Improving the understanding of poverty and social exclusion in Europe

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18 The measurement of social class in EU-SILC: comparability between countries and consistency over time

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18.1. Introduction

Across the social sciences, social class is seen as a key indicator of socioeconomic stratification. The social class literature postulates that in market economies it is position in the labour market and occupation that fundamentally determine social and economic inequalities (Goldthorpe, 2007; Rose and Harrison, 2010). Individuals higher up in the social class hierarchy are assumed to enjoy a range of economic advantages, including economic security, economic stability and better long-term economic prospects (Bukodi and Goldthorpe, 2019; Erikson and Goldthorpe, 1992; Goldthorpe, 2007; Goldthorpe and McKnight, 2006). Since social class shapes access to economic resources and advantages, it has been linked with a range of further outcomes, including health (Richards and Paskov, 2016; Shaw et al., 2014; Marmot et al., 1997), life satisfaction (Lipps and Oesch, 2018) and voting behaviour (Brooks and Svallfors, 2010; Evans, 1999), to name a few. Although the 'death of class' argument suggests that social class has lost its relevance as a determinant of economic standing (Clark and Lipset, 1991), numerous recent studies find that social class still shapes economic outcomes in life (Albertini, 2013; Williams, 2017; Wodtke, 2016). Social class thus remains a highly relevant concept for the social sciences.

The importance of class as a social science concept is illustrated by the fact that most social science surveys in Europe include the information required to assign individuals or households to social class positions, most typically the Erikson–Goldthorpe–Portocarero schema or the ESeC schema (Connelly et al., 2016). Considering that EU-SILC is very rich in data on living conditions and also contains the basic variables to reproduce ESeC (although with some noticeable caveats, as will be discussed in this chapter), it presents an opportunity to study class inequalities or the effect of social class on a range of outcomes, including earnings, household income, poverty, material deprivation, economic stress, housing conditions, labour market conditions and health, with a degree of detail that is not possible with other surveys. A review of the literature indicates that the primary focus of comparative studies utilising social class information in EU-SILC (and its precursor, the ECHP) has been the relationship between social class and economic vulnerability, including poverty and material deprivation (Bedük, 2018; Maître et al., 2012; Paskov et al., 2018; Pintelon et al., 2013; Whelan and Maître, 2010, 2012; Whelan et al., 2014, 2013; Watson et al., 2010, 2018). Recently, two studies have used EU-SILC to investigate the association between social class and earnings in a comparative perspective (Albertini et al., 2020; Goedemé et al., 2020). Other studies have used EU-SILC to look at class inequality in housing tenure and housing well-being (Filandri and Olagnero, 2014) or class inequality in health (Chauvel and Leist, 2015).

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Although a number of published papers have used social class measures in EU-SILC, we are convinced that several of the measurement issues regarding social class have received insufficient attention. Therefore, in this chapter we discuss the measurement of class, as operationalised by ESeC, in EU-SILC. Furthermore, we illustrate the relevance of social class, and some of the associated data challenges, by looking into the level of in-work poverty experienced by people of different social classes across the EU in the period covered by EU-SILC, 2004–2018. The prior work cited above has shown that social class is one of the important factors associated with poverty but that the strength of the association varies across countries. One study shows that class inequalities are stronger in less prosperous countries (Whelan and Maître, 2012). In another study, Whelan and Maître (2010) show that the relative risk of income poverty is highest for the small farmer and petit bourgeois classes, and lowest for the salariat class, a finding that holds across all welfare regimes, although to varying degrees.

In what follows, we first explain ESeC and how it can be implemented in EU-SILC, albeit with some caveats (Section 18.2). Subsequently, we briefly discuss some other methodological issues related to analysing EU-SILC (Section 18.3), before turning to our findings (Section 18.4). We first highlight the social class structure of those in paid work across Europe and illustrate how several limitations to the consistency of the occupational variable impacts upon the social class structure across countries and time. Thereafter, we do the same for levels and trends in in-work poverty by social class. We conclude with a brief summary of the main findings and some suggestions for further improving the quality of EU-SILC in the future.

18.2. The European Socio-economic Classification in EU-SILC

18.2.1. Background of the European Socio-economic Classification class schema

ESeC is a categorical social class schema that was developed more than a decade ago to facilitate comparative research on social class in Europe (Rose and Harrison, 2007). In the ESeC schema, class positions are differentiated in terms of two central elements: employment status and employment contracts typical for different occupations (Erikson and Goldthorpe, 1992). Employment status tells us whether someone buys and controls the labour of others (employers), sells their own labour directly to customers and clients (self-employed), or sells their labour to employers and employing organisations (employees). In the last group, employees, who constitute the largest share of the labour force, an additional distinction is made depending on the nature of their employment contracts, which is deduced from their occupation. A 'labour contract' is typically applied to occupations that require relatively low-level, unspecialised and widely available capacities and skills (i.e. manual and routine non-manual occupations). A 'service contract', however, is applied to occupations in which employees typically exercise delegated authority or specialised knowledge and expertise on behalf of their employers (i.e. managerial and professional occupations). Furthermore, mixed forms of employment contracts are applied to occupational positions that are found between these two extremes.

Occupation is usually measured on the basis of ISCO ([185]), while those voluntarily out of paid employment are considered a separate category. Since ESeC is often not readily available in surveys, it needs to be constructed by researchers themselves. EU-SILC offers many of the variables required to construct ESeC, but the level of detail, quality and exact definition varies quite substantially across countries and over time. Furthermore, in 2011 EU-SILC moved from ISCO-88 to the ISCO-08 classification of occupations. Given that the two classifications do not perfectly map onto each other, a break in series occurs. Luckily, for most countries both types of classifications are available for at least 1 year, so it is possible to compute overlapping time series (with the exception of Bulgaria, Ireland and Finland, for which ISCO-88 is missing in 2011). We refer to ESeC based on ISCO-88 as 'ESeC-88' and ESeC based on ISCO-08 as 'ESeC-08'.

18.2.2. Constructing the European Socio-economic Classification in EU-SILC

The various social classes distinguished in ESeC and the way ESeC is operationalised in EU-SILC are illustrated in Figure 18.1. We build strongly on the work of Anika Herter and Heike Wirth (Gesellschaft Sozialwissenschaftlicher Infrastruktureinrichtungen (GESIS)) to compute ESeC in EU-SILC, with a number of minor tweaks ([186]).

In a first step, a distinction is made between the self-employed and employees, by making use of variable PL040 (status in employment). For those with a missing value on PL040, we complete this variable with information from PL031 (self-defined current economic status), for the period for which ISCO-08 is available ([187]). In contrast to the original code by Herter and Wirth, we make a further distinction between self-employed with and without employees, before moving to the next step. We do so because a substantial number of self-employed people indicate having no employees but appear to be working in large economic units. In addition, we keep the distinction between employees and family workers.

Subsequently, the self-employed are subdivided by the number of people working at their local economic unit (variable PL130), while employees are split up by whether or not they are in a supervisory position (PL150). Given that PL150 is not available for family workers, we assign them all a non-supervisory status (in the GESIS code, family workers receive a missing value, and are subsequently excluded from the computation) ([188]).

In the next step, everyone is assigned to one out of nine social classes. Figure 18.1 illustrates this process for ESeC-88 (it is slightly different for ESeC-08). Self-employed people with at least 10 employees are directly assigned to class 1. The other categories are assigned to each class based on their ISCO occupation (PL050, PL051). Self-employed people without employees or those with fewer than 10 employees may be assigned to class 1, 2, 4 or 5 depending on their occupation. Employees are assigned to category 1, 2, 3, 6, 7, 8 or 9, depending on their supervisory role and occupation. Whereas those with a supervisory role only end up in class 1, 2 or 6, those without such a role can end up in any class, except for classes 4 and 5. This procedure is

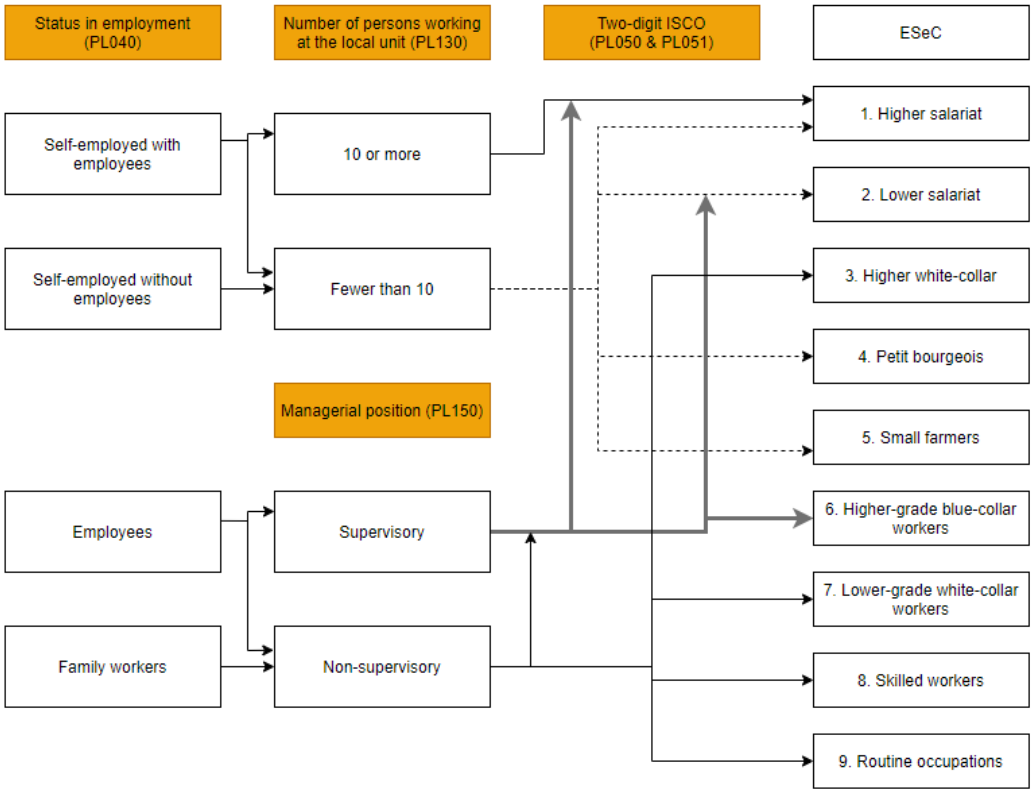
([185]) See the ILO website (https://www.ilo.org/public/english/bureau/stat/isco/, accessed 19 June 2019).

([186]) Herter and Wirth developed Stata do-files by EU-SILC year (up to EU-SILC 2014), following the instructions of Rose and Harrison (2007). These do-files can be downloaded from the GESIS website (https://www.gesis.org/en/gml/european-microdata/eu-silc/, last accessed 30 June 2020). We integrated the computation of ESeC for all SILC years into a single Stata do-file, with the modifications mentioned in the text. The do-file is available from Tim Goedemé (https://timgoedeme.com/tools/esec-in-eu-silc/). Recently, the iscogen command in Stata created by Ben Jann has become available to automatically construct different versions of class variables, including ESeC. However, we did not test how iscogen differs from our own code.

([187]) We only do this for the second period onwards, as PL031 was only introduced in 2009, and we do not want to add another break in series as well as the one that occurred when changing from ISCO-88 (PL050) to ISCO-08 (PL051). PL031's predecessor PL030 does not make a distinction between employees and the self-employed.

([188]) A more nuanced approach regarding the supervisory status of family workers might be to consider them supervisors if there are more than two persons in the local economic unit. However, we stick to our simple approach because (1) the alternative might lead to other misclassifications; (2) the share of family workers is less than 1 % of the labour force; (3) the alternative would result in different social classes for only 1 % of family workers (so it would not affect the overall results). Further research should clarify what would be the best way to classify family workers, for instance by taking into account their partner's supervisory status in the business or the size of the local economic unit (presumably the size of the family business).

Figure 18.1: Flowchart to illustrate the code to reconstruct ESeC-88 in EU-SILC



Note: The procedure is somewhat different in the case of ESeC-08 (making use of PL051): some large employers are assigned to classes 3 and 5, while some self-employed people with fewer than 10 employees are also assigned to class 3. Furthermore, some non-supervisory employees are assigned to class 5, and no single non-supervisory employee is assigned to class 6 any longer.

Source: Own compilation based on GESIS Stata do-files (see text).

rather complex, as the four groups formed in the previous step may end up in various social classes depending on their occupation, and people with a similar ISCO occupation may be assigned to different social classes, depending on the group to which they belonged in the previous step. For example, the first class 'Higher salariat' may include self-employed people with at least 10 employees, self-employed people with fewer than 10 employees (including those without any employee), or employees with or without a supervisory role, depending on their ISCO occupation.

18.2.3. Limitations of constructing the European Socio-economic Classification in EU-SILC

There are some important general limitations to the variables available in EU-SILC for constructing the ESeC, as well as specific issues that limit their comparability across countries and within countries across time. Next, we briefly highlight the most important caveats (for an extensive discussion, see Goedemé, 2019).

Sample selection

An important limitation is that some information is only available for selected respondents in countries with the selected respondent model (based on PX040, the selected respondent status), considerably restricting the sample size in these countries. Furthermore, data availability for the unemployed varies strongly across countries and in some countries also across time (as measured by PL030 and PL031). Therefore, for comparative studies it is best to limit the analysis to the population currently at work, as otherwise the composition of individual classes will be affected by partial data availability, probably for a group with a specific income profile ([189]).

Occupational information

Another limitation is that the ISCO classification is only available at two-digit level, whereas in its original design ESeC was refined up to three digits of ISCO. Rose and Harrison (2007) show for the first round of the ESS that making use of a two- rather than a three-digit categorisation misclassifies about 14 % of cases. For Malta, ISCO is even available only at one-digit level, and this is also the case for some years for Germany and Slovenia (also affecting comparability across time). Similarly, for Ireland and Slovakia (until 2014) ISCO-08 is available in about 25 rather than 42 categories, and it is not clear what grouping has been applied. As mentioned earlier, a general break in series takes place in 2011 when moving from ISOC-88 to ISCO-08, although this is generally accompanied by an increase in precision of the coding of ISCO (going from about 26 or 27 categories to about 42). For EU-SILC 2011, it can be observed that, for all countries combined, the change affects the classification of 13 % of (unweighted) cases when applying a three-class schema (comprising classes 1 and 2, 3–6 and 7–9).

Non-response

Furthermore, comparability both across countries and within countries over time is challenged by relatively strongly fluctuating rates of non-response. Overall, among the working age and currently in work sample, social class is generally available for well over 90 % ([190]). An exception is France, where in many survey years social class is available for fewer than 90 % of this group. However, in some countries the response rate for social class fluctuates considerably, including in Austria (2007–2008), Denmark (2006, 2007, 2014, 2015), Finland (2004, 2007), France (2008, 2011, 2012), Hungary (2006, 2017), the Netherlands (2006), Norway (2011, 2012) and Sweden (2012) ([191]). In Iceland social class is not available from EU-SILC 2014 onwards, and in Slovakia it is not available for 2018 ([192]). In many cases, non-response does not seem to be random, and may severely affect the composition of social classes. For instance, among those for whom data are available, the percentage of self-employed in the highest classes is equal to 100 % in Finland in 2004, while the self-employed are completely missing from the picture in Denmark from EU-SILC 2012 until 2015 (owing to missing information on PL130). Other non-negligible changes driven by non-response in the share of the self-employed in the upper classes are observed in countries such as Austria (2007–2008), Bulgaria (2008), Hungary (2010, 2014), Slovakia (2012) and Sweden (2006, 2010, 2012). Furthermore, in Denmark throughout the entire period, and in Sweden until EU-SILC 2011, the availability of ESeC for the self-employed is close to or below 50 %, and in Slovenia until 2011 it is about 80 %. Therefore, it is recommendable to analyse differences by social class excluding the self-employed, and be cautious about studying trends over time when the self-employed are included in the analysis. A preliminary analysis for a selection of countries shows that, overall, average earnings tend to be lower among non-respondents, while earnings inequality within this group is higher than in those for which social class is available (see Goedemé, 2019).

([189]) However, for specific countries or years it should be possible to do a reliable class analysis for the unemployed.

([190]) In selected respondent countries, this is if the sample is restricted to selected respondents.

([191]) Years in brackets indicate a big change in the non-response rate compared with surrounding years.

([192]) PL051 is filled in for fewer than 10 cases.

18.3. Other methodological issues

We use the 2020 spring release of EU-SILC, with data from the 2004 up to the 2018 wave. With the exception of Finland, for most countries the 2004 data quality regarding ESeC does not seem worse, and in some cases (notably Sweden) it even seems better than EU-SILC 2005. 'Official' breaks in series (i.e. as reported on the Eurostat data portal for the AROP threshold) include those in Bulgaria (2016), Luxembourg (2016), the Netherlands (2016), Sweden (2008), and the United Kingdom (2017) ([193]). It is somewhat surprising that other changes in data collection or weighting procedures are not counted as breaks in series, e.g. the change in underlying data source for the United Kingdom in 2012 ([194]), the change in weighting schemes in Belgium since 2012, and the increased use of register data for collecting income information for a range of countries (see, among others, Zardo Trindade and Goedemé, 2020).

In all our analyses, we include both employees and the self-employed, and highlight problems with changing shares of self-employed when relevant. We follow the standard procedure for computing the AROP rate (but do not make use of the RX variables on equivalised disposable income or poverty status provided with the data by Eurostat). We compute standard errors and confidence intervals taking the sample design into account as much as possible (see Goedemé, 2013) ([195]). The Stata do-files that we created for this chapter, and the detailed results in Excel, are available online ([196]).

([193]) See the Eurostat online database (code ilc_li02; https://tinyurl.com/yaky6qr6, accessed 8 July 2020).
([194]) In 2012 the Family Resources Survey replaced the General Lifestyle Survey as the main source for EU-SILC; see, for instance, https://beta.ukdataservice.ac.uk/datacatalogue/series/series?id=200015#!/faqs (accessed 19 June 2019).
([195]) More information and Stata do-files available on Goedemé's website (https://timgoedeme.com/eu-silc-standard-errors/, accessed 8 August 2020).
([196]) https://timgoedeme.com/tools/esec-in-eu-silc/ (accessed 8 August 2020).

18.4. Findings

18.4.1. The class structure of the population currently at work

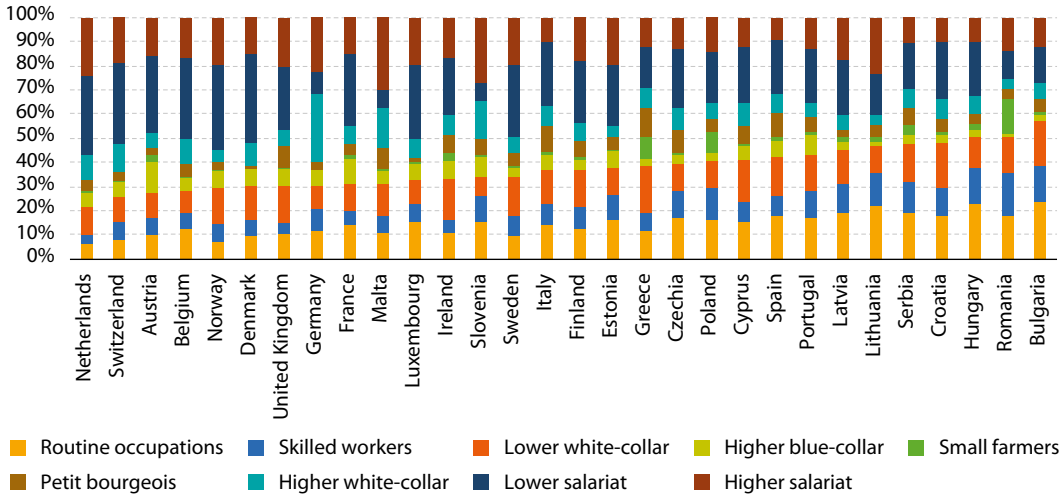
Before we delve into the income situation of social classes across Europe, Figure 18.2 illustrates the relative share of social classes in the population at working age (i.e. between 18 and 65 years old) and currently at work. Figures are based on EU-SILC 2018. The countries in the graph are ordered by the joint share of the 'Routine occupations', 'Skilled workers' and 'Lower white-collar' classes ([197]) European countries vary quite substantially in the class structure of their workforce. The joint share of the lower three classes in each country appears to be negatively correlated with median income (in PPS). While the lower classes account for less than one third of the working population in rich countries such as the Netherlands, Switzerland, Austria and Belgium, their share is well over 40 % in Bulgaria, Romania, Hungary, Croatia and Serbia. Conversely, the share of the upper two classes (the higher and lower salariat) in the richest countries is around 50 % of the population at work, whereas the equivalent figure is 30 % in the poorest countries of Europe. Germany is a notable exception, probably because of less precise data (see Figure 18.4 and discussion below). A distinct category consists of the 'Petit bourgeois' and 'Small farmers'. While small farmers account for fewer than 2 % of those at work in the great majority of countries, their share is above 8 % in Greece and Poland and close to 15 % in Romania. The share of those categorised as belonging to the petite bourgeoisie varies more gradually, reaching close to 10 % in Malta, Czechia, Spain, Italy and Greece.

In many countries, the class structure has changed over time, although mostly gradually. The trends that stand out most are the expansion of the higher salariat and the declining share of the skilled workers, especially in the first period (i.e. until SILC 2011). These trends are strongest in Iceland, Latvia, Bulgaria, Lithuania, Romania and Austria in the

([197]) In this chapter, we use the terminology adopted by Rose and Harrison (2007) to describe the various classes identified by ESeC.

Figure 18.2: Share of each social class in the population at working age and currently in paid work, by country, 2018

(%)



Note: Countries ordered by the joint share of the routine occupations, skilled workers and lower white-collar classes. Germany, Malta and Slovenia: based on first digit of ISCO-08. Data for Slovakia are missing.

Reading note: In Latvia about 20 % of those of working age and currently at work belong to the routine occupations class.

Source: Authors' computations, UDB March 2020.

first period, and Luxembourg and Austria in the second period (i.e. from SILC 2011 onwards). The most noticeable exceptions that display the opposite trends are Belgium and Croatia (only the first period). In both the first and the second period, in Hungary and Slovakia the shares of both the higher salariat and the skilled manual class decrease. It is worth remarking that in many countries these changes were smaller than the ones caused by the transition from ISCO-88 to ISCO-08 (see Figure 18.3). In nearly all countries this transition resulted in a sizeable expansion of the estimated share of the lower salariat, at the expense of the share of the higher salariat and higher white-collar classes. That can be problematic, given that most common groupings of social classes keep higher white-collar and lower salariat in separate categories (see Rose and Harrison, 2007). The share of the routine occupations, skilled manual and lower white-collar classes was not so much affected by the transition in ISCO codings, although also in these cases a sizeable share of the sample is reallocated to a different class, without affecting the overall share of these classes much.

Another major change in some countries is related to the varying degree of precision of the ISCO coding. In Germany, Malta and Slovenia, the move from two-digit to one-digit ISCO codes has led to quite a drastic change in the estimated social class structure of those at work, resulting in a considerable overestimation of the share of the higher white-collar and higher salariat classes, at the expense of the lower salariat class's share. Similarly, the move from 25 to 40 categories in Ireland in EU-SILC 2018 resulted in a sizeable change in the share of the skilled manual and lower white-collar classes. In contrast, a similar move from 27 to 41 categories from EU-SILC 2015 onwards in Slovakia appears to have had only a minor impact on the share of social classes among those at work (see Figure 18.4).

Figure 18.3: Change in class composition of the population of working age and currently in paid work when moving from ISCO-88 to ISCO-08, selected countries, 2011

(%)

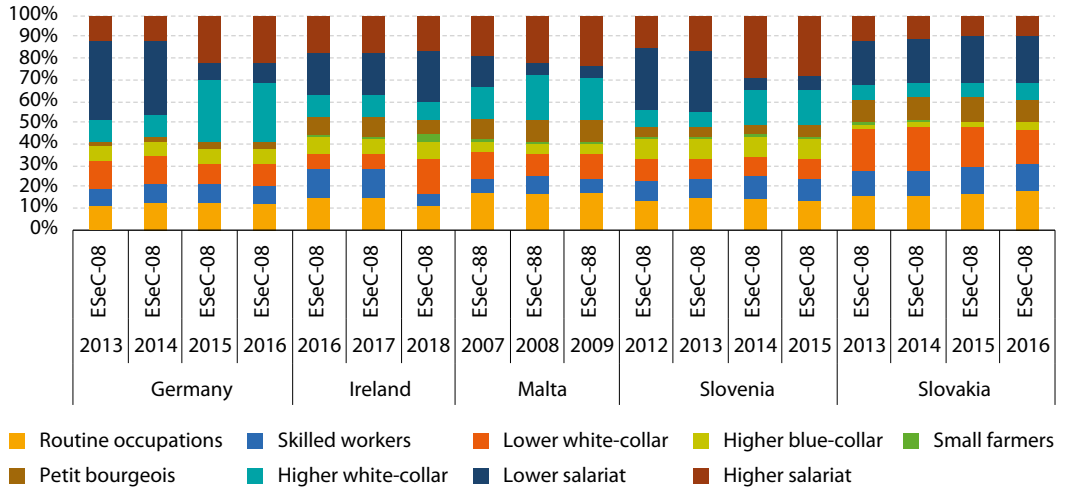
Note: Selection of countries.

Reading note: In Denmark the share of higher white-collar workers is much higher when using ISCO-88 than using ISCO-08 for constructing the social class variable.

Source: Authors' computations, UDB March 2020.

Figure 18.4: Change in the class composition of the population of working age and currently in paid work for countries with changing precision in ISCO coding, EU-SILC 2007–2018

(%)



Note: When data are available, the last 2 years before the change in precision and the subsequent 2 years are shown.

Reading note: The reduction in the precision in ISCO coding in Germany coincided with a strong reduction in the share of the lower salariat and a strong increase in the share of the class of higher white-collar workers in the population of working age and currently in paid work.

Source: Authors' computations, UDB March 2020.

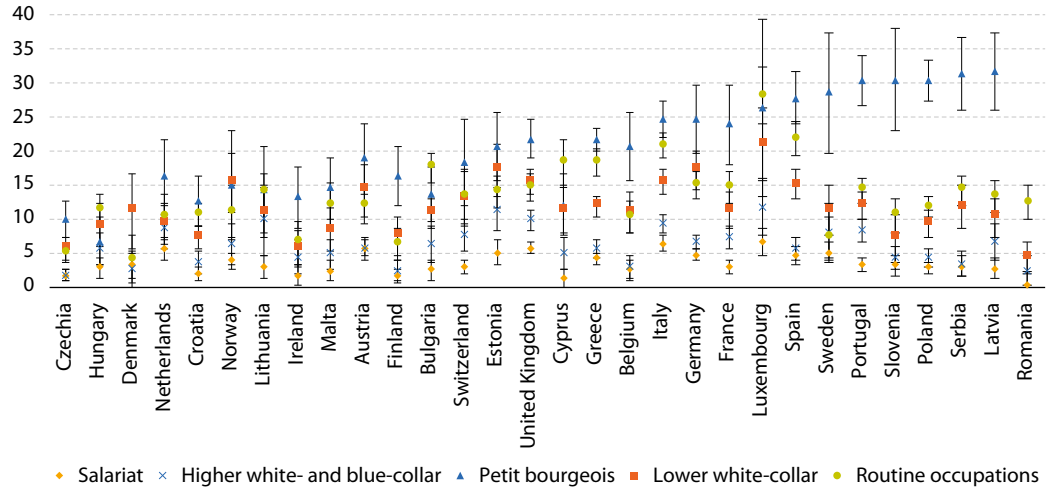
18.4.2. In-work poverty by social class in 2018

Social class is known to be associated with an entire range of outcomes in life (see Section 18.1). This also applies to poverty outcomes. As is shown in Figure 18.5, a clear social class gradient in the AROP rate is found in many countries. To facilitate the presentation and avoid small cell sizes, we combined classes into five groups, in line with the recommendations by Rose and Harrison (2007): (1) the higher and lower salariat (category 'Salariat'); (2) the higher white-collar and higher blue-collar workers ('Higher white- and blue-collar'); (3) the petit bourgeois and small farmers ('Petit bourgeois'); (4) the skilled workers and routine occupations ('Routine occupations'); and (5) lower white-collar, which remains a class of its own. Although this reduces the variance in the poverty headcount to some extent, the most important differences remain. The countries in Figure 18.5 are ordered from left to right by the size of the difference between the highest and lowest poverty rates of each social class. The spread (i.e. the difference between the highest and lowest poverty rates of each social class) varies strongly across countries and is lowest in Czechia (8 p.p.) and highest in Romania (52 p.p.). It is important to note that, if the composite class of petit bourgeois and small farmers were disregarded, the ordering of countries would change quite substantially. However, even then in half of the countries the spread would be more than 10 p.p., reaching a high of 21 p.p. in Luxembourg (between salariat and routine occupations).

In nearly all countries, the salariat has the lowest AROP rate. The relatively low poverty risk applies to both the higher and lower salariat (with the exceptions of Austria, the Netherlands and Slovenia). Compared with the salariat, higher white- and blue-collar workers are confronted with similar or somewhat higher in-work poverty risks. More pronounced differences between the salariat and higher white- and blue-collar workers can be found in Lithuania, Portugal, Luxembourg, France, the United Kingdom, Estonia and Switzerland.

Figure 18.5: AROP rate by social class, population of working age in paid work, 60 % threshold, by country, 2018

(%)



Note: Countries are ordered by the absolute difference between the highest and lowest poverty rates. The value for 'Petit bourgeois' in Romania is 53 % and not displayed in Figure 18.5. Germany, Malta and Slovenia: based on first digit ISCO-08. Data for Slovakia are missing. The value for 'Petit bourgeois' in Denmark is not shown because of small sample size. 95 % confidence intervals are shown.

Reading note: In Romania about 13 % of the class of routine occupations are AROP in spite of being in paid work.

Source: Authors' computations, UDB March 2020.

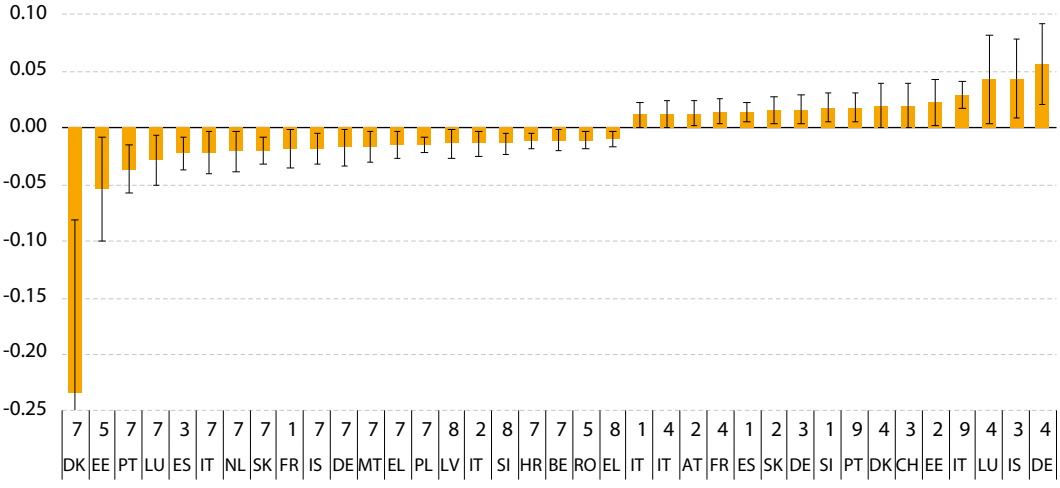
Also within this class there is a strong degree of internal homogeneity in poverty risks between higher blue-collar workers and higher white-collar workers (results not shown), with the exceptions of Greece, Italy, Norway, Slovenia and Sweden. Remarkably, in Sweden higher white-collar workers face as high a poverty risk as lower white-collar and those in routine occupations. Lower white-collar workers, skilled workers and those in routine occupations, generally face (much) higher poverty risks, but again with considerable variations across countries. In most countries where there is a substantial and significant difference between the two groups, skilled workers and those in routine occupations generally face higher poverty risks than lower white-collar workers. This is most apparent in Greece, Spain, Italy and Romania. With very few exceptions, poverty risks are highest among the petit bourgeois and, their poverty risk tends to be higher in countries where they account for a larger share of the population in paid employment. This is especially the case for Romania (53 % AROP) and Poland. In contrast to most other classes, heterogeneity within this class in terms of poverty risks is rather large, and especially so in Poland and Romania, where small farmers account for 8.7 % and 14.7 % of the population in paid employment respectively. In these two countries small farmers face by far the highest poverty risks, reaching about 40 % in Poland and a high of about 61 % in Romania ([198]).

18.4.3. The change from ISCO-88 to ISCO-08

When it comes to moving from ISCO-88 to ISCO-08, EU-SILC has set a very good example of how methodological changes could be handled, by providing both the old and the new variable for the same year. This offers a rare opportunity to estab-

([198]) Including production for own consumption does have a moderating effect on these very high poverty risks, reducing the poverty risk by less than 5 p.p. However, this does not make up for their very high AROP rates.

Figure 18.6: Difference in the AROP rate by social class between ESeC-08 and ESeC-88, nine–class structure, population of working age in paid work, 60 % threshold, by country, 2011 (p.p.)



Note: 1, higher salariat; 2, lower salariat; 3, higher white-collar; 4, petit bourgeois; 5, small farmers; 6, higher blue-collar; 7, lower white-collar; 8, skilled workers; 9, routine occupations. Horizontal axis shows country code and number of social class. Values ordered by the p.p. difference between the AROP rates of the same social class under ESeC-88 and ESeC-08. Only significant differences of at least 1 p.p. shown. 95 % confidence intervals shown.

Reading note: In Denmark the AROP rate of the lower white-collar class as measured by ESeC-08 is 23 p.p. lower than the AROP rate of the lower white-collar class as measured by ESeC-88.

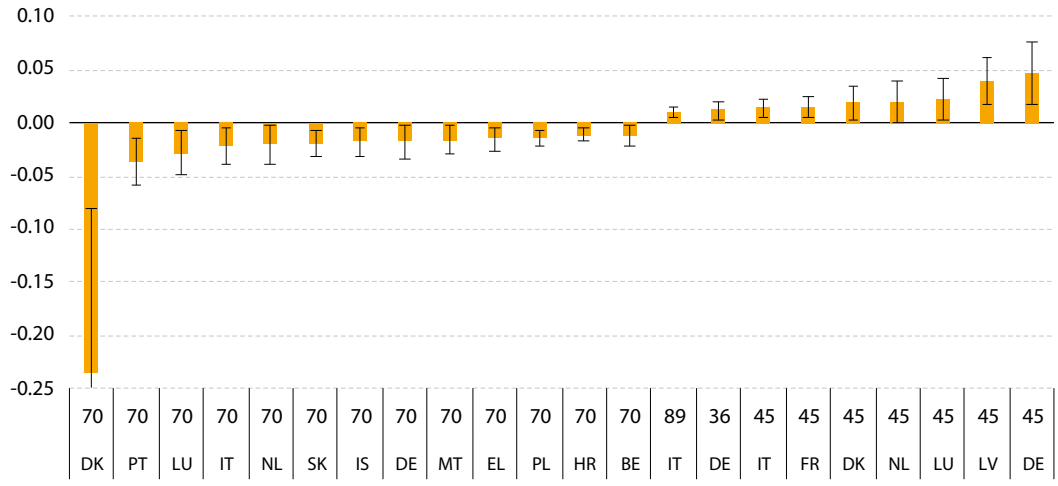
Source: Authors' computations, UDB March 2020.

lish with a high degree of certainty the impact this change has had. As highlighted above, the change to the new ISCO coding resulted in relatively substantial changes in the composition of individual and more aggregated social classes in many countries. Although the number of people who moved into and out of each class is important, Figures 18.6 to 18.8 show that, even for some classes with relatively minor changes in their share, the poverty risk was affected significantly (e.g. the class of small farmers in Estonia) ([199]).

When sticking to the nine-class structure, we find that, in 21 out of the 28 countries for which we have both codings available, the estimated poverty risk changed significantly (at 95 % confidence level) by at least 1 p.p. for at least one class. The number of substantially and significantly affected social classes is lower when applying a five- or three-class structure (in about 15 countries at least one class is substantially affected). The groups, and to some extent also the countries, affected depend to some extent on the level of detail of the class structure applied. In both the nine- and five-class structures, the change in ISCO coding has affected the poverty estimate for the lower white-collar class in particular, with a general reduction in the estimated poverty risk. Increases in estimated poverty risks affect the salariat, the higher white-collar workers, the petit bourgeois and routine occupations in a nine-class structure, but are remarkably concentrated among the petit bourgeois (including small farmers) in a five-class structure, and by extension in the 'middle class' in a three-class schema. At the same time, it must be said that, with few exceptions (most notably lower white-collar workers in Denmark), the impact on estimated poverty risks is rather moderate, especially when considering year-to-year fluctuations in the AROP rate of social classes (see below).

([199]) Please note that the requirement of having a statistically significant change rules out any substantial change in estimates that is not picked up owing to low sample sizes.

Figure 18.7: Difference in the AROP rate by social class between ESeC-08 and ESeC-88, five–class structure, population of working age in paid work, 60 % threshold, by country, 2011
(p.p.)



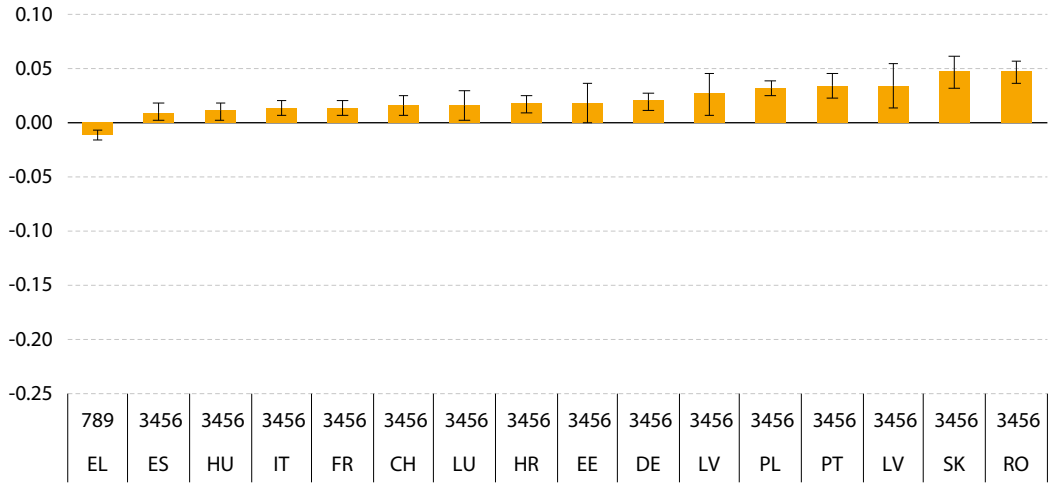
Note: 36, higher white- and blue-collar; 45, petit bourgeois; 70, lower white-collar; 89, routine occupations.

Horizontal axis shows country code and number of social class. Values ordered by the p.p. difference between the AROP rates of the same social class under ESeC-88 and ESeC-08. Only significant differences of at least 1 p.p. shown. 95 % confidence intervals shown.

Reading note: In Denmark the AROP rate of the lower white-collar class as measured by ESeC-08 is 23 p.p. lower than the AROP rate of the lower white-collar class as measured by ESeC-88.

Source: Authors' computations, UDB March 2020.

Figure 18.8: Difference in the AROP rate by social class between ESeC-08 and ESeC-88, three-class structure, population of working age in paid work, 60 % threshold, by country, 2011
(p.p.)



Note: 3456, higher white-collar and higher blue-collar workers, petit bourgeois and small farmers (i.e. the middle class); 789, lower white-collar, skilled workers and routine occupations.

Horizontal axis shows country code and number of social class. Values ordered by the p.p. difference between the AROP rates of the same social class under ESeC-88 and ESeC-08. Only significant differences of at least 1 p.p. shown. 95 % confidence intervals shown.

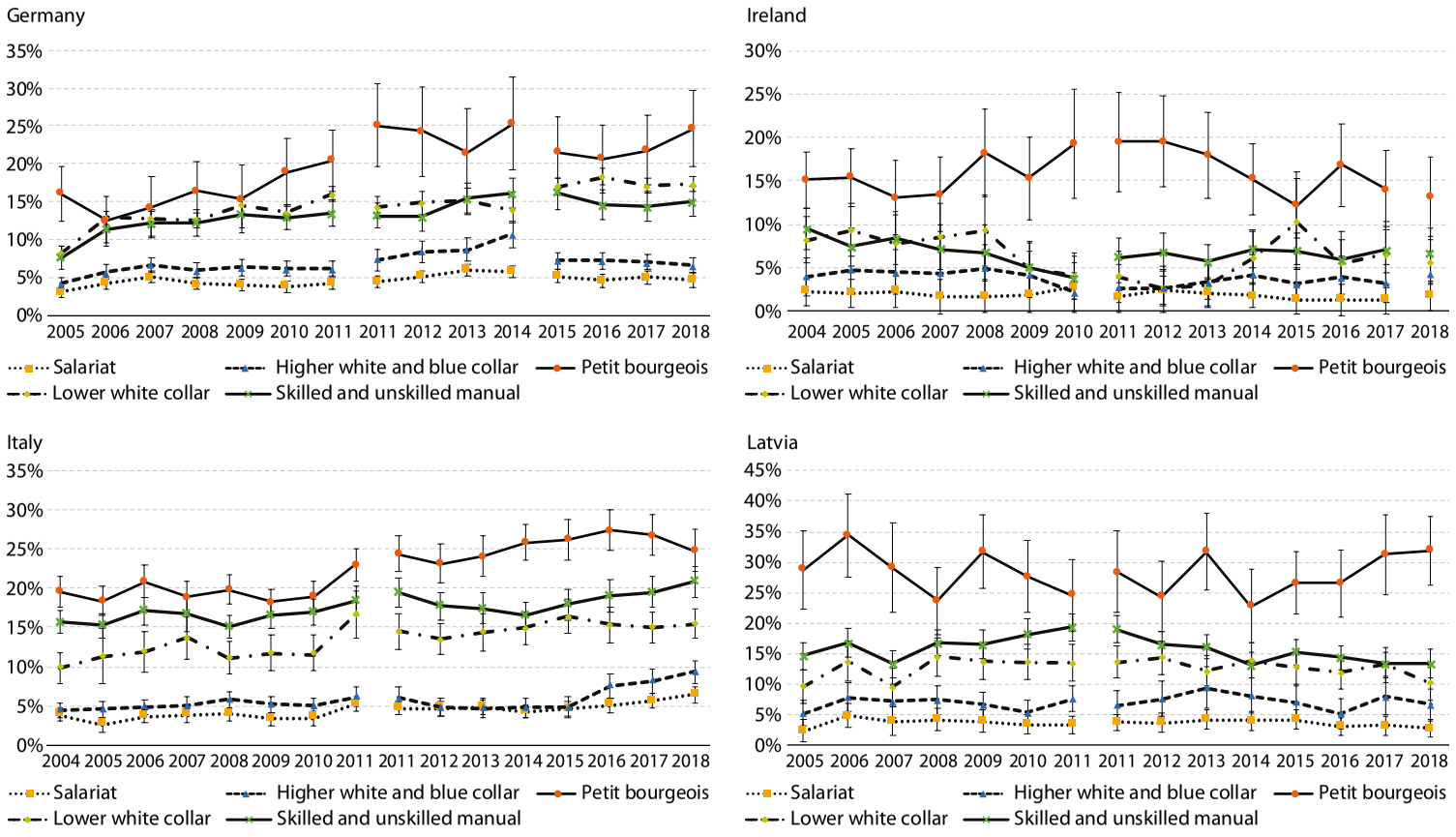
Reading note: In Romania the AROP rate of the middle class as measured by ESeC-08 is about 5 p.p. higher than the AROP rate of the middle class as measured by ESeC-88.

Source: Authors' computations, UDB March 2020.

18.4.4. Longer-term trends in selected countries

While the change from ISCO-88 to ISCO-08 is an obvious concern, other changes have also affected the quality and comparability of the derived social class variable in EU-SILC, most notably changes in the precision of the ISCO variable and availability of data about the self-employed. In this section, we illustrate the impact this may have had, taking four country cases – Germany, Ireland, Italy and Latvia – as examples, and put the 2011 break in broader perspective. Both Italy and Latvia displayed significant changes in the poverty risk of some classes (using the five-class structure) as a result of the move from ISCO-88 to ISCO-08. As Figure 18.9 shows, in Germany and Italy, ignoring the change in ISCO coding would lead to distorted conclusions regarding the size of some trends, whereas in Latvia, at least in the case of petit bourgeois and small farmers, this would add to the highly fluctuating pattern in poverty risks, with little effect on the poverty trend for other social classes. Similarly, moving to a different precision of the occupational variable seems to have had a more pronounced impact in Germany (move from 38 to 9 categories in SILC 2015) than in Ireland (move from 25 to 40 categories in SILC 2018), although we do not control for confounding factors that might explain these differences. It is noteworthy that the relatively large changes in the share and composition of some classes do not seem to have been translated into fundamentally different estimated poverty levels. Yet these four country cases also illustrate that caution is required when analysing social class in EU-SILC, especially when focusing on trends over time, and measurement issues should be kept in mind when interpreting results.

Figure 18.9: Trends in the AROP rate by social class, five-class structure, population of working age in paid work, 60 % threshold, 2004–2018
(%)



Note: Breaks in lines indicate breaks in series. When available, in the case of EU-SILC 2011 both ESeC-88 (before the break) and ESeC-08 (after the break) shown. 95 % confidence intervals shown.
Reading note: In Germany the estimated AROP rate of the petit bourgeois (including small farmers) went up from 16 to 25 %.
Source: Authors' computations, UDB March 2020.

18.5. Conclusion

Social class is a key variable for studying social stratification and the distribution of well-being. It has also been identified as an important determinant of varying levels of (in-work) poverty. While there are a number of studies that try to include social class in the analysis of EU-SILC, challenges to its operationalisation have received little attention. Therefore, in this chapter we have given an overview of some of the key challenges, and their impact on the comparability of constructed social class variables across time and countries. These challenges include in particular the (changing and varying) level of detail of the ISCO coding in EU-SILC and the move from ISCO-88 to ISCO-08 in 2011, as well as the varying degree of availability of key variables for the self-employed and the unemployed in particular, and, in countries with the single-respondent model, information on the non-selected respondents.

As this chapter shows, special care is required when analysing countries with less detailed and time-varying information on occupation, in particular Germany, Malta and Slovenia. Although researchers should be very careful about these caveats, we are convinced that they do not pose an insurmountable problem for informative comparative studies of social class with EU-SILC. This should encourage EU-SILC countries to continue collecting high-quality and consistent variables that allow the construction of a social class variable such as ESeC. Moreover, countries should consider collecting ISCO at three- or four-digit level and could discuss with the ESS how this can be done in the most efficient way. The current economic and health crisis also shows the added value of detailed information on occupation, and of using EU-SILC for timely estimates of its ongoing socioeconomic impacts (e.g. Palomino et al., 2020). Furthermore, we are strongly convinced that the decision to include in EU-SILC 2011 both the ISCO-88 and ISCO-08 variables is an example to be followed for other changes implemented in the data (and an example for other surveys). EU-SILC countries should consider applying a similar logic to country-specific changes. For instance, this would be extremely useful in the case of changes to the mode of data collection, especially when this concerns moving from survey to register data, or changes in the weighting scheme. Both of these changes are now implemented in Belgium, and the relevant 'old' and 'new' variables will be made available in the national SILC data set. These variables and similar ones for other countries could usefully be made available in the UDB released by Eurostat.

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