



# Nonstandard Employment in the Nordics – Toward Precarious Work?<sup>1</sup>

■ **Stine Rasmussen<sup>2</sup>**

*Associate Professor, Aalborg University, Center for Labour Market Research (CARMA), Denmark*

■ **Jouko Nätti**

*Professor, University of Tampere, Faculty of Social Sciences, Finland*

■ **Trine Pernille Larsen**

*Associate Professor, University of Copenhagen, Employment Relations Research Centre (FAOS), Denmark*

■ **Anna Ilisøe**

*Associate Professor, University of Copenhagen, Employment Relations Research Centre (FAOS), Denmark*

■ **Anne Helene Garde**

*Professor, National Research Centre for the Working Environment, Denmark*

## ABSTRACT

This article examines nonstandard employment and precariousness in four Nordic countries (Denmark, Sweden, Finland and Norway). Drawing on data from the Labour Force Survey from 1995 to 2015, the article investigates and compares recent developments of nonstandard employment in the countries and analyzes whether fixed-term contracts, temporary agency work, marginal part-time work and solo self-employment have precarious elements (measured as income or job insecurity). We conclude that nonstandard employment has remained rather stable in all four countries over time. However, although nonstandard employment seems to be largely integrated in the Nordic labor markets, it still entails precarious elements in certain countries in particular. Norway and Denmark stand out as having less insecure labor markets, while Finland and Sweden have more precariousness associated with nonstandard employment. We argue that these differences are explained by differences in the institutional contexts in the countries.

## KEYWORDS

*income insecurity / job insecurity / nonstandard employment / Nordic labor markets / precariousness*

## Introduction

There is a growing academic interest in the so-called nonstandard employment forms (NSEs), which are understood as employment arrangements that deviate from the standard employment relationship, which is typically defined as full-time employment of indefinite duration and is a part of a subordinate employer-employee relationship

<sup>1</sup> You can find this text and its DOI at <https://tidsskrift.dk/njwls/index>.

<sup>2</sup> Corresponding author: Stine Rasmussen, Center for Labour Market Research (CARMA), Department of Political Science, Aalborg University, Denmark. E-mail: [sra@dps.aau.dk](mailto:sra@dps.aau.dk).

(ILO 2016; Kalleberg 2000). Such nonstandard working arrangements have become more widespread across countries, sectors and occupations (Eurofound 2017). Thus, NSE is no longer considered as a transient or marginal phenomenon on European labor markets.

The recent growth in NSE across Europe is often linked to the macroeconomic conditions and to more general changes in the organization of work. Changes in the economic structures, globalization and technological advancements are examples hereof. Also, the recent rise in NSE is often associated with employers' needs for an increasing flexible workforce to match competition (ILO 2016, 157ff). In continuation hereof, ample research perceives NSE as less favorable and investigates the risks and negative sides associated with NSE. Thus, NSE is often described as more insecure than standard employment or even vulnerable or precarious. For instance, research points toward lower pay, fewer rights and less employment and social protection, less representation and fewer opportunities for career advancement compared with standard employment (Eurofound 2010; 2017; ILO 2016; McKay et al. 2012).

In cross-European studies, the Nordic countries are highlighted as countries, where the uncertainties associated with NSE are less prevalent (Broughton et al. 2016). The explanations are often that the Nordic welfare states are more egalitarian and inclusive, have relatively high levels of social security, decent wages, high union densities and collective bargaining combined with comprehensive welfare policies. Therefore, in these countries, flexible employment arrangements are not entirely unregulated or unprotected, and working in NSE is not necessarily the same as being in an insecure labor market position (Andersen et al. 2014).

However, there is a lack of knowledge of the uncertainties related to NSE forms in a Nordic context, and only few studies compare precarious elements of NSE across the Nordic countries and address the potential consequences of NSE (Furåker 2013; Nätti 1993; Oke et al. 2016). Indeed, most research is within-country studies that explore uncertainty, vulnerability and precariousness from different theoretical standpoints in a specific national context, which makes a Nordic comparison and understanding difficult. This article offers a comparative analysis of precarious employment in the Nordic countries based on comparative data from the European Labour Force Survey. In this context, and as we return to later, we argue that precarious employment should be measured by using multiple indicators due to precariousness being a multi-dimensional phenomenon. Our focal point is to

- map the recent development in NSE in the Nordic countries (Denmark, Sweden, Finland and Norway) since 1995;
- explore to what extent these NSE forms have precarious elements;
- understand and possibly explain similarities and differences between the countries in terms of both the development in NSE forms and the degree of precariousness associated with the employment forms.

The two main theoretical concepts of interest are NSE and precarious work. Thus, the article first defines these two concepts by reviewing existing literature, primarily the Nordic literature. In this section, we also clarify which forms of NSE and dimensions of precariousness we focus on in the analysis. We then present the empirical data and the empirical indicators used to measure NSE and precariousness and present the used

statistical methods. Finally, the empirical findings are discussed along with the concluding remarks.

## **Theoretical background and previous research: nonstandard employment and precariousness**

Ample research deals with NSE, but the literature is somewhat unprecise on definitions. Besides NSE, terms like alternative work arrangements, atypical employment, flexible work forms, new forms of work and sometimes also vulnerable and precarious work are used (for an overview of the different terms, see Kalleberg 2000, 341). However, despite these differences, the common trait is an interest in employment forms that deviate from the standard employment relationship understood as full-time open-ended positions (ILO 2016, 7–9; Kalleberg 2000, 341).

NSE is often conceptualized as part-time employment, distinct forms of temporary employment [fixed-term contracts, temporary agency work (TAW), casual work etc.] and self-employment without employees. These are the predominant forms of NSE in many countries. However, in reality, NSE covers an array of employment forms and work arrangements and is closely linked to distinct national context and traditions. For instance, zero-hour contracts are increasing and quite widespread in countries like the UK, Ireland and Austria (Broughton et al. 2016). Likewise, part-time employment is common in the Netherlands and the Nordic countries, but quite marginal in some of the Eastern European countries (Broughton et al. 2016). In a Nordic context, ample research on NSE has often focused on the most common forms of NSE on the Nordic labor market such as part-time employment and fixed-term contracts (Berglund et al. 2017; Håkansson 2001; Ilsøe et al. 2017; Larsen 2011; Nätti 1993; Neergaard 2016; Scheuer 2011; Skollerud 1997; Svalund 2013). More recent studies also focus on TAW, solo self-employment, digital platform work and zero-hour contracts (Håkansson & Isidorsson 2015; Ilsøe & Madsen 2017; Neergaard 2016; Scheuer 2017; Thörnquist 2015). However, most Nordic studies are single-country rather than cross-national studies. Such research reveals that the Nordic countries fare comparatively well when it comes to cushion the risks of precarious employment often associated with nonstandard employment due to their densely regulated labor markets and citizen-based welfare protection (Campbell & Price 2016; Hipp et al. 2015). However, the few intra-Nordic comparisons also point to important cross-national variations in the Nordics where the institutional framework in terms of social security, employment protection and collective bargaining seem to account for the intra-Nordic variations in the incidence of nonstandard employment (Nätti 1993) as well as the job quality (Furåker 2013), take-up of sick leave and low pay among nonstandard employees (Oke et al. 2016).

The academic literature agrees that NSE is not by definition precarious, but to what extent NSE forms are associated with uncertainty must be understood and assessed within the specific national and regulatory context they exist in (Broughton et al. 2016). However, the focal point of such studies is often the negative sides of NSE where terms such as vulnerability or insecurity and lately precariousness has gained increased footing in the literature. Precariousness is typically associated with Guy Standing's use of the term, where he argues that a new precarious class is emerging (Standing 2011; 2014). However, the concept dates back to French sociologists in the 1970s. Here, it was first

used to capture a more general situation of insecurity or poverty, where employment precariousness was only a minor part (Barbier 2004, 9–10). Today, precariousness is mainly associated with employment precariousness and is conceptualized as a ‘state of threatening insecurity or risk’ (Olsthoorn 2014, 423) and as ‘employment that is uncertain, unpredictable and risky, from the point of view of the worker’ (Kalleberg 2009, 2). In addition, the literature is somewhat ambiguous in terms of defining what genuinely constitutes precariousness (Olsthoorn 2014; 423). Some commentators link precariousness to work-related stress and health issues (Gash et al. 2007; Quinlain et al. 2001). Others emphasize the regulatory and protective gaps that precarious workers may experience in terms of employment and social protection rights (Grimshaw et al. 2016). In addition, income inequality, risks of low wage jobs and employees’ transition to full-time positions have also been subject to extensive research (Berglund et al. 2017; Booth et al. 2002; Gash 2008). Ample research also stresses that precariousness is a multidimensional phenomenon (Broughton et al. 2016; Kalleberg 2014, 2), which calls for multiple indicators and more integrated empirical measures.

Research on NSE in the Nordic countries is just as divergent. First, few Nordic studies use the term precariousness when examining NSE (Håkansson & Isidorsson 2015; Pyöriä & Ojala 2016; Rasmussen & Madsen 2017). Instead, concepts like dualization (Svalund 2013), labor market marginalization (Svalund & Berglund 2017), outsiders (Larsen 2011) and working poor (Ilsøe 2016) are used to capture the uncertainty. Second, the Nordic studies diverge in their focus on uncertainty with examples of research on income issues (Gash 2005), employment security (Håkansson & Isidorsson 2015), quality of work (Pyöriä & Ojala 2016), regulatory and protective issues (Larsen & Mailand 2018; Rasmussen et al. 2016; Scheuer 2017; Thörnquist 2015) and transitions into stable employment (Håkansson 2001; Nätti 1993; Svalund & Berglund 2017). The overall learning from such studies is that NSE, in general, is associated with increased risks of insecurity compared with standard employment, but this varies across NSE forms.

Despite different perspectives and conceptualizations in the literature, most studies on precariousness have an interest in economic uncertainty or job/employment instability. Economic uncertainty is mainly about the ability to secure a decent and adequate income, but in some studies, it also concerns the possibilities of gaining access to social security arrangements when unemployed. Job instability refers often to the risks of job loss, which is closely linked to the employment contract as well as an instable employment position or work history such as continuous shifts between unemployment and employment. In this context, we argue that job instability and income insecurity comprise of two profound elements of precariousness and together they can capture a great deal of the insecurity or risk as defined earlier with reference to Kalleberg (2009), which is why we use these indicators to explore the level of precarious employment in the Nordics (see the next section on measures).

In a Nordic context, similar measures of precariousness have been used in single-country studies. A recent Finnish study on precarious work operationalized precarious work using five indicators that reflect both economic instability and job insecurity. Here, precarious work was defined as employees having at least three of the following five criteria: atypical employment, previous unemployment spells, fears of dismissal, poor prospects of employment and low earnings (Pyöriä & Ojala 2016). A recent Swedish

study on TAW used perceived job security (satisfaction with job security) and perceived employment security (perceptions of the chance of getting a similar or better job) as indicators for precarious employment (Håkansson & Isidorsson 2015). We are inspired by these ways of defining precariousness and also by the attempt by Pyöriä and Ojala (2016) to develop integrated measures.

In this article, we argue that precariousness is closely linked to the specific national context. Thus, the Nordic context, including cross-country and intracountry variations, is pivotal to understand precariousness in the Nordics. When we later assess the precarious character of the NSE forms, we therefore consider the specific regulatory and protective frameworks that exist in the Nordic countries. Secondly, our understanding of precariousness is in line with Olsthoorn and Kalleberg and is thus defined as an employment status that is unstable, uncertain and undesirable from the perspective of the worker. In this context, when measuring precarious elements, we are mainly concerned with perceived insecurity. We also draw on literature that focuses on economic uncertainty/income insecurity and job/employment instability, since these are two important aspects of precariousness. In the next section, we describe how we have empirically constructed and indexed these two aspects as indicators of precariousness.

## Data

We use data from the European Union Labour Force Survey (EU-LFS), as it enables us to conduct a comparative cross-country analysis. We use annual data for Denmark, Finland, Norway and Sweden for the years 1995–2015. However, we excluded Iceland due to a very low sample size in the Icelandic LFS. The original numbers of respondents vary considerably between the Nordic countries and years. Therefore, we randomly selected similar annual samples from each country (Denmark  $N = 231,754$ , Finland  $N = 231,399$ , Norway  $N = 231,847$  and Sweden  $N = 231,288$ ). The analysis focuses on citizens aged 15–64 in employment ( $N = 926,288$ ).

## Measures of NSE

We identified four forms of NSE: marginal part-time employment, fixed-term contracts, TAW and solo self-employed. These employment forms are chosen, as they are the most common forms of NSE in the Nordic countries and are typically associated with distinct levels of insecurity as mentioned earlier.

*Marginal part-time work* is here defined as less than 15 hours per week mainly as used in other studies (Grimshaw et al. 2016). Marginal part-time work was identified based on a question on the number of hours per week respondents usually work in their main job (1–80 hours). ‘Usual hours worked’ was defined as the modal value of the actual hours worked per week over a long reference period (4 weeks to 3 months), excluding time of absence from work (e.g., holidays and leaves). If employees are covered by an employment contract, usual hours include contractual hours of work and the overtime that the employee is expected to work regularly.

*Fixed-term contracts* employees were asked if they had a permanent job or work contract of unlimited duration or if they had a temporary job or employment contract of

limited duration. We excluded temporary agency workers from this category and placed them in a separate category (see below).

*Temporary agency work* from 2008 and onwards, employees were asked if they have contract with a temporary employment agency. A temporary employment agency is a firm that places workers it has entered contracts of employment with at the temporary disposal of user firms.

*Solo self-employment* are here defined as persons, who work in their own business, professional practice for the purpose of earning a profit, and who do not employ any other person. We focus on self-employed persons, who have been less than 5 years continuously self-employed in the occupation of her/his current main job (excluding agriculture). Thus, the focus is on relatively new solo self-employed persons without traditional farmers. This group has been a special focus in recent employment policy in order to create new jobs outside the standard employment relationship.

## Measures of precarious work

As argued in the theoretical framework, we focus on two elements of precarious work: income insecurity and job insecurity. We define both elements as integrated measures meaning that they are constructed based on several empirical indicators and subjective dimensions. In the following, the construction of these measures is described.

*Income insecurity* is understood as being in a position, where the level of income is perceived by the person to be inadequate and the person is therefore underemployed. We do not use the actual income as an indicator, as the statutory or collective agreed minimum wage is comparatively high in the Nordic countries (Eurostat 2017) and research suggests that income security often is linked to securing enough work hours rather than receiving the statutory or collective agreed minimum wage in the Nordic countries (Ilsøe et al. 2017). Therefore, income insecurity is based on questions on whether the person is dissatisfied with the number of hours worked in the present job. The idea is that if the person is in a position, where the number of weekly hours is too low or if the person seeks a new job to work more hours than what the current job allows, we then assume that the level of income is inadequate. The person is therefore believed to suffer from income insecurity. Income insecurity is measured by three items:

- Wish to work more hours than the current job allows (item 1)
- Seeking an additional job to add more hours to those worked in present job (item 2)
- Seeking a job with more hours worked than in present job (item 3)

The respondents are asked, if they wish to work usually more than the current numbers of hours (item 1): in 2015, 7% wished to work more hours. The respondents are also asked, if they are looking for another job (8% in 2015), and if so, what the main reason for this is. It is possible for the respondent to answer that he/she is looking for an additional job in order to add more hours to those worked in present job, that is, a secondary job (item 2) (0.3% in 2015). The respondent may also answer that he/she is looking for a new job (not additional), because the number of hours in the present job is not sufficient (item 3) (0.7% in 2015). In the LFS, items 2 and 3 are alternatives, of which the respondent can select only one. All three (partly overlapping) items express

dissatisfaction with the number of hours worked in the present job and thus indicate time-related underemployment according to the ILO definition (ILO 1998). Income insecurity is defined as answering yes to one or more of the above-mentioned questions.

*Job insecurity*, which concerns the uncertainty or instability associated with the job the respondent holds, is measured by two items:

- Is looking for a new job because of risk or certainty of loss or termination of present job (item 4)
- Main activity one year earlier: unemployed (item 5)

Item 4 has to do with the respondents' perception of the risk of losing present job and is questioned as a possible reason to seeking a new job. If the respondent says yes, then he/she is classified as job insecure (item 4) (1% in 2015). Once again, this item and earlier items 2 and 3 are alternatives of which the respondent can select only one. Item 5 is about an insecure work history, which is also understood as a job-related insecurity, since previous research suggests that earlier unemployment experiences predict later perceptions of job insecurity (Kinnunen & Nätti 1994). Here, respondents are asked what their main activity was one year earlier and if they state that they were unemployed, they are classified as job insecure (item 5) (2% in 2015). Job insecurity is defined as answering yes to one or both of the two questions.

## Background and control variables

We also used a number of background and control variables. These included gender (women, men), age (15–29, 30–44, 45–54, 55–64 years), marital status (married, yes/no), education (primary, secondary, tertiary), nationality, student or not, and economic sector. Nationality (national citizens, non-national citizens) is interpreted as citizenship and it corresponds to the country issuing the passport. Economic sector is based on the economic activity classification (NACE) (manufacturing vs. services). In the descriptive analysis in the Appendix, we used a more detailed classification to identify those sectors with the largest share of NSE.

## Statistical methods

First, we map the development of the four selected forms of NSE from 1995 to 2015 by country without adjustments. The figures are based on mean comparisons and they are presented in order to visualize where and what kind of changes have happened over time. Second, the extent of NSE forms by background factors is presented by cross-tabulations in the Appendix. Here, we use the combined 2010–2015 data to increase reliability of the results, because some of the NSE forms cover very small proportion of the employed, especially TAW (1–2%). With the cross-tabulations, we are able to trace the characteristics of nonstandard workers. In the Appendix, we have also shown the distribution for the insecurity measures. Third, we investigate to what extent the four NSE forms have precarious elements. This is done by analyzing differences in the extent of income and job insecurity between persons in nonstandard and standard employment



forms (permanent job and full-time employment) with the combined 2010–2015 data. They were tested with cross-product terms in a linear regression model with adjustment (age, level of education, marital status, nationality and economic sector). We employed linear probability models (LPMs), which is standard linear regression. Coefficients from a LPM may be interpreted as the difference in probability for having a certain value on the dependent variable for units with different values on an independent variable. Also, in LPMs, coefficients are comparable over models, groups and time.

## **Background: the Nordic labor markets and labor market regulation**

Unlike many other countries, legislation plays a comparatively limited role with regard to the regulation of the Nordic labor markets. Wages and working conditions are primarily regulated through multiemployer collective bargaining and collective bargaining coverage is comparatively high. The Nordic industrial relations models are so-called ‘voluntaristic’ where employers’ organizations and unions negotiate and sign collective agreements within each sector and industry (Andersen et al. 2014). Most sectors are covered by sector-level agreements, which to varying degrees allow for company-based bargaining. Although legislation plays a less dominant role in the Nordic industrial relations models, cross-national variations can be observed. For example, Sweden, Finland and Denmark have no statutory minimum wage, while Norway has introduced a legal extension of collective wage agreements in certain areas of the economy. Social partners in Denmark strongly oppose any legislative interference in wage setting mechanisms (Dølvik 2016).

The Nordic welfare states are also important contexts for the voluntarist industrial relations models. Universal access to social assistance, education and further training shape the overall developments on the labor market. Tripartite consultations between the state, employers’ organisations and unions are thus important elements of the Nordic industrial relations models (Andersen et al. 2014). The unemployment insurance system is central to this cooperation – unions often administer unemployment benefits and the state provides funding in addition to the contributions paid by members of the unemployment insurance. The unemployment insurance system is characterized as a ‘Ghent system’ in Denmark, Sweden and Finland.

Also, when we look more specifically at the regulation of NSE, collective bargaining and welfare benefits are important regulatory instruments in the Nordics. Many collective agreements cover different forms of nonstandard work. In some Nordic countries, sector-level agreements implement the important EU directives with regards to nonstandard work such as EU’s directives on part-time, fixed-term contracts and TAW, whereas in other Nordic countries, the implementation is solely by legislation (Andersen 2003). We also find examples of company-based agreements on NSE, where social partners have exploited the increased scope for company-based bargaining to negotiate and sign local agreements that offer more generous entitlements for part-time workers, fixed-term workers and temporary agency workers (Rasmussen et al. 2016). Collective agreements are therefore important regulatory instruments when it comes to nonstandard work in the Nordics, despite the fact that nonstandard employment is less often organized and covered by collective agreements (Scheuer 2017; Svalund & Berglund 2017).



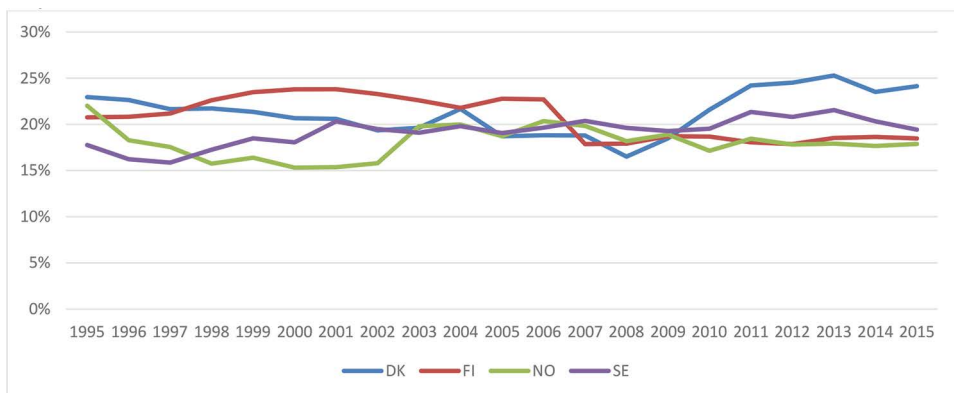
Welfare benefits and the regulation thereof often interact with the take-up of nonstandard employment. In Denmark, for instance, student allowances are often too small to make a living in the large cities and most students thus work part-time to supplement their student allowances. This has created a labor supply of students seeking to work part-time (Ilsøe & Felbo-Kolding 2017). In Finland, there have been government schemes seeking to stimulate self-employment, which has had some effect (Eurofound 2015). The recent reforms of the various benefit schemes not least in Denmark have also affected nonstandard workers' access to such schemes. For example, when the Danish government recently tightened the rules for accessing social assistance and unemployment insurance and increasingly linked this to employment status, this affected in particular nonstandard workers, as they often have and still have great difficulties in meeting the various eligibility criteria (Mailand & Larsen 2018).

## Results

In the sections to come, we present the results from the data analysis on insecurity. However, first, we take a short look at the incidence and development of nonstandard employment in the four countries over time and at a general level (Figs. 1 and 2). Here, nonstandard employment is measured as the total share of persons employed in part-time employment, temporary employment, agency work and solo self-employment out of total employment, which are the four forms of nonstandard employment that we are able to capture with the Labour Force Survey.

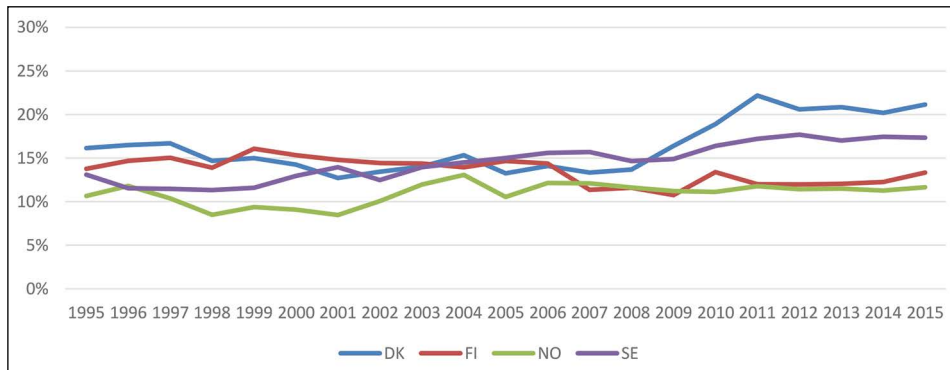
From Figs. 1 and 2, we see that nonstandard employment is most prevalent among women and less so among men. The figures also suggest that Denmark has the highest incidence of NSE among the Nordic countries, where there has been a rapid increase since 2008 and especially up until 2011. In the other three Nordic countries, the development in NSE has remained more stable over time and seems to have slightly declined in Finland and Norway during the last 10 years, while having marginally increased among Swedish men from 2008 and onwards.

**Figure 1:** Proportion (%) of nonstandard forms of employment of total employment in 4 Nordic countries (15–64 years old), 1995–2015, women.





**Figure 2:** Proportion (%) of nonstandard forms of employment of total employment in 4 Nordic countries (15–64 years old), 1995–2015, men.

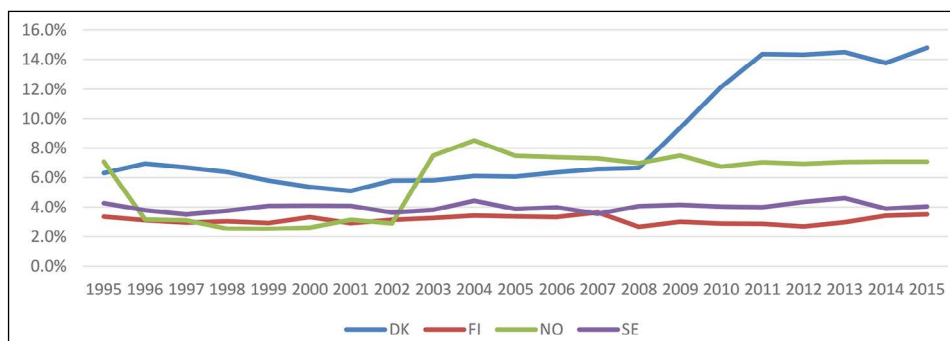


### Marginal part time

Marginal part-time employment (< 15 h/week) has become more widespread in Denmark and Norway since the mid-1990s (Fig. 3). The number of marginal part-time contracts has particularly accelerated in Denmark since 2008 and amounted to 15% of the Danish workforce<sup>1</sup> in 2015 compared to 7% in Norway, 4% in Sweden and 3.5% in Finland in 2015.

When looking into the type of workers holding marginal part-time positions, we find not only wide cross-national but also intrasectoral variations (see Appendix, Table 1 for the following numbers). In all four countries, women, unskilled and young people are more likely to hold contracts of few hours, while the incidence of migrant workers among marginal-part-time workers is lower in Denmark and Norway, but higher in Sweden and Finland. In addition, the gender differences among marginal part-time workers are more pronounced in Norway closely followed by Denmark and then Sweden and Finland. Wide country variations also exist as to the share of young people aged 15–29 in marginal part-time employment, where this figure is four times

**Figure 3:** Marginal part-time in 4 Nordic countries, 1995–2015, percentage of employed population, 15–64 years old.



higher in Denmark (47%) than in Finland (11%) and Sweden (13%), while twice as high in Denmark than Norway (22%). Sector also seems to matter in all four countries. Marginal part-time employment is more common within private and public services than other sectors, but is comparatively higher in Danish private services (35%) followed by Norway (16%), Sweden (8%) and Finland (6%). Likewise, marginal part-time employment is more widespread in other community, social and personal services in Denmark (29%) compared with the three other countries (NO: 18%, FI: 12%, SE: 11%).

The cross-national and intrasectoral variations in marginal part-time employment and not least the rapid increase in Denmark may be explained by a combination of various contributing factors that coincide. For example, the global economic and financial crisis from 2008 hit particularly Denmark hard with a decline in the annual growth rate in GDP of  $-4.9\%$  from 2008 to 2009 and the number of unemployed more than doubled within just one year, which was considerably higher than any previous economic crises in Denmark (Andersen 2013). In the other three Nordic countries, the economic crisis also had a severe impact in Finland ( $-8.3\%$ ) and Sweden ( $-5.2\%$ ), but less in Norway ( $-1.7\%$ ) when measured in declining annual growth rate of GDP between 2008 and 2009 (Eurostat, 2018). However, the unemployment figures rose less rapidly in Norway (0.7 percentage points) Finland (1.8 percentage points) and Sweden (2.1 percentage points) compared to Denmark (3 percentage points) from 2008 to 2009 (Eurostat 2018). Another contributing factor to the rapid increase in Denmark could be a series of recent government reforms, which introduced not only stricter eligibility criteria for unemployment benefits (2010) but also rule changes regarding student allowances, which tightened students' access to such allowances (2008).

Alongside this development, Denmark has also seen a trend within social protection, where social benefits (including social assistance) are increasingly dependent on employment status as well as collective agreement coverage (Mailand & Larsen 2018). In this context, employees with contracts of less than on average eight weekly working hours per month were up until 2016 exempted from being covered by Danish collective agreements as well as the Salaried Employees Act (2009). Likewise, various collective agreements particularly within the retail, hotel and restaurant business operate with a lower hourly minimum wage for young people and students. Young people and marginal part-time workers with contracts of less than 8 weekly working hours are thus cheaper labor than their older peers with contracts of longer hours in that they have no access to the collective agreed social benefits or receive a lower hourly wage (Ilsøe et al. 2017). The combined effects of recent rule changes indicate economic incentives for employers and employees alike to rely on marginal part-time employment, although often for different reasons. The importance of economic incentives seem further underpinned by the fact that marginal part-time workers with less than 12 weekly working hours also fall outside Norwegian labor law and collective agreements (Neergaard 2016). Indeed, Norway has similar to Denmark a higher share of marginal part-time workers compared to Finland and Sweden, which do not offer less generous protection for marginal part-time workers.

Although the share of marginal part-time workers is higher in Denmark and Norway, such workers do not necessarily experience greater job insecurity or income insecurity than their peers in full-time open-ended positions. In fact, Danish marginal part-time workers report of greater job security than their peers in full-time permanent



positions, which stands in sharp contrast to the situation in the other three countries, where marginal part-time workers are more likely to report of job insecurity although important cross-national variations exist (see Table 1).

**Table 1** Income insecurity and job insecurity indicators for marginal part-time 2010–2015 in 4 Nordic countries (%)

	Income Insecurity				Job Insecurity			
	DK	FI	NO	SE	DK	FI	NO	SE
Marginal part-time	16.1	31.0	20.6	34.7	0.8	7.6	2.9	9.1
Full-time, permanent	1.7	5.0	3.7	2.6	2.4	2.3	1.3	1.8
Difference (-points)	14.4	26.0	16.9	32.1	-1.6	5.3	1.7	7.3

Note: Results from linear probability models for analysis of differences in the extent of income and job insecurity between persons in marginal part-time employment and full-time, permanent job in 2010–2015. Sig. (p) <0.001 for all calculations, controls: gender, age, marital status, level of education, nationality and economic sector.

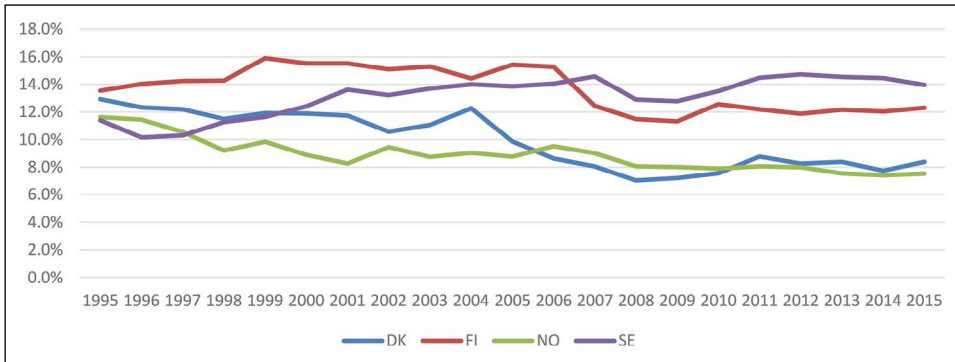
Danish and Norwegian marginal part-time workers seem to experience lower levels of both income- and job insecurity compared to their Swedish and Finnish peers (Table 1). In fact, income insecurity among Finnish (31%) and Swedish (35%) marginal part-time workers are nearly twice as high as in Denmark (16%) and Norway (21%), while level of job insecurity among marginal part-time workers is three times higher in Sweden (9%) and Finland (8%) compared to Norway (3%) and much higher than Denmark, where less than 1% experiences job insecurity. The country variations may be due to marginal part-time is more often involuntary in Finland and Sweden, while typically voluntary in Denmark and Norway (see Appendix, Table 2). Indeed, it is often students in Denmark and Norway that take up marginal part-time employment whilst studying (Larsen et al. 2017). In Finland and Sweden, this is less so the case which also our cross-tabulations confirm (Ilsøe 2016; see Appendix, Table 1).

### Fixed-term employment

In the mid-1990s, the four Nordic countries had rather similar levels of fixed-term employment ranging from 11.4% in Sweden to 13.5% in Finland (Fig. 4). However, since 1995, fixed-term employment has evolved quite differently in the four countries. In Denmark and Norway, the share of fixed-term employees has declined, while in Finland and Sweden, fixed-term employment increased up until the Millennium. Since then, the share of fixed-term workers has declined in Finland, while in Sweden, the number of fixed-term workers remains comparative high throughout the 2000s (Fig. 4). In 2015, 14% of the total employment in Sweden was fixed-term employment compared to 12% in Finland, 8% in Norway and 7% in Denmark (Fig. 4).

Despite differences in the levels of fixed-term employment between the countries, the composition of workers in fixed-term employment is more alike (Appendix, Table 1). In all four countries, a larger share of women is working in fixed-term contracts

**Figure 4:** Fixed-term employment in 4 Nordic countries, 1995–2015, percentage of employed population, 15–64 years old.



compared to men. Fixed-term employment is also mainly a phenomenon for young people. Here, Sweden and Finland stand out with a relatively high share of employed persons between 15 and 29 years (38% and 35% compared to around 20% in Denmark and Norway). Non-nationals are also more likely to be employed in fixed-term contracts in all countries, again with a higher share in Sweden (23% of all employed non-nationals compared to 11–17% in the three other countries). In addition, fixed-term employment is more common in the service sector (trade, hotels, restaurants, other community, social and personal services) and within the public sector (public administration, education, health, etc.) in all four countries.

One important explanation as to the rapid increase in Finland and Sweden in the mid-1990s seem closely related to the economic crisis that hit the two countries in the early 1990s, which resulted in Sweden withdrawing from the European Monetary union and rising unemployment rates, rapid decline in annual GDP growth rates in the two countries along with increased outsourcing of public services throughout the 1990s (Bergh 2011). Research suggests that the economic situation may have left employers rather cautious about recruiting employees in open-ended contracts and thus opting for more flexible forms of employment such as fixed-term contracts (Green & Livanos 2015; Hipp et al. 2015).

Another important explanation as to why Sweden continues to stand out in terms of their level of fixed-term employment may be closely linked to the cross-national differences in the employment protection regulations (EPLs). Sweden is the only Nordic country that gradually has liberalized the use of temporary employment contracts, while maintaining employment protection for ordinary employees. Employment protection in Sweden is stipulated in the Employment Protection Act from 1974, but was changed in 1982, 1997, 2007 and 2016 (Berglund et al. 2017). For instance, in 1997, it became possible for employers to employ up to five persons on temporary contracts without any specific reason and in 2007 employers could have an unlimited number of temporary employees without any specific reason (Berglund et al. 2017, 28–29). These changes have without doubt eased employers to use temporary contracts. The more relaxed EPL for temporary employees in Sweden is shown in Table 2; Norway has the strictest

EPL (3.42), which means that temporary contracts are more difficult for employers to use, while Sweden has the lowest level (1.17). Denmark and Finland are placed in the middle. Furthermore, all four countries are quite similar in terms of EPL for permanent employees (ranging from 2.17 in Finland to 2.52 in Sweden), but Sweden has the strictest EPL for permanent workers. This means that Sweden has the largest gap in EPL between permanent employees and temporary employees, where permanent employees are most difficult to lay off in Sweden and temporary contracts are most easy to use.

**Table 2** OECD EPL-index 2013 for 4 Nordic countries

	Protection of permanent workers against individual and collective dismissals	Regulation on temporary forms of employment
Sweden	2.52	1.17
Denmark	2.32	1.79
Norway	2.31	3.42
Finland	2.17	1.88

Source: OECD (2013)

According to the literature, strong employment protection for permanent employees makes it more difficult and more expensive for employers to layoff the employees. This makes the employers less willing to employ in ordinary contracts and more willing to use contracts of limited duration, if it is possible. If there is a loose regulation concerning temporary employment forms, then employers will offer these contracts rather than permanent contracts in order to create external numerical flexibility (for instance described in OECD 2013, 69). This seems to be the case in Sweden, where numerical flexibility is increased through the use of temporary employment contracts, and this may explain the higher level of fixed-term employment compared to the levels in Denmark, Norway and Finland.

The two indicators for precariousness (Table 3) reveal that a higher share of fixed-term employees in Sweden experience income insecurity compared to fixed-term

**Table 3** Income insecurity and job insecurity indicators for fixed-term contracts 2010–2015 in 4 Nordic countries (%)

	Income Insecurity				Job Insecurity			
	DK	FI	NO	SE	DK	FI	NO	SE
Fixed-term	10.5	14.5	15.6	22.4	9.6	21.5	6.8	22.2
Full-time, permanent	1.6	5.1	3.8	2.8	2.2	2.3	1.3	1.8
Difference (-points)	8.9	9.3	11.8	19.6	7.4	19.2	5.6	20.4

Note: Results from linear probability models for analysis of differences in the extent of income and job insecurity between persons in fixed-term employment and full-time, permanent job in 2010–2015. Sig. (p) = 0.000, controls: gender, age, marital status, level of education, nationality and economic sector.

employees in the three other countries. In Sweden, 22% of all fixed-term employees are income insecure, while it is the case for 10–16% in the three other countries. Also, the difference in income insecurity between fixed-term employees and permanent employees is largest in Sweden (20 percent points compared to 9–12 percent points in the three other countries).

For job insecurity, the picture is somewhat different. Here, both Sweden and Finland have higher job insecurity compared to Denmark and Norway. One explanation for the high job insecurity in Finland and Sweden is the high proportion of involuntary nature of fixed-term contracts. In Finland, 68%, and in Sweden, 61% of fixed-term employees reported that they could not find a permanent job (years 2010–2015). In Denmark (47%) and in Norway (52%), the corresponding figures were lower (see Appendix, Table 2). The explanation for Sweden not being in the top here may be that despite a more liberal use of temporary employment contracts, the Swedish regulation states that temporary employees must be employed permanently, if they have worked more than 5 years with the same employer (Berglund et al. 2017, 29). It is likely that this regulation decreases the job insecurity a bit in Sweden, since there is awareness on the possibility of moving into stable employment. Nonetheless, these numbers suggest that fixed-term employment seems to have more precarious elements than fixed-term employment in most of the other Nordic countries. Others have already argued that Sweden is at risk of having a dual labor market, among other things because of the gap in employment protection for temporary and permanent employees (Berglund et al. 2010, 212; Thelen 2014, 173–192). Our findings support this view.

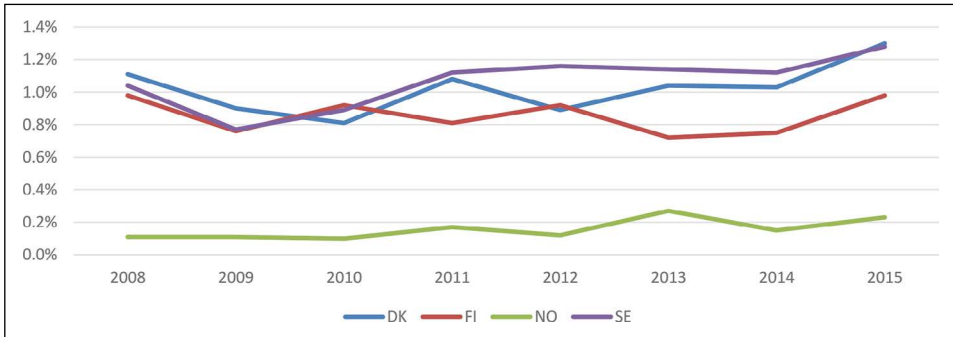
### Temporary agency work

Temporary agency work (TAW) is a relatively new form of employment in all four countries. TAW started to emerge in its current form after liberalizing the legal monopoly of public job centers to provide employment services by allowing private companies to provide TAW services in 1990 in Denmark, in 1993 in Sweden, in 1994 in Finland and in 2000 in Norway (Eklund 2011). The share of temporary agency workers continues to be low compared to other types of NSE in all four countries: 1.3% of the workforce are TAWs in Denmark and Sweden compared to 1% in Finland and 0.2% in Norway (see Fig. 5). Other surveys report of higher levels of TAW in Norway and estimate that 1.2% of the Norwegian workforce are temporary agency workers, indicating that the share of TAW is rather similar across the four Nordic countries, although the LFS operate with a lower incidence of such forms of employment in Norway (Neergaard 2016).

Particularly, young people and migrants take up TAW in all four countries, although important cross-national and intrasectoral variations exist (see Appendix, Table 1). For instance, Sweden and Finland have higher shares of young people aged 15–29 in TAW compared to Denmark and Norway. Our cross-tabulations also point to intrasectoral variations, where TAW is more widespread within Danish manufacturing and construction services (1.2%) as well as public services (1.2%). In Finland, TAW is also seen in the manufacturing, construction (1.1%) and private services (2.4%), while in Sweden (5%) and Norway (0.3%), TAW is more common within the transport sector. The recent development within TAW also seems closely related to recent governmental



**Figure 5:** Temporary agency work in 4 Nordic countries, 1995–2015, percentage of employed population, 15–64 years old.



reforms as well as sensitive to economic cycles. For example, the Danish TAW sector was hit hard when the economic crisis hit in 2008, and figures suggest that within just one year, the annual turnover in the Danish TAW sector was reduced by 36%. A total of 13% of private temporary work agencies (TWAs) went bankrupt and the numbers of temporary agency workers nearly halved (Larsen & Mailand 2014). A similar development was seen in the other Nordic countries, and since then, the TAW sector has slowly recovered (Berglund et al. 2017; Rasmussen et al. 2016).

When examining income and job insecurity, we find that TAW is often associated with increased risks of job and income insecurity. Temporary agency workers in Finland experience higher risks of income- and job insecurity compared to their peers in the other three Nordic countries (see Table 4). Finland also has the widest gap between full-time permanent employees and temporary agency workers compared to Denmark, Norway and Sweden when it comes to job insecurity and income insecurity. Thus, TAW entails elements of precariousness in all four countries, but such risks seem highest in Finland, followed by Denmark, then Sweden and Norway. One explanation could be that in Finland and Denmark, the proportion of marginal part-time work is more common among TAW than Norway and Sweden. Moreover, the share of involuntary part-time among temporary agency workers is also higher in Denmark and Finland compared to Norway and Sweden (see Appendix, Table 2).

**Table 4** Income insecurity and job insecurity indicators for TAW 2010–2015 in 4 Nordic countries (%)

	Income insecurity				Job insecurity			
	DK	FI	NO	SE	DK	FI	NO	SE
Temporary agency work	17.0	25.8	12.1	9.2	9.3	21.9	8.8	15.4
Full-time, permanent	1.4	4.9	3.6	2.5	2.2	2.3	1.2	1.7
Difference (-points)	15.7	20.9	8.5	6.7	7.1	19.6	7.6	13.7

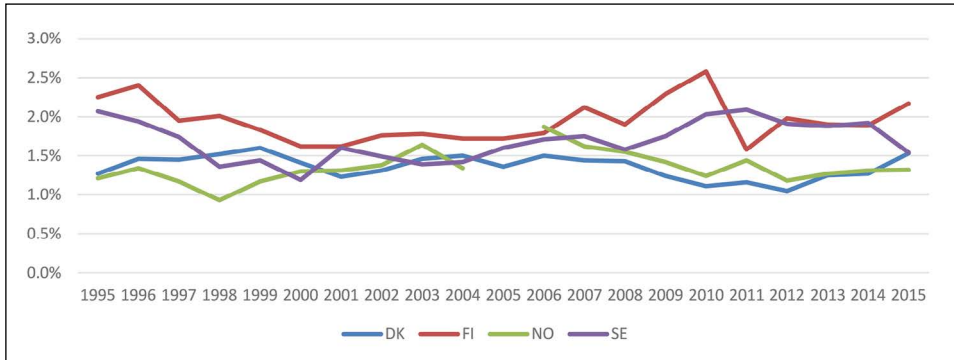
Note: Results from linear probability models for analysis of differences in the extent of income and job insecurity between persons in TAW and full-time, permanent job in 2010–2015. Sig. (p) = 0.000, controls: gender, age, marital status, level of education, nationality and economic sector.



### Solo self-employment

Figure 6 shows that solo self-employment is less widespread in all four Nordic countries, ranging from 1.3% of total employment in Norway to 2.2% in Finland in 2015. The share of solo self-employed in the countries have been relatively stable over time and have rarely varied with more than one percent point between 1995 and 2015 (Fig. 6).

**Figure 6:** Solo self-employment (0–4 years) outside agriculture in 4 Nordic countries, 1995–2015, percentage of employed population, 15–64 years old.



Our cross-tabulations suggest that solo self-employed in all four countries share similar characteristics (see Appendix, Table 1). A larger share of men are solo self-employed, their average age is around 40 years and non-nationals are more likely to be solo self-employed. Furthermore, solo self-employment is found in similar economic sectors across the countries. There are larger proportions of self-employed within transportation, storage, communication, financing and business activities and especially within other community, social and personal services. This is most distinct in Finland, Sweden and Norway.

When we investigate the precarious elements of solo self-employment (Table 5), we find that in all four countries, larger shares of solo self-employed are both income insecure and job insecure compared to persons in full-time and permanent employment. However, income insecurity is more common than job insecurity, which may be due to

**Table 5** Income insecurity and job insecurity indicators for solo self-employed 2010–2015 in 4 Nordic countries (%)

	Income Insecurity				Job Insecurity			
	DK	FI	NO	SE	DK	FI	NO	SE
Solo-self-employed	6.8	18.0	12.3	13.3	5.0	7.8	3.2	7.6
Full-time, permanent	1.4	4.8	3.7	2.5	2.3	2.3	1.3	1.8
Difference (-points)	5.4	13.2	8.6	10.8	2.7	5.4	2.0	5.9

Note: Results from linear probability models for analysis of differences in the extent of income and job insecurity between solo self-employed and full-time, permanent job in 2010–2015. Sig. (p) = 0.000, controls: gender, age, marital status, level of education, nationality and economic sector.



solo self-employment often is a voluntarily decision, which stands in sharp contrasts to other forms of NSE as mentioned in the earlier sections. In other words, a solo self-employed may be less worried about the termination of the present job, as they cannot be dismissed in a similar way as a wage-earner.

Table 5 also indicates that solo self-employed experience higher levels of income insecurity in Finland and followed by Sweden. A similar tendency is found for job insecurity, but less pronounced. Overall, the findings suggest that solo self-employment have most precarious elements in Finland compared to the three other Nordic countries. However, if we compare the levels of job and income insecurity for solo self-employed with the level for the three other forms of NSE in the four countries, then the precarious elements for solo self-employed seem to be at the low end (Tables 1, 3, 4 and 5). This suggests that solo self-employment is less insecure than other forms of NSE despite the fact that solo self-employed are one of the groups of nonstandard workers with least regulation and protection, since they operate not only under individual conditions, but are also typically without collective agreement coverage. On the one hand, this implies more insecurity than the other forms of NSE. However, our measures for income and job insecurity mainly capture discontent with present job or being in an undesirable situation, since we ask about seeking other employment either due to too few hours or fear of job termination. If we assume that solo self-employment to a larger degree is a voluntary choice made by someone who is attracted to this employment form, then solo self-employed will probably not seek other employment or additional employment, and therefore income and job insecurity is less widespread for this group.

## Discussion

In this article, we examined the recent development of four forms of NSE in Denmark, Norway, Finland and Sweden from 1995 to 2015. We also explored selected precarious characteristics of these employment forms by assessing the degree of income and job insecurity associated with marginal part-time work, fixed-term contracts, TAW and solo self-employment.

First of all, when investigating the development of NSE in the Nordic countries over time, the general picture is a high degree of stability in most countries with the exception of Denmark, which has seen a recent increase in NSE, especially since 2008. In fact, Denmark has the highest share of NSE among the four countries in 2015 (concluded from Figs. 1 and 2), although country-variations exist across distinct forms of NSE (Figs. 3–6). In this context, TAW and solo self-employment have remained fairly stable and at a comparatively low level in all four countries since 1995. Cross-country variations exist as to the development in marginal part-time employment, which has been relatively stable in Finland, Norway and Sweden over time, but increased rapidly in Denmark since 2008. A similar tendency is seen for fixed-term employment, but here Sweden has witnessed an increase in fixed-term employment, while the other three countries have seen a decline since the turn of the Millennium. Therefore, our analyses point to significant intrasectoral variations, which corroborate with other research results that have shown that the incidence of NSE is rapidly growing in some parts of the Nordic labor markets, for instance the private services (Ilsøe *et al.* 2017).

We also aimed to explain the most dominant cross-national differences in the development of NSE. For Denmark, the rise in marginal part-time is likely to be explained by various factors, which seem to coincide such as the economic crisis in 2008 and an array of recent government reforms. Economic recessions may also account for the increase in fixed-term contracts in Sweden and Finland during the 1990s, while recent government reforms may explain why such forms of fixed-term employment have declined in Finland while continued to increase in Sweden. For example, Sweden has recently relaxed the regulation of temporary employment while maintaining a rather strict employment protection for standard employees. Therefore, in the Swedish case, employers seem to use temporary employment contracts to increase numerical flexibility to a larger degree than in the three other countries.

We also looked into two precarious elements for the four NSE forms. Here, the general picture is that all four forms of NSE in all four Nordic countries are associated with more job and income insecurity compared to full time and open ended employment. The only exception is marginal part time in Denmark, where experienced job insecurity is actually less than standard employment. This may be due to the fact that it is typically students that voluntary take-up marginal part-time employment whilst studying (Larsen et al. 2017).

Job and income insecurity appear differently in relation to the distinct forms of NSE. Job insecurity – which among other things concerns the risk of job loss – is mainly linked to fixed-term employment, which is temporary by nature, and to TAW, which to some extent also have a temporary character, even though it is possible for temporary agency workers in Norway, Sweden and Finland to have open ended contracts. Income insecurity is to a larger extent associated with all the NSE forms but seems to be most widespread in relation to marginal part-time. This makes sense, since the measure on income insecurity is about being underemployed, which probably is most severe for marginal part-timers. Furthermore, the four forms of NSE seem to be associated with different levels of income and job insecurity. Across the four countries, solo self-employed has the lowest levels of income and job insecurity. However, it does not necessarily mean that solo self-employed are without risks of precariousness. Instead, it is more likely that our findings are related to the way we measure job and income insecurity where the voluntary dimension seem more widespread among solo self-employed than the other forms of NSE examined.

Our analysis also points to interesting cross-country variations. NSE forms are associated with the lowest level of job and income insecurity in Denmark and Norway and with the highest level in Finland and Sweden. In Denmark, the share of income insecurity for the four NSE forms ranges from 7% of the solo self-employed to 17% for TAW. In Norway, it ranges from 12% for solo self-employed to 21% for marginal part time. In Finland and Sweden, the share of income insecurity ranges from 9% to 35% in Sweden and 15% to 31% in Finland. Similar tendencies are found with regards to job insecurity. In addition, the differences in percentage points for NSE and standard employment are in general lower in Denmark and Norway compared to Finland and Sweden. This suggests that Norway and Denmark have more inclusive labor markets than Finland and Sweden, where NSE appears associated with higher risks of precariousness when measured as job and income insecurity.

In the analysis, we point to the fact that some of the NSE forms such as marginal part-time and fixed-term work are more likely to be involuntary in Finland and Sweden



compared to Denmark and Norway and this may explain some of the cross-country variations in terms of job and income insecurity. However, the cross-country variations are also likely to be caused by differences in the institutional frameworks that surround the labor markets in the four countries, even though they also share many similarities. For instance, it is well-known that Denmark is the typical flexicurity country with high labor market flexibility combined with relatively generous social security (despite government reforms in later years that has made the security system less generous). It is also known for an extensive active labor market policy, and studies have already highlighted this institutional mix as conducive for an inclusive labor market. For instance, in a larger European study on precariousness, Broughton and colleagues use this argument to explain why Denmark seems to have a low level of precariousness associated with several forms of NSE (Broughton *et al.* 2016). The same argument was used in a Nordic comparative study on mobility in the Nordic countries, where Denmark stood out with relatively high mobility patterns, also to and from NSE and to and from employment and positions outside the labor force (Berglund *et al.* 2010). This suggests that the Danish labor market may be less segmented since it is possible to change between different labor market positions. For the Danish case, it is possible that the perception of insecurity when employed in NSE forms is less present due to the specific institutional mix that allows for transitions between both standard and not standard employment forms. In that study, the same point was made for Norway that also had high mobility rates. Norway does not have a typical institutional flexicurity-mix just like Denmark, but the study concluded that the Norwegian model has a high degree of employment security (Berglund *et al.* 2010), which may work in the same way as the Danish case when it comes to a lower degree of income and job insecurity. Furthermore, and as we have already touched upon in the analysis and as other studies also have argued (Berglund *et al.* 2010, 212; Thelen 2014, 173–192), Sweden seems to have a more dual labor market due to a more strict employment protection, which may explain a higher level of job and income insecurity in our analysis.

## Conclusion

The main contribution of this article has been of empirical character, where we have analyzed the development of NSE forms in the Nordic countries since 1995 and investigated the degree of precariousness associated with NSE forms based on comparative data from the European Labour Force Survey. The article is based on the argument that there is a lack of comparative Nordic studies, especially on precariousness associated with NSE forms. One main finding in terms of the development of NSE is that NSE seems rather stable in the countries during the period investigated, but that some of the countries have taken different paths. Denmark has seen a rise in marginal part-time in later years, while fixed-term employment in Sweden is on the rise. Another main finding is that NSE is associated with precariousness in all four countries, but the level of insecurity seems lower in Denmark and Norway compared to Sweden and Finland. We have explained this with reference to differences in the institutional settings in the countries and differences in the degree of voluntariness associated with the employment forms. Thus, we also provide a more theoretical contribution to drivers for NSE and precariousness.

## References

- Andersen, S. K. (2003). EU og det nordiske spil om lov og aftale: de nordiske lande og de europæiske aftaler/direktiver om deltid og tidsbegrænset ansættelse, Stockholm: SALTSA. [EU and the Nordic game on law and agreements: the Nordic countries and the European agreements/directives on part-time and fixed-term employment].
- Andersen S. K., Dølvik J. E. & Ibsen C. L. (2014). Nordic labour market models in open markets, Report 132, Brussels: European Trade Union Institute.
- Barbier, J. C. (2004). A comparative analysis of 'employment precariousness' in Europe, Cross-National Research Papers 7(3), Paris: European Research Centre.
- Bergh, A. (2011). The rise, fall and revival of the Swedish welfare state, IFN working paper 873, Stockholm: Research centre for industrial economics.
- Berglund, T., Aho, S., Furåker, B., Madsen, P. K., Neergaard, K., Rasmussen, S. & Virjo, I. (2010). Labour market mobility in the Nordic welfare states, *Temanord* 2010: 515, Copenhagen: Nordic Council of Ministers. doi: <http://dx.doi.org/10.6027/tn2010-515>.
- Berglund, T., Håkansson, K., Isidorsson, T. & Alfonsson, J. (2017). Temporary employment and the future labour market status, *Nordic Journal of Working Life Studies* 7(2): 27–47. doi: <https://doi.org/10.18291/njwls.v7i2.81593>.
- Booth, A. L., Francesconi, M. & Frank, J. (2002). Temporary jobs: Stepping stones or dead-ends?, *The Economic Journal* 112(480): F189–F213. doi: <https://doi.org/10.1111/1468-0297.00043>.
- Broughton, A., Green, M., Rickard, C., Swift, S., Eichhorst, W, Tobsch, V., Magda, I., Lewandowski, P., Keister, R., Jonaviciene, D., Ramos Martín, N. E., Valsamis, D. & Tros, F. (2016). Precarious employment in Europe: patterns, trends and policy strategies, Brussels: Policy Department A/European Union.
- Campbell, I. & Price, R. (2016). Precarious work and precarious workers, *The Economic and Labour Relations Review* 37(3): 314–332.
- Dølvik J. E. (2016). The Danes' uneasy relationship between collective bargaining and legislation in implementing EU workers' rights, in Larsen, T. P. & Ilsøe, A. (eds.): *Den danske model set udefra*, Copenhagen: Jurist- og Økonomforbundets Forlag, pp. 103–126. [The Danish model seen from the outside].
- Eklund, R. (2011). Temporary Employment Agencies in the Nordic Countries, Stockholm: Stockholm Institute for Scandianvian Law.
- Eurofound (2017). Non-standard Forms of Employment: Recent Trends and Future Prospects, Dublin: Eurofound.
- Eurofound (2015). Finland: Spotlight on Self-employed Persons Without Employees, Dublin: Eurofound.
- Eurofound (2010). Flexible Forms of Work: 'Very atypical' Contractual Arrangements, Dublin: Eurofound.
- Eurostat (2018). Real GDP growth rate-volume percentage change on previous years - CODE tec00115, Brussels: Eurostat.
- Eurostat (2017). Earnings Statistics 2016, Brussels: Eurostat.
- Furåker, B. (2013). Non-standard employment and perceptions of Job characteristics and labour market Situation: An Intra-Nordic comparison, in Koch, M. & Fritz, M. (eds.) *Non-standard employment in Europe*, Palgrave Macmillan, pp. 150–166. doi: [https://doi.org/10.1057/9781137267160\\_10](https://doi.org/10.1057/9781137267160_10).
- Gash, V. (2008). Bridge or trap? Temporary workers' transition to unemployment and to the standard employment contract, *European Sociological Review*, 24(5): 651–668. doi: <https://doi.org/10.1093/esr/jcn027>.



- Gash, V. (2005). The labour market outcomes of atypical employment in Ireland and Denmark, Working Paper 05/03, Combat Poverty Agency.
- Gash, V., Mertens, A. & Romeu-Gordo, L. (2007). Are fixed-term jobs bad for your health? A comparison of Spain and Germany, *European Societies* 9(3): 429–458. doi: <https://doi.org/10.1080/14616690701314150>.
- Green, A. & Livanos, I. (2015). Involuntary nonstandard employment in Europe, *European Urban and Regional Studies* 24(2): 175–192. doi: <https://doi.org/10.1177/0969776415622257>.
- Grimshaw, D., Johnson, M., Rubery, J. & Keizer, A. (2016). *Reducing Precarious Work: Protective Gaps and the Role of Social Dialogue in Europe*, Manchester: European Work and Employment Research Centre, University of Manchester.
- Hipp, L., Bernhardt, J. & Allmendinger, J. (2015). State of the art: Institutions and the prevalence of nonstandard employment, *Socio-economic Review* 13(2): 351–377. doi: <https://doi.org/10.1093/ser/mwv002>.
- Håkansson, K. (2001). Språngbräda eller segmentering? Et longitudinell studie av tidsbegränsat anställda, IFAU: Rapport 2001: 1. [Stepping stone or segmentation? A longitudinal study of fixed-term employees].
- Håkansson, K & Isidorsson, T. (2015): Temporary agency workers – precarious workers?, *Nordic Journal of Working Life Studies* 5(4): 3–22. doi: <http://doi.org/10.19154/njwls.v5i4.4841>.
- ILO (2016). *NSE around the world*, Geneva. ILO.
- ILO (1998). Sixteenth International Conference of Labour Statisticians, 6–15 October 1998, Geneva: ILO ICLS/16/1998/V.
- Ilsoe, A. (2016). From living wage to living hours – the Nordic version of the working poor, *Labour and Industry* 26(1): 40–57. doi: <https://doi.org/10.1080/10301763.2016.1152534>.
- Ilsoe, A. & Felbo-Kolding, J. (2017). The role of physical space in labour–management cooperation, *Economic and Industrial Democracy* 1–22. doi: <https://doi.org/10.1177/0143831x17695440>.
- Ilsoe, A., Larsen, T. P. & Felbo-Kolding, J. (2017). Living hours under pressure: flexibility loopholes in the Danish IR-model, *Employee Relations* 39(6): 888–902. doi: <https://doi.org/10.1108/er-03-2017-0049>.
- Ilsoe, A. & Madsen, L. W. (2017). Digitalisering af arbejdsmarkedet. Danskernes erfaring med digital automatisering og digitale platforme, FAOS Research Note 157, Copenhagen: FAOS. [Digitalisation of the labour market. Danes experiences with automation and digital platforms].
- Kalleberg, A. (2014). *Measuring Precarious Work*, a working paper of the EINet Measurement Group, Chicago: EIEnet.
- Kalleberg, A. (2009). Precarious work, insecure workers: employment relations in transition, *American Sociological Review* 74(1): 1–22. doi: <https://doi.org/10.1177/000312240907400101>.
- Kalleberg, A. (2000). Nonstandard employment relations: part-time, temporary and contract-work, *Annual Review of Sociology* 26: 341–365. doi: <https://doi.org/10.1146/annurev.soc.26.1.341>.
- Kinnunen, U. & Nätti, J. (1994). Job insecurity in Finland: antecedents and consequences, *European Work and Organizational Psychologist* 4(3): 297–321. doi: <https://doi.org/10.1080/13594329408410490>.
- Larsen, T. P. (2011). *Insidere og outsiders - den danske models rækkevidde*, Copenhagen: Jurist- og Økonomforbundets forlag. [Insiders and outsiders – the scope of the Danish model].
- Larsen, T. P., Ilsoe, A. & Felbo-Kolding, J. (2017). Part-time employment in Danish private services: Work-life balance or wage flexibility, in Nicolaisen, H.; Kavli, H. & Jensen, R. S. (eds.) *Dualization of part-time work – the new normal?*. Bristol: Policy Press.

- Larsen, T. P. & Mailand, M. (2018). Lifting wages and conditions of atypical employees in Denmark – the role of social partners and sectoral social dialogue’, paper accepted for publication in *Industrial relations journal*.
- Larsen, T. P. & Mailand, M. (2014). *Bargaining for Social Rights in Sectors: National Report Denmark*, Copenhagen: FAOS.
- Mailand, M. & Larsen T. P. (2018). *Hybrid work: Social protection of atypical employment in Denmark*, research report 000, Berlin: WSI.
- McKay, S., Jefferys, S., Paraksevopoulou, A., & Kels, J. (2012). *Study on Precarious Work and Social Rights*, Report produced for the European commission, London: London Metropolitan University.
- Neergaard, K. (2016). *Tilknytningsformer i norsk arbeidsliv. Nullpunktsanalyse, FAFO-report 2016:07*, Oslo: FAFO. [Forms of associations in norwegian work life. Baseline study].
- Nähti, J. (1993). Temporary employment in the Nordic Countries: A ‘Trap’ or a ‘bridge’?, *Work, Employment & Society* 7(3): 451–464. doi: <https://doi.org/10.1177/095001709373006>.
- OECD (2013). *Protecting jobs, enhancing flexibility: a new look at employment protection legislation*, in *OECD Employment Outlook 2013*, Paris: OECD Publishing. doi: [https://doi.org/10.1787/empl\\_outlook-2013-6-en](https://doi.org/10.1787/empl_outlook-2013-6-en).
- Oke, A., Braitwaite, P. & Antai, D. (2016). Sickens absence and precarious employment: a comparative cross-national study of Denmark, Finland and Norway, *International Journal of Occupational Environmental Medicine* 7(3): 125–147. doi: <https://doi.org/10.15171/ijocem.2016.713>.
- Olsthoorn, M. (2014). Measuring precarious employment, *Social Indicators Research* 119(1): 421–441. doi: <https://doi.org/10.1007/s11205-013-0480-y>.
- Pyöriä, P. & Ojala, S. (2016). Precarious work and intrinsic job quality: Evidence from Finland, 1984–2013, *The Economic Labour Relations Review* 27(3): 349–367. <https://doi.org/10.1177/1035304616659190>.
- Quinlan, M; Mayhew, C. & Bohle, P. (2001). The global expansion of precarious employment, work disorganization and consequences for occupational health: a review of recent research, *International Journal of Health Services* 31(2): 335–414. doi: <https://doi.org/10.2190/607h-ttv0-qcn6-y1t4>.
- Rasmussen, S. & Madsen, P. K. (2017). *Platformsøkonomien og prekariatet*, *Tidsskrift for Arbejdsliv*, 19(1): 46–62. [The platform economy and the precariat]. doi: <https://doi.org/10.7146/tfa.v19i1.109077>.
- Rasmussen, S., Refslund, B., Sørensen, O. H. & Larsen, T. P. (2016). *Reducing precarious work in Europe through social dialogue: The case of Denmark, Aalborg and Copenhagen*: Aalborg University and University of Copenhagen.
- Scheuer, S. (2017). *Atypisk beskæftigelse i Danmark*. LO-documentation no. 1/2017, Copenhagen: LO. [Atypical employment in Denmark].
- Scheuer, S. (2011). *Tema: atypisk ansatte på det danske arbejdsmarked*. LO-documentation no. 1/2011, Copenhagen: LO. [Theme: Atypical employees on the Danish labor market].
- Skollerud, K. (1997). Er midlertidig ansatte og deltidsansatte marginalisert på arbeidsmarkedet? Søkelys på arbeidsmarkedet 14: 107–111. [Is temporary employees and part-time workers marginalized on the labour market?].
- Standing, G. (2014). *A Precariat Charter. From Denizens to Citizens*, London: Bloomsbury Academic.
- Standing, G. (2011). *The Precariat. A New Dangerous Class*, London: Bloomsbury Academic.
- Svalund, J. (2013). Labour market institutions, mobility and dualization in the nordic countries, *Nordic Journal of Working Life Studies* 3(1): 123–144. doi: <https://doi.org/10.19154/njwls.v3i1.2523>.



- Svalund, J. & Berglund, T. (2017). Fixed-term employment in Norway and Sweden: a pathway to labour market marginalization?, *European Journal of Industrial Relations* 24(3): 261–277. <https://doi.org/10.1177/0959680117740777>.
- Thelen, K. (2014). *Varieties of Liberalization and the New Politics of Social Solidarity*, New York: Cambridge University Press.
- Thörnquist, A. (2015). False self-employment and other precarious forms of employment in the ‘Grey Area’ of the labour market, *International Journal of Comparative Labour Law and Industrial Relations* 31(4): 411–429.

## Note

- <sup>1</sup> The level of marginal part-time workers in 2015 in Denmark may be overestimated probably because EU-LFS contains not-corrected data. In other Danish studies based on the national LFS, the level is around 11%. However, the upward tendency is the same.



## Appendix

**Table 1** Proportion of NSE forms of total employment in 4 Nordic countries, 15–64 years old employed people, 2010–2015, by background factors, (%)

	Marginal part time				Fixed-term employment				Temporary agency work				Solo self-employment			
	DK	FI	NO	SE	DK	FI	NO	SE	DK	FI	NO	SE	DK	FI	NO	SE
Gender																
- Women	15.8	3.8	9.2	5.1	8.3	14.8	9.4	16.1	1.0	0.9	0.2	1.0	1.0	1.8	1.1	1.4
- Men	12.1	2.3	4.9	3.2	8.1	9.7	6.2	12.5	1.0	0.8	0.2	1.2	1.5	2.3	1.5	2.4
Age group																
15–29	46.5	10.8	22.0	12.6	20.2	35.3	21.5	37.6	1.5	2.8	0.3	2.4	0.9	2.5	1.3	2.0
30–49	1.7	1.0	2.5	1.6	4.6	8.4	5.0	9.1	0.9	0.6	0.2	1.0	1.7	2.2	1.5	2.1
50–64	2.4	1.7	3.6	2.6	2.6	5.0	2.4	7.5	0.7	0.2	0.1	0.6	0.9	1.5	1.0	1.5
Average age (years, mean)	22.1	30.2	29.3	32.0	28.6	32.0	30.0	33.1	36.6	30.3	34.5	35.3	40.3	39.6	39.8	40.9
Level of education																
- Primary	38.6	9.7	16.4	9.1	14.0	21.1	13.2	20.9	0.8	1.0	0.1	1.1	0.9	2.0	1.3	1.9
- Secondary	9.0	2.7	5.9	3.6	6.2	12.2	6.2	13.8	1.4	1.2	0.2	1.3	1.3	2.2	1.2	1.9
- Tertiary	3.9	1.2	3.4	2.7	6.9	9.2	6.7	12.0	0.7	0.4	0.1	0.9	1.7	1.9	1.3	1.9
Student																
- No	2.6	1.8	2.8	2.1	4.3	8.5	5.6	11.6	1.0	0.7	0.2	1.1	1.4	1.9	1.3	1.9
- Yes	62.5	19.2	41.9	29.9	24.9	37.0	25.2	48.1	1.2	2.6	0.2	1.9	0.5	2.7	1.0	1.9
Family situation																
- Unmarried	27.6	5.4	10.8	5.7	13.6	20.1	11.5	19.5	1.3	1.4	0.2	1.5	1.2	2.1	1.4	1.9
- Married	2.0	1.4	3.0	2.1	3.4	6.5	3.7	7.6	0.7	0.3	0.1	0.7	1.2	2.0	1.2	1.9
Nationality																
- National	14.0	3.0	7.1	4.1	8.0	12.1	7.5	13.9	1.0	0.8	0.1	1.1	1.1	2.0	1.2	1.8
- Non-national	12.3	3.6	5.8	6.2	11.0	17.2	11.3	23.3	2.0	2.4	0.7	1.2	3.4	4.0	2.6	4.0
Economic sector																
- Agriculture	10.4	6.1	10.5	6.3	7.4	6.1	5.6	10.2	0.3	0.1	0.0	0.0				
- Manufacturing, construction	5.1	1.3	1.8	1.4	7.3	7.3	4.3	7.9	1.2	1.1	0.2	0.0	0.9	1.6	1.1	1.7
- Wholesale and retail trade; hotels and restaurants	35.2	6.2	16.1	8.1	9.2	9.9	8.1	19.2	0.7	2.4	0.1	0.0	1.1	1.9	0.8	2.4
- Transport, storage and communications, financing, real estate, renting and business activities	9.2	3.7	4.8	3.7	4.7	9.1	5.7	11.0	0.9	0.8	0.3	4.6	2.5	2.9	2.1	3.0

(Continued)

	Marginal part time				Fixed-term employment				Temporary agency work				Solo self-employment			
	DK	FI	NO	SE	DK	FI	NO	SE	DK	FI	NO	SE	DK	FI	NO	SE
- Public administration, education, human health and social work activities	6.6	2.5	5.8	3.2	9.2	19.6	10.4	16.7	1.1	0.4	0.1	0.0	0.5	0.8	0.7	0.4
- Other community, social and personal services	28.9	12.1	17.5	10.8	10.6	21.7	11.2	22.3	0.7	0.5	0.0	0.0	2.8	7.1	5.6	6.2
Insecurity measures																
Income insecurity	17.5	33.4	22.1	36.3	12.3	16.3	17.0	24.2	19.5	28.8	12.3	10.8	7.9	19.5	12.9	14.0
Job insecurity	1.6	8.2	3.4	10.2	9.7	21.2	7.1	22.2	9.4	23.0	10.5	16.3	5.4	8.0	3.5	7.9
Overlapping insecurity (both income insecurity and job insecurity)	0.7	5.0	1.6	7.3	2.4	5.0	1.7	7.1	3.2	7.0	3.5	3.5	0.6	3.5	0.4	1.7

**Table 2** Reasons for part-time and temporary work among marginal part-timers, fixed-term employed and temporary agency workers in 4 Nordic countries, 2010–2015, (%)

	Marginal part-time				Temporary agency workers			
	DK	FI	NO	SE	DK	FI	NO	SE
Reasons for the part-time work								
1 Person is undergoing school education or training	85.4	55.3	59.9	47.8	17.8	15.9	9.4	5.8
2 Of own illness or disability	3.0	3.8	14.8	13.2	1.3	0.8	0.8	2.6
3 Looking after children or incapacitated adults	0.1	4.9	3.0	3.4	0.9	1.6	1.6	1.4
4 Other family or personal	3.6	14.9	1.9	5.6	6.2	5.8		0.7
5 Person could not find a full-time job	4.2	16.4	10.2	19.7	12.3	13.0	5.5	6.4
6 Of other reasons	3.2		10.1	8.0	4.4		3.1	2.8
9 Not applicable	0.4	4.7	0.1	2.3	57.2	62.9	79.7	80.3
N	10831	2263	4047	2523	698	377	128	832
	Fixed-term employed				Temporary agency workers			
	DK	FI	NO	SE	DK	FI	NO	SE
Reasons for having a temporary job/work contract of limited duration								
1 It is a contract covering a period of training apprentices, trainees, research assistants, etc.	37.5	5.7	13.1	1.1	1.8	0.8	0.8	
2 Person could not find a permanent job	46.6	67.7	52.3	60.8	22.2	37.8	39.7	22.9
3 Person did not want a permanent job	13.1	24.3	34.5	28.0	8.9	12.5	10.3	10.3
4 It is a contract for a probationary period	2.8	2.2	0.2	10.2	1.3	0.5		8.0
9 Not applicable					65.8	48.4	49.2	58.8
N	6533	5017	5066	11251	685	376	126	865