLEED+, and DREAM-database, own calculations.

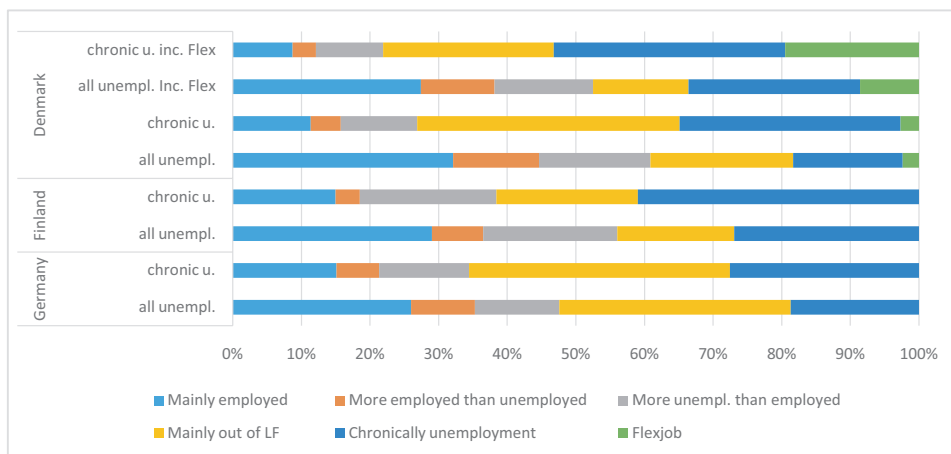
4.4. Transition to stable employment

In the last part of the analysis, we investigate the third research question about to what extent chronically unemployed move to stable employment and what role participation in ALMP measures plays in this process.

First, we have followed the cohort of chronically unemployed individuals over a period of five years. Here, we find that a high share in all three countries is still or again in the status of CU five years later—measured according to our definition of CU

presented earlier. In Finland, more than 40% of those who were chronically unemployed in the period of 2007–2008 were still or again chronically unemployed in 2012–2013, whereas in Germany, many more chronically unemployed leave the labor force altogether (27.5%, see Figure 4). If flex-jobbers are regarded as part of the population of CU in Denmark, 33.7% are still chronically unemployed five years later. If not, the CU population remains almost at the same level at 32.2%.

**Figure 4** Labor market status of the cohort chronically unemployed at the end of 2008 five years later:



Source: IEB, DREAM Database, and FLEED+, own calculations.

The share of those making a transition to more stable employment in the open labor market is considerably lower in all three countries. Figure 4 shows that only a minority find their way out of CU by transitioning into regular, long-lasting employment: 15% in Germany and Finland of those chronically unemployed in 2007–2008 were mainly employed (at least 18 months out of 24 months) five years later. For Denmark, the transition rate is very much dependent on whether flex-jobbers are included. If included, the transition rate is at 8.7% (much lower than in Germany and Finland) and, if excluded, the transition rate is at 11.4%.

We now turn to a regression analysis on the probability of leaving CU controlling for socio-demographic and five different types of ALMP measures. As already mentioned, a limitation of our study is that it has not been designed as a stringent effect study of the outcomes of specific active labor market policies. Our data and design opportunities are not sufficient to carry out an analysis of the effect of ALMP participation on leaving CU with a credible control of selection bias. Selection effects (both on observable and unobservable) to ALMPs is a phenomenon that quasi-experimental or experimental designs take into account to identify casual effects. However, a regression analysis controlling for a number of relevant variables is still relevant to learn more about who has the largest probability of leaving CU and move into stable employment and what role does participation an ALMP measure play in this process.

In Table 5, we show the results of a regression analysis investigating the probability of a chronically unemployed at the end of 2010 being mainly regular employed in the





period of 2011–2014 in the three countries. The results show that the probability to find a stable job is about three percentage points lower for men than for women in all three countries. Moreover, chronically unemployed persons of higher age, particularly in the age group 50–60, have lower chances to get a stable job. A higher educational level has, in contrast, a positive influence. Therefore, persons with a college or university degree have more than 5 percentage point higher probability of job finding than those without vocational training in Finland and Germany. The effects of education on finding employment are much larger in Denmark, regardless of whether flex-jobbers are regarded as part of the CU population. The likelihood is 9 percentage points higher for those having completed vocational training or high school (6 percentage points if flex-jobbers are included), and 12 percentage points for those with a college or university degree (8 percentage points if flex-jobbers are included). Danish nationality has a positive and statistically significant effect on the transition to stable employment, while German or Finnish nationality has a negative sign. However, the effect is small in both countries and statistically insignificant for Finland.

Furthermore, chronic unemployed people participating in occupational training and qualification have a 12 percentage point higher probability to get a stable job in Finland and a 9 percentage point higher probability in Germany but no effect in Denmark. Finland’s and Germany’s job creation measures show weaker but positive effects, while shorter training measures and coaching had weakly positive effects in Germany and weakly negative ones in Finland. Both types of measures have rather strong negative effects in Denmark.

**Table 5** Transition from chronic unemployment to stable employment in Germany, Finland and Denmark

	Germany		Finland		Denmark		Denmark including flex-jobs	
	dy/dx	std. err.	dy/dx	std. err.	dy/dx	std. err.	dy/dx	std. err.
Male	-0.032	(0.004)***	-0.029	(0.003)***	-0.039	(0.002)***	-0.026	0.002(***)
Age (ref. group: - 20–29 years)								
30–49	-0.019	(0.006)***	-0.045	(0.005)***	-0.004	0.003	-0.003	0.002
50–60	-0.084	(0.007)***	-0.096	(0.006)***	-0.091	0.003(***)	-0.058	0.002(***)
Education (ref. group: without vocational training)								
Vocational training or high school degree	0.039	(0.005)***	0.036	(0.003)***	0.092	0.003(***)	0.059	0.002(***)
College or university degree	0.057	(0.009)***	0.053	(0.005)***	0.116	0.005(***)	0.075	0.003(***)
Nationality								
German/Finish /Danish citizen	-0.012	(0.006)*	-0.011	(0.006)	0.054	0.003(***)	0.037	0.002(***)

	Germany		Finland		Denmark		Denmark including flex-jobs	
	dy/dx	std. err.	dy/dx	std. err.	dy/dx	std. err.	dy/dx	std. err.
Participation in measures of active labor market policy								
Occupational training & qualification	0.090	(0.005)***	0.119	(0.005)***	0.001	0.002	0.001	0.002
Other training/ coaching/work trial	0.027	(0.004)***	-0.013	(0.003)***	-0.141	0.003(***)	-0.094	0.002(***)
Wage subsidies in private sector	0.184	(0.007)***	0.124	(0.008)***	0.120	0.008(***)	0.085	0.006(***)
Direct job creation/ supported employment	0.059	(0.008)***	0.024	(0.004)***	-0.102	0.003(***)	-0.131	0.002(***)
Work activity	-0.016	(0.004)	-0.058	(0.006)***	0.150	0.007(***)	0.105	0.005(***)
Pseudo R <sup>2</sup>	0.100		0.192		0.177		0.245	
Observations	32,508		44,372		69,778		105,828	

Note: Significance levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The specification includes also previous unemployment duration and duration in regular employment between 2004 and 2008 and 186 regional dummy variables for Germany. For Germany, disability status is included in the regression analysis; (dy/dy: -0.050; stand. error: 0.029\*).

Chronically unemployed at the end of 2010: Probit regression showing marginal effects; Dependent variable: mainly regularly employed (at least 24 months) during the years 2011–2014.

Source: IEB, FLEED+, Dream database, own calculations.

The results from Table 5 also suggest that the relation between participation in different ALMP measures and subsequent employment among CU is similar to results of impact evaluations in general (see, e.g., the results of the meta-analysis conducted by Card et al. 2018).

In summary, our results suggest the following: socio-demographic characteristics, particularly the educational level, influence the probability to leave CU. Wage subsidies in all three countries and occupational training and qualification in Germany and Finland could facilitate the transition from CU to stable market employment, while other types of measures had no or even a slightly negative influence. The very negative influence of supported employment in Denmark on leaving CU is not surprising given that flex-jobs are the only measure included in this category. As already mentioned, permanently subsidized flex-jobs are a labor market policy program that is unique and does not exist in the other two comparison countries. Although flex-jobbers might consider themselves as workers, they are per CU definition out of open (unsubsidized) market employment.

## 5. Conclusion

In this article, we have developed a new concept to account for a group of people, who are not in stable employment over longer periods of time but cycling often between unemployment, very short-term spells of employment, and time spent in activation measures. Our concept of CU refers to a situation, where a segment of the labor force is principally outside genuine market employment for years. It contributes to a better understanding of the phenomenon of persistent unemployment across welfare states and institutional arrangements. It provides a more realistic picture of problems at the labor market than the conventional measurement of LTU does because the latter underestimates the cumulated detachment from the labor market.

With rich and comparable data from administrative registers, we can provide a detailed follow-up of individual labor market careers and ALMP participation in Germany, Denmark, and Finland over a period of more than 10 years. Despite the heterogeneity of labor market institutions across the three countries under study, we find persistent and considerable CU in all three comparison countries. Chronically unemployed people make up more than 2% of the labor force and between 27% and 37% of all unemployed in all three countries. This finding implies that taking the recurrence of unemployment spells shorter than one year into account worsens the usually favorable LTU performance of Denmark and Finland compared to Germany.

Our analysis further shows that the prevalence of CU is salient among the unemployed with a low education level. Among the groups who face a higher risk of exclusion from stable employment are persons of higher age, particularly in the age group 50–60. Foreign nationality does not result in much lower transition rates to stable employment in Germany and Finland, but it does in Denmark. A higher educational level has a positive influence on the probability to find a stable job in all three countries. The effects of education are particularly large in Denmark. Our analysis on socio-economic characteristics remains, however, incomplete as—due to data protection reasons—we cannot control for health problems or motivational aspects.

While higher activation shares in the Nordic countries, particularly in Denmark, help individuals weakly attached to the labor market to remain ‘active’, that is, limiting non-participation (inactivity) and providing them with income support, higher activation shares do not lead to higher transition rates into stable employment. Less time in activation in Germany results in higher persistence rates in CU *and* higher dropout rates through more transitions into inactivity (out of labor force).

Individuals who do not gain a stable foothold in the labor market over longer periods suffer from lower levels of well-being and risk of social exclusion. Programs that foster social inclusion such as the very generous and closely to regular work structured Danish flex-job program provides a ‘permanent solution’ to a considerable share of CU with reduced work ability. The effects of the Danish flex-job example have also shown that careful targeting by defining narrow criteria for participation is essential to reach those most in need and to avoid the displacement of regular jobs at extraordinary high expenses.

With certain limitations of our analysis in mind, it has become clear that in developed welfare states, unemployment of chronic character is a much wider problem than what conventional statistics reveal, and that sustainable integration into gainful

employment at the open labor market is a distant goal for a considerable share of the unemployed. Just about 15% in Germany and Finland and about 11% in Denmark of those chronically unemployed at the end of 2008 were mainly employed (at least 18 months out of 24 months) five years later. In the end, activation policy is a way to live with CU, not a way to overcome it.

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## Notes

<sup>1</sup>This holds for statistics based on register as well as survey data (e.g., the EU Labour Force Survey). According to the ILO Labour Force concept, non-employed people are either unemployed (out of work but available and actively looking for work) or economically inactive (out of labour force) because they are not available and/or not actively seeking for work. Individuals persistently out of work and not available for the labor market such as those in full-time studies, severely ill, having care obligations, being in early retirement, etc., are not counted as chronically unemployed in our analysis.

<sup>2</sup>During our observation period, the maximum duration of benefit receipt in *Finland* was two years. In *Germany*, the duration of unemployment (insurance) benefit entitlement depends on age. For unemployed aged less than 50 years, the maximum duration is 12 months and for unemployed aged 58 years and older it is 24 months. In *Denmark*, the maximum period of receiving unemployment insurance benefit was 4 years in most of our observation period but was reduced to maximum 2 years in a political reform from 2010 after many years of political discussions about the length and generosity of the unemployment insurance system.

<sup>3</sup>Datta et al. (2010, 2015) show that the transition rate into non-subsidised employment before the 2013 reform tended toward zero and the inflow to disability pension—a major goal of the set-up of flex-jobs—was nearly unaffected. The labor market participation of previously inactive flex-job participants was 33% higher than for non-participants but at the expense of a displacement effect of regular jobs, estimated at 20%.

<sup>4</sup>Germany, for example, has been excluded from cross-country studies exploiting the longitudinal dimension of EU-SILC. Until 2020, the German EU-SILC has been provided only as a cross-sectional dataset.

<sup>5</sup>However, we did also calculate CU as a percentage of total unemployment (see Table 2). Here, chronically unemployed make up between 27% and 37% of all unemployed in 2013 in all three countries.

<sup>6</sup>Our *activation share* is ALMP participation days/days in labor force over a period of time (here two years), while the conventional *activation rate* is ALMP participants/ALMP participants + unemployed at a given point of time.