

European Commission

Class and Unemployment

JRC Working Papers Series on Social Classes in the Digital Age 2023/11

Miguel Requena





This Working Paper is part of a Working paper series on Social Classes in the Digital Age by the Joint Research Centre (JRC) The JRC is the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication. The Working paper series on Social Classes in the Digital Age is intended to give visibility to early stage research to stimulate debate, incorporate feedback and engage into further developments of the research. This Working Paper is subject to the Commission Reuse Decision which allows authors to reuse the material without the need of an individual application.

Contact information Name: Miguel Requena Contact: <u>mrequena@poli.uned.es</u>

EU Science Hub https://ec.europa.eu/jrc

https://ec.europa.eu/jrc/en/research/centre-advanced-studies/digclass



JRC135245

Seville: European Commission, 2023

 $\ensuremath{\mathbb{C}}$ European Union, 2023 Credits of the Image in the cover page: kras99, Adobe Stock image n. $\underline{175461355}$



The reuse policy of the European Commission is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Except otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<u>https://creativecommons.org/licenses/by/4.0/</u>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated. For any use or reproduction of photos or other material that is not owned by the EU, permission must be sought directly from the copyright holders.

All content © European Union, 2023

How to cite this report: Requena, M., Class and Unemployment, European Commission, Seville, 2023, JRC135245.

Contents

A	ostract		1
1	Intro	oduction	3
	1.1	Outline	3
	1.2	Purpose	4
2	Back	ground: class and unemployment	5
	2.1	Class definitions and unemployment	5
	2.2	Why do the unemployed not make up a social class?	7
	2.3	The class position of the unemployed	9
	2.4	Unemployment as a class effect and other topics	10
3	Mate	erial and methods	11
	3.1	Data and variables	11
	3.2	Empirical strategy	13
4	Find	ings	14
	4.1	Unemployment in the composition of classes	14
	4.2	Class and unemployment rates	18
5	Disc	ussion	23
6	Refe	rences	25
7	Арре	endix	30

Class and Unemployment

Miguel Requena Grupo de Estudios 'Población y Sociedad' Departamento de Sociologia II (UNED)

Abstract

The purpose of this paper is to theoretically clarify and empirically analyse the link between social class and unemployment. After reviewing and justifying the criteria used to determine the class position of the unemployed, empirical evidence of the associations between class and unemployment rates in ten selected European countries is provided. Data come from the European Union Labour Force Surveys and European Socio-economic Classifications was used. Results of the analysis show that the likelihood of being unemployed depends on class position. The experience of unemployment is distributed across classes according to a clear gradient in which the more advantaged classes have lower unemployment rates than the working classes. This implies that the class profile of the employed and the unemployed is different and that the employed and the unemployed contribute differentially to class composition, with the unemployed contributing more than the employed to the composition of the working classes. The results are robust to different specifications of the observed populations. The class gradient in unemployment rates is visible among women and men and is also present in all ten countries considered.

Keywords: Social class, class composition, class analysis, unemployment, unemployment rate

Authors: Miguel Requena (Grupo de Estudios 'Población y Sociedad' y UNED)

Acknowledgements: The author is very grateful for the valuable comments and suggestions of Leire Salazar, Miguel Caínzos and the participants in the DigClass seminar session.

Joint Research Centre reference number: JRC135245

Related publications and reports:

Moawad, J., Oesch, D. The Myth of the Middle Class Squeeze: Employment and Income by Class in Six Western Countries, 1980-2020, European Commission, Seville, 2023, JRC131515. <u>https://joint-research-centre.ec.europa.eu/publications/myth-middle-class-squeeze-employment-and-income-class-six-western-countries-1980-2020 en</u>

Jaime-Castillo, A. M., Fernandez, J. J., Conceptualizations of socio-economic status and preferences for redistribution, European Commission, Seville, 2023, JRC131510. <u>https://joint-research-centre.ec.europa.eu/publications/conceptualizations-socio-economic-status-and-preferences-redistribution en</u>

Esteve Mora, F. Muñoz de Bustillo Llorente, R. The economics of class. A dual approach, European Commission, Seville, 2022, JRC129746. https://joint-research-centre.ec.europa.eu/publications/economics-class-dual-approach_en

Gil-Hernández, C. J., Vidal Lorda, G., Torrejón Pérez, S., Technology, Tasks and Social Classes in Europe, European Commission, Seville, 2022, JRC129522. https://joint-research-centre.ec.europa.eu/publications/technology-tasks-and-social-classeseurope_en

Muñoz de Bustillo Llorente, R., Esteve Mora, F., Social classes in economic analysis. A brief historical account, European Commission, Seville, 2022, JRC127236. https://joint-research-centre.ec.europa.eu/publications/social-classes-economic-analysisbrief-historical-account_en

Oesch, D., Contemporary Class Analysis, European Commission, Seville, 2022, JRC126506. https://joint-research-centre.ec.europa.eu/publications/contemporary-class-analysis_en

1 Introduction

Because of its many damaging consequences, the experience of unemployment is very costly both individually and societally. As recognised years ago (Gallie & Paugan 2000), when socio-economic position depends primarily on participation in labour markets, losing one's job almost automatically means lowering one's social status. The individual damage of unemployment is primarily economic, but health, social consideration, or family stability can also be potentially harmed. Income is reduced or disappears, material living standards fall, some social relations vanish, and a sense of personal failure can emerge (Roberts 2016). Furthermore, long-term unemployment ends up severely undermining people's life chances (Cooper 2014). On the other hand, the collective costs of keeping a potentially productive segment of the population inactive can be very high. The macroeconomic consequences of unemployment are well known (Layard, Nickell & Jackman 2005). At a minimum, unemployment reduces output and economic growth, shrinks aggregate demand and depresses consumption, increases poverty and augments public spending if social assistance programmes for the unemployed are implemented.

The social seriousness of the unemployment problem is indisputable. However, this paper is not directly concerned with its macroeconomic causes and consequences, two issues widely addressed by economists and other social scientists (Borjas 2019). What basically interests here is to delve into the dynamics linking socio-economic position and unemployment. This relationship will be conceptually framed within the class analysis approach (Goldthorpe 2007). The underlying assumption for this type of analysis is that unemployment can be treated as a typical class process. Given the way classes are defined (Smallenbroek et al. 2022), it is highly likely that the risk of unemployment depends on the type of employment relationships characteristic of each class and that transitions to unemployment are not class neutral. If this is the case, unemployment can be considered as one important base of class inequality. If the risk of losing one's job depends on class, unemployment can become a significant mechanism for reproducing class inequality.

1.1 Outline

Modern approaches to stratification (Wright 2005; Goldthorpe 2007, vol. 2, chap. 5; Oesch 2022) consider that class positions arise from the social relations established in economic life or, more precisely, in the labour market. Contemporary labour markets give rise to different employment relations and the employment relations in which individuals are involved are the basis of the class positions they occupy. Such class positions also have important implications for the individuals who occupy them and their life chances, for example in terms of educational outcomes, social mobility, or more generally life conditions. Among the most relevant of these implications are those directly deriving from the employment relationships themselves. In labour markets, class position affects, at the very least, job security, job stability, and outlook for future career. Given that for the vast majority of people the primary source of income is the wages they receive in exchange for their work, class becomes a fundamental determinant of their economic situation and opportunities insofar as it conditions the economic security, economic stability, and economic prospects (Goldthorpe & McKnight 2006; for a critical perspective, see Tahlin 2007).

Nonetheless, linking unemployment risk to social class is not a straightforward task because the class location of the unemployed is not self-evident. This is, in part, a consequence of the so-called problem of the unity of class analysis (Breen 2005). Furthermore, deriving class from employment relations poses an obvious problem in the case of the unemployed, who by definition are not involved in any kind of employment relations during the time they remain outside the labour market. Exclusion from the labour market and the absence of employment relations prevents the direct derivation of class from employment relations and raises the question of what class position should be attributed to the unemployed. Two possible solutions to this question, which need not necessarily apply to the same

groups of people, are (1) to attribute to unemployed the social class corresponding to the last occupation they held; or (2) to assign them the class of one of the family members (usually parents or partners) with whom they lived or live. Other possibility is to consider the unemployed as a social class per se. Be that as it may, analysing unemployment as a class process requires a prior determination of the class of the unemployed.

1.2 Purpose

The aim of this paper is to theoretically clarify and empirically analyse the link between class and unemployment. For this purpose, at least two simple research questions need to be answered: (1) What is the social class of the unemployed; (2) Is unemployment a class-driven process? To answer both questions, the general aim can be broken down into two more specific objectives, one primarily theoretical and the other largely empirical.

The first objective consists of establishing the class location of the unemployed. This is done in several steps. First, a brief account is given of how class definitions commonly used in the field of contemporary social stratification studies are based on occupations and thus disregard, or do not directly address, unemployment. Next, it will be determined whether the unemployed meet the criteria to be considered a social class. Does unemployment constitute one of the bases of social class formation? Do the unemployed have sufficient demographic identity to be considered a class? If, as will be argued in this paper, the answer to these questions is negative, i.e. if the unemployed do not in themselves constitute a distinct social class, another important question immediately arises: what class position should be assigned to the unemployed? Answering this question is important. Once grounded criteria for attribution have been established and a class location has been assigned to different types of unemployed, unemployment can be empirically examined as an effect of class dynamics. From this point of view, unemployment will be treated as one of the contractual hazards (Goldthorpe & McKnight 2006) or dimensions of job insecurity (Gallie et al. 2017) which are ingredients of the very definition of classes.

The second objective is to provide ample empirical evidence of the associations between class and unemployment in several European countries. If the unemployed do not constitute a class per se, but they can be assigned one based on sound criteria, it is possible to analyse the differential probability of becoming unemployed experienced by people in —or coming from— different social classes¹ and its most obvious consequence: the unemployment composition of the different classes.² The idea behind the unemployment risk analysis is to see unemployment as one of the dependent variables in the causal chain that starts with class and to analyse how the probability of being unemployed is conditioned by social class. In compositional analysis, the explanatory chain runs from unemployment to class structure.

There are several studies examining class-specific unemployment in different European national contexts such as Britain (Gallie et al. 1998; Layte et al. 2000; Elias and McKnight 2003), Great Britain and Germany (McGinnity & Hillmer 2004), Austria, Denmark, Italy and the UK (Luchini & Schizzerotto 2010), Finland (Lahtinen, Sirniö & Martikainen 2020) or Spain (Polavieja & Richards 2001; Martínez-Pastor 2020).³ In general, as expected, classes in the more advantaged segment of the social structure

¹ If the unemployed were to be considered a class, the risk of unemployment would have to be studied as a process of social mobility in which the unemployed, having lost their jobs, would be moving from one class to another. Such a perspective is both conceptually and empirically alien to the tradition of social mobility studies.

² This paper will not address the other process that determines the stock of unemployed in each class at a given point in time: the process of exiting unemployment (Blossfeld, Mills & Bernardi 2006).

³ Strictly speaking, the aforementioned study on Spain by Martinez-Pastor does not use social class, but rather social origin as measured by the ISEI (International Socioeconomic Index), i.e. socio-economic status based on occupations.

(managers, professionals and technicians) are less likely to be unemployed and more likely to be out of unemployment than the working classes. Using standardized European Labour Force Survey data, a systematic comparative analysis of the probability of being unemployed associated with social class can be conducted.

The rich information from EU Labour Force Survey Database will allow to examine the variability of class conditioning of unemployment across countries, controlling for other sources of variation both individual (socio-demographic, family, and basic educational characteristics) and contextual (e.g. level of development, labour market regulations, and welfare state regime). National contexts are important and should be given due attention. Although unemployment levels vary everywhere with the economic cycle, some countries exhibit persistently high levels over prolonged periods of time. In Europe, this is particularly the case in Spain and Greece and, to a lesser extent, Italy (Eurostat, 2023), three countries with high rates of long-term unemployment. Obviously, the class/unemployment problem is of particular economic, social and political interest everywhere, but above all in those societies whose labour markets produce high levels of unemployment prevalence and persistence.

2 Background: class and unemployment

2.1 Class definitions and unemployment

In the sociology of social stratification, the most widespread use of the term social class refers to the partition of all occupations into large sets to which a certain internal homogeneity is attributed. For sociologists, social classes are, empirically speaking, groupings of occupations that are assumed to share similar characteristics and which are sometimes ordered hierarchically or vertically. All relevant class schemes in contemporary sociology have, from an operational point of view, been constructed in this way. And it should be noted that in a field where disputes between different doctrinal traditions over the theoretical definition of classes have flourished (Wright 2005), the empirical operationalisation of the class concept is almost unanimously based on occupations. As two reputed experts (Grusky & Galescu 2005) acknowledged years ago, a long and venerable tradition of stratification studies (including Parsons, Duncan, Parkin or Featherman, Jones, and Hauser) always treated occupations as the "backbone" of the class system.⁴ In other words, when social classes have to be defined empirically, Neo-Marxist, neo-Weberian, neo-Durkheinian, and even Bourdieusian sociologists begin their journey towards the class system in the occupational system. It is true that for neo-Marxists classes are not strictly clusters of occupations (Wright 1980) since the theoretical foundation of class schemas revolves around the ownership of economic assets and occupation is an operationalization criterion that coexists with others of similar relevance.⁵ In practice, however, even within these schemes, the down-to-earth solution to the problem of operationalising classes is to assemble occupations. The widespread operationalisation of classes through occupations allows to focus on only one of the approaches to class analysis to illustrate some of the problems involved in the class/unemployment binomial. Since neo-Weberian EGP-like schemes have become dominant in contemporary social class studies, where they have attained a paradigmatic status (Barone et al. 2022), in what follows I will develop the theoretical and empirical arguments using the Erikson, Goldthorpe, and Portocarero (EGP) and European Socio-economic Classification (ESeC) class schemes for the sake of brevity.

To begin with, this centrality of occupations in defining social classes stems from the fact that sociologists —unlike economists or epidemiologists — tend to treat inequality in a relational, non-

⁴ The original formulation of this idea first appeared in the work of Parkin (1971).

⁵ In Wright's case, the exercise of authority, workplace autonomy and educational credentials, all measured independently of occupation.

attributional sense. They thus consider that what matters are the advantages and disadvantages that individuals derive not so much from the attributes they possess to a greater or lesser extent, but from the social relations in which they are involved (Goldthorpe 2012). Inequalities between classes arise, specifically, from the relations established in labour markets and production units. Employment relations are, in a nutshell, the very foundation of class positions.

According to Goldthorpe's conceptual apparatus (Goldthorpe & McKnight 2006; Goldthorpe 2007), the first distinction differentiates employers, self-employed and employees, the so-called employment status, by ownership of the means of production. As an ancillary criterion, employers are distinguished by the number of employees. Next, two types of problems arise in the relationship between employers and employees that require further differentiation: the difficulties for the former to monitoring the work of the latter and the degree of specificity of the latter's assets. Two different forms of employment relationships, codified (explicitly and implicitly) by two types of contracts, have emerged to circumvent these obstacles. On the one hand, the service relationship arises when the employee's qualification is very specific and, consequently, the employer's ability to monitor his/her work is very limited and/or extremely costly. On the other, when it is easy for the employer to supervise the performance of the employee whose work does not require specific assets, the contract employment relationship consists of the direct exchange of labour power for a wage. There are also intermediate or mixed forms of contracts between the two main types, such as that of supervisors. Main types of contractual arrangements imply considerable differences in two important dimensions of employment relationships, namely the time horizon of the employment relationship itself and the types of rewards that employees can expect to receive. Those who come to the labour market with very specific skills to do tasks difficult to supervise and establish a service relationship with their employers have considerable bargaining power that allows them to negotiate their working conditions and be paid to their advantage. Typically, service relationships result in higher degrees of job security and job stability and better prospects for career advancement. For example, the ability to protect oneself against unemployment can then be expected to be conditional on the type of employment relationship one has with one's employer.

Under these assumptions, a classificatory exercise is undertaken to place occupations into different classes. First, ownership of the means of production places small employers and self-employed workers in the class of small proprietors (petty bourgeoisie and peasants), separated from the rest of the employed. Then, underlying mechanisms for regulating employment (difficulty to monitoring, asset specificity) and different types of relationships (contractual arrangements involving different types of rewards) are taken into account among employees. Occupations are grouped into different classes depending on prevailing mechanisms, employment relationship and rewards. Managerial and professional occupations constitute the service classes or salariat.⁶ Employees in these occupations, where the work is difficult to supervise and the skills required are very specific, engage in service relationships that provide them with job security and stability and good promotion prospects. At the opposite extreme, the working classes, composed of routine non-manual workers (lower grade), skilled manual workers, and unskilled manual workers, are engaged in occupations with a low level of specificity in the skills required and ease of monitoring by employers, where employment is typically regulated by an employment contract (on some kind of piece- or time-rate basis). In the so-called intermediate occupations (higher grade routine non-manual employees and lower grade technicians and supervisors of manual workers) jobs are regulated by hybrid forms between the service relationship and the employment contract.

⁶ Which also include large employers and independent professionals (Goldthorpe 1997).

As expected, the EGP class scheme does not treat the unemployed as a class, nor does it offer criteria for placing them, as a group, in a particular class. Given its assumptions, the scheme is, so to speak, blind to classifying those who are not in employment relationships, whether unemployed, inactive or otherwise excluded from the labour market. Similarly, certain socio-economic categories which can be recognised as having a certain identity —such as the poor, students, young people, pensioners, or ethnic minorities— and which may constitute axes of social divisions or inequalities are also not considered as social classes in the sense defined by the classificatory schemes. With some exceptions, empirical class definitions based on the aggregation of occupations do not explicitly or directly include the unemployed. Neither does Wright's neo-Marxist scheme in any of its versions or the neo-Durkheimian scheme of microclasses. The approaches that claim to be better adapted to postindustrial societies (Esping-Andesen 1993; Oesch 2006) do not include the unemployed as a class either. The only recorded exception is the European Socio-economic Classification (ESeC) which offers the possibility of including those involuntarily excluded from employment relations as an additional class in the scheme. This class would include those who have never worked but are looking for work and the long-term unemployed (more than six or twelve months in unemployment). Interestingly, the proponents of ESeC (Harrison & Rose 2010) offered no theoretical support for these decisions. In fact, the option of implementing the unemployed as a separated class is presented more as a potential resource to improve the population coverage of the scheme than as an analytical requirement of the classificatory device.

2.2 Why do the unemployed not make up a social class?

The possibility offered by ESeC proponents to consider the unemployed as a class in their own right is marginal to conventional class analysis, although not entirely exceptional. Some instances where this possibility has been realised can be mentioned. The old Marxist idea of a lumpemproletariat (Marx & Engels 2022) pointed to certain social segments, situated on the margins of society and below the proletariat, among which the unemployed and the intermittently employed abounded. Marx never delimited the conceptual boundaries of what he called an "entirely undefined, disintegrating mass, thrown hither and yon" (Marx 1963). Having property as the ultimate foundation of the class structure, some neo-Marxist approaches left room for possible arguments in favour of treating the unemployed as a class. For example, based on microeconomic theories of unemployment such as the insidersoutsiders approach and the efficiency-wage theory, Van Parijs regarded jobs as assets and deemed the divide between employed and unemployed as "even more important than the standard division between capitalists and workers in those capitalist societies in which the welfare state is most developed" (Van Parijs, 1987: 474). On the other hand, in the 1980s and 1990s a plethora of studies appeared in the Anglo-Saxon world on the ill-defined concept of the underclass. The label itself and the prefix 'under-' obviously alluded to a social stratum situated below the other classes, on the lowest rung of the social structure. Runciman (1990), for example, proposed for British society a map of seven social classes, the lowest of which was an underclass composed of those excluded entirely from the labour market who for various reasons were bound to long-term unemployment. More recently, and in the wake of the Great Recession, Standing (2011; 2014) has identified a new map of seven social classes that includes, alongside the existence of a growing precariat, the unemployed as a class in their own right.⁷

⁷ Standing's most successful proposal is the one that considers the precariat, not the unemployed, as a social class, but it should be made clear that the success of the idea has been mainly media-driven. In neither of his two books did Standing provide convincing theoretical support for his new class scheme. For a critique of the consideration of the precariat as a social class from a (neo)Marxist perspective, see Wright (2015, chap. 9).

None of these proposals has yielded a rigorous analytical foundation for their rationale, nor have they evolved into a coherent research programme. Nevertheless, considering that the unemployed —or, for that matter, the underclass or the precariat— might be a social class poses an interesting problem that has been raised relatively frequently in the study of social inequalities. The issue is best understood by breaking it down into two questions. First, is there a place in class schemes for categories of people who do not participate in the labour market or participate only partially, irregularly, or intermittently? The answer of mainstream class analysis to this question has tended to be conclusively negative. A second question, distinct from the previous one, is whether persons who are classified as unemployed can be included in class schemes; and, if the answer is yes, what criteria of class assignment can be applied to those who are not in employment relationships. Distinguishing the two questions is important, because even though the first one is answered in the negative, if the answer to the second one is affirmative, the repeated accusation that conventional class analysis ignores a large fraction of the population that is economically inactive or unemployed is unfounded.⁸

Since the 1990s the answer to the first question was answered quite conclusively by British sociology (Gallie 1994; Marshall et al. 1996) in the negative. From the point of view of class analysis, the idea that the unemployed are a social class in their own right breaks the conceptual foundations on which the class schemata are based. Since the unemployed —unlike, for instance, day labourers, machine operators, waiters, teachers, or managing directors— do not participate in employment relations, they cannot be directly assigned to a social class. The key point here is that the unemployed, while maintaining their unemployed status, are not engaged in any occupation, are not subject to the regulatory mechanisms of employment, and are not bound by any kind of employment contract. In short, they are not in any kind of employment relationship and are not exposed to the differential rewards that follow. The lack of employment relationships means that there are no criteria for assigning the unemployed to a certain class. Moreover, from a more practical point of view, the algorithms for constructing the class schema are not computable because neither the main decision criteria —employment status, occupational title, employment relationships — nor the ancillary criteria -number of employees, supervisory status - can be applied to the unemployed. If the unemployed are considered as a class, one could (and surely should) consider students, pensioners, economically inactive housewives or the disabled in the same terms.

Besides violating classificatory logic, the idea that the unemployed are a class per se raises empirical problems related to their alleged patterns of class formation. Arguably, research on class formation has receded in the contemporary development of the class analysis research programme⁹, overshadowed by interest in class as an explanatory factor or *explanans* for various forms of inequality and social mobility. But, as Goldthorpe (1982) pointed out decades ago, processes of class formation matter for understanding the emergence of socially discernible entities and for linking class position to collective action. To properly fathom the processes of class formation, classes are considered *explananda* in causal arguments whose objective is to specify the social mechanisms that shape class structures, establish their distribution and composition profiles, and give them some identity. Two important forms of identity are demographic and socio-cultural. Demographic identity refers primarily to the extent to which classes may form specific and discernible social collectivities by means of the continuity of their members in the same class positions over time. Socio-cultural identity refers to the processes that make classes identifiable in terms of shared lifestyles, patterns of association and socio-political attitudes and behaviours.

Insofar as class demographic identity is understood as persistence in the same class locations over time, intra- and inter-generational mobility are the first processes to be looked at. Inflow and outflow

⁸ According to Eurostat, 56% of the EU27 population was out of the labour force or unemployed in 2022.

⁹ For a recent paper on the relevance of early political socialisation in the class of origin, see Ares (2023).

social mobility hinders the formation of a given class reducing its homogeneity in regard to the class origin of its members. In fact, to date most of the literature has seen the demographic identity of classes as a consequence of social mobility (Goldthorpe 1982; Goldthorpe et al. 1987; Crompton 2008). From this viewpoint, recognising the unemployed as a class would mean applying the same logic to them to understand the processes of formation of its demographic identity. The demographic identity of the class of the unemployed would depend on the magnitude of transitions into and out of unemployment, and as a result the degree of turnover between classes would be disproportionately large. According to Eurostat's experimental labour market transition statistics, 38.4% (5,754 thousand persons) of the unemployed transitioned into employment over the year 2022; in addition, 24.5% (3,671 thousand persons) of the unemployed made the annual transition from unemployment to inactivity. Treating these transition rates as indicators of social mobility would produce a grossly exaggerated view of short-term class movements. To speak of the demographic identity of a class subject to such transition rates would be nonsensical. As Gordon Marshall and his co-authors so aptly put it almost thirty years ago (Marshall et al. 1996), considering the unemployed as a class "would generate huge amounts of entirely artefactual social mobility".

Additional arguments for not considering the unemployed as a social class emerged from the analysis of the processes of socio-cultural class formation in Britain. Gallie (1994) compared the degree of job stability (average number of jobs over working lives), commitment to employment and other attitudes towards work, as well as various political behaviours, to conclude that there were no significant differences between the unemployed and the employed, all other factors being equal. Marshall and co-authors (1996) showed that the partisan preferences of the employed and the non-employed in Britain and the United States were not appreciably different, although they clearly varied by class. A similar pattern was found with fatalistic attitudes, defeatism and distrust. In a more recent study in Spain, Caínzos and Voces (2015) showed that, controlling for social class, there are no major differences in the voting patterns of the unemployed and the employed, except that the former participate in some elections less than the latter. Although the growing disinterest in the processes of class formation has not given much continuity to such studies, analyses of the construct or criterion validity of class classifications (Evans & Mills 2000) have not included the unemployed as a separate class, although they have occasionally assessed the propensity to unemployment for different classes (Evans & Mills 1998). Significantly, specific ESeC validation studies (Bihagen et al. 2010; Brousse et al. 2010; Harrison & Rose 2010; Katrňák 2012; Wirth et al. 2010) did not include the unemployed as a social class in their assessments.

2.3 The class position of the unemployed

That the unemployed, as a socio-economic category, do not constitute a social class does not mean that it is not possible to attribute a class position to them as individuals. Actually, they have been assigned class many times and, for certain types of analysis, it is necessary to do so. Several solutions have been proposed to determine the class position of those individuals who, being outside the labour force, do not have any occupation or employment relations from which to derive their class. The solutions in use do not seem to have required very elaborate theoretical exercises, but rather have tended to be based on pragmatic criteria. The most followed guidelines may depend on the specific issue under research and tend to be based on common sense considerations, often derived from or imposed by available information.

To begin with, it is usual to attribute to those excluded from the labour market due to unemployment with previous work experience the class derived from the occupation (and related characteristics) held in the last paid job they had before becoming unemployed. If this information is available, the last paid job criterion is sharp, easy to implement and relatively unambiguous. In fact, this solution applies not only to the unemployed, but also to economically inactive persons, such as pensioners and the permanently disabled, provided they had previous work experience. The assumption underlying this

procedure is that those excluded from the labour market with work experience remain in the same class to which they were attached in their last paid job. Given that those who do not have an occupation are unclassifiable into class schemes, this seems a plausible option insofar as it is also assumed that the effects of class position have a certain permanence over time.

The last paid job criterion is impossible to apply to the unemployed seeking their first job (and to other categories of inactive people with no previous work experience) simply because they never had an occupation from which to derive their social class. The conventional view (Goldthorpe 1983, 1984) prescribed for these categories the assignment of the social class of their families.¹⁰ The prescription was made on the assumption that the constituent units of class analysis were families, not individuals (Marshall et al. 1995); and if the family was the basic unit of class analysis, then the class of the family must be that of the 'head of the household', who was usually a man. The conventional view generated a lively debate in the 1980s about the class position of women (Heat & Britten 1984; Stanworth 1984; Crompton 1989, 2008). There was much discussion as to whether it was appropriate regarding the family as the unit of class analysis and assigning jobless women to the social class of the husband or household head. One of the most contentious issues was whether the criterion should be applied when married or partnered women were employed. If the occupation of the wife and husband in the same family was different, should these employed women be assigned a different class from their husbands? Or should the family-based unit be preserved by using, for example, a dominance criterion?

In any case, the debate on the unit of class analysis faded as in recent decades female employment (including that of married or partnered women) expanded unprecedentedly, post-Fordist occupational structures became largely feminised and the male breadwinner model declined by leaps and bounds (Crompton 1999). Family transformations and the emergence of new definitions of family pushed in the same direction. The prevailing position now is that determining the unit of class analysis can be considered a measurement problem (Crompton 2008) that basically depends on the subject under investigation. Certain applications of class analysis —to social mobility, for example— require considering the unit under inspection to be the family, whereas if one wants to assess the effects of class on, for instance, income, the most appropriate perspective is to look at individuals and, possibly, to analyse men and women separately. In brief, determining the class of the unemployed requires a dual or combined rule: applying the criterion of the last paid job to the experienced unemployed, on the one hand, and the class of their families to the unemployed looking for their first job, on the other.

Finally, pragmatic procedures are followed to specify the class of the family. A common way of defining the dominance criterion to establish the family class (Davies & Elias 2010) is to first use the class of the householder or responsible for the accommodation. In cases of joint householders, if the class derived from their occupations coincides, the family may be assigned the class of the person who performs the occupation with the highest prestige or earns the highest income. If, for some reason, a choice has to be made between these matched joint householders, the oldest person prevails. At any rate, these procedures are highly dependent on the information available. An alternative when data on corresidents with a person are not available is to use, if feasible, the class of the person's mother/father at some point in his/her youth.

2.4 Unemployment as a class effect and other topics

Under these premises, and within the framework of the class analysis research programme (Goldthorpe & Marshall 1992), at least three types of empirical tasks can be undertaken that illustrate

¹⁰ As far as economically inactive family members are concerned, Wright (1997) defended from his neo-Marxist perspective a position relatively similar to that of Goldthorpe. Social relations within families are a mechanism linking people indirectly to the class structure. This economically inactive family members occupy class "mediated" locations.

the associations of unemployment with social class. The first two tasks are of primarily empirical interest; the third is of both analytical and empirical interest.

Many of the applications and developments of class analysis that take class position as the independent variable of a causal (or explanatory) chain only look at the employed population due to lack of data or other reasons. Such analyses provide results for an incomplete or limited part of the class structure and are potentially vulnerable to the accusation of biased representation of the population under inquiry. But if one admits that the unemployed can also be attributed a class position, then it is interesting to see how the inclusion of the unemployed alters the size of the classes and changes their distribution. This first task (Davies & Elias 2010) allows us to refine the description of the class structure by assessing the impact that unemployment has on the distribution of classes. Classes, or class structures, are regarded as an obviously partial outcome of unemployment.¹¹ The second task also requires looking at the class structure as an effect of unemployment. The specific objective of this second task is, after assigning the unemployed a class position, to examine the composition of unemployment in the different classes and to answer the question of how many unemployed there are in each class.

Both results depend on the differential risks of unemployment for members of different social classes. Conventional class analysis not only almost unanimously opposed considering the unemployed as a class but agreed in treating unemployment as an effect of class position. The underlying theoretical argument here is crystal-clear. As Goldthorpe himself pointed out, if the mechanisms that produce different kinds of employment relations involve different kinds of rewards and these, in turn, take the form of different degrees of job security, stability and expectations, one of the most obvious ways in which class position is associated with job and economic security is by producing differential risks of job loss for different classes (Golthorpe & McKnight 2006). The link between class and unemployment is a consequence of the very underlying mechanisms that induce different employment relations and shape the economic bases of social classes. The operation of these mechanisms implies that classes that rely on service relationships can be expected to show lower risks of unemployment than classes whose jobs are regulated by labour contracts. An additional interest of this exercise is that, since unemployment is not included in the class classification algorithm, the assessment of differential unemployment risks by social class serves as a sort of validity test for the class scheme used.

3 Material and methods

3.1 Data and variables

The empirical analysis presented in this paper is based on data from the European Union Labour Force Survey (EU-LFS). The EU-LFS is a survey conducted quarterly, with partial renewal of its sample, by European national statistical institutes. Eurostat collects the information from national surveys, harmonizes it and distributes, upon request, the microdata. The EU-LFS represents the entire European population and offers information on the composition of their households, their socio-demographic profiles and their status in the labour market. Due to its wide coverage and the quality of the information collected, the EU-LFS has become the official source of information, internationally validated, on the European labour market. Full technical documentation of the survey, including (i) classifications, (ii) explanatory notes and user guide for the core variables, (iii) coding lists, explanatory

¹¹ Of course, this task can be extended to other types of economically inactive population such as retired people, permanently disabled people, etc.

notes and classifications used over time, as well as (iv) core questionnaires, can be found on the Eurostat website.¹²

Eurostat offers quarterly and yearly data from the EU-LFS. Following Eurostat's advice, this paper will use yearly data, which "include additional information [to the quarterly data] and provide the basis for more structural analyses" (Eurostat 2022). Data from ten countries have been selected: Sweden, Denmark, Germany, France, United Kingdom, Ireland, Czech Republic, Hungary, Spain, and Portugal. The selection aims to achieve a broad coverage of the different geographical regions, political traditions, labour markets, welfare regimes, institutional arrangements, and cultural areas throughout Europe. Table A1 in the appendix presents a selection of macro indicators for the ten countries containing information on the economic position of the countries and some relevant characteristics of their labour markets. Data refer to 2021, the last available year in all countries except the UK, where due to Brexit the latest year distributed by Eurostat is 2019. The selected year was the first year after the outbreak of the pandemic in 2020. Notice that the annual unemployment rate for the EU-27 in 2021 (7.1%) improved on the data for the pandemic year (7.2% in 2020) without fully offsetting its impact (6.8% in 2019). The 2021 data are therefore interesting because they reflect the impact of both an employment shock and the immediate recovery which was already completed in 2022 (annual unemployment rate = 6.2%).

The total sample available for the ten countries, covering the population of all ages, amounts to 944,557 persons. However, for the purpose of unemployment analysis, age limits have been imposed on the total sample. In particular, to avoid possible disturbances associated with labour market entry and exit processes at the beginning and end of working careers, which will not be discussed here, only the population aged 20-59 has been selected. This selection implies excluding 19.3% of all unemployed, but does not affect the basic association between class and unemployment (data not shown here, but available upon request). After exclusion, the analytical sample includes 468,014 persons. Table 1 shows the basic distributions of the population selected for analysis.

Main independent variable is social class. The class schema used in this paper is the so-called ESeC social class schema (Rose & Harrison 2010) in its 7-classes version. In this exercise, ESeC operationalization combines three-digit occupations coded to ISCO08 following the classificatory algorithms proposed by Harrison¹³ and the implementation by the 'iscogen' Stata package provided by Jann (2019). The ESeC scheme (Rose & Harrison 2010) is an updated variant of the EGP scheme (Erikson et al. 1979) widely used in the contemporary literature on stratification.¹⁴ According to ESeC, the following seven class categories are distinguished: (1) Higher service (professionals, large employers and higher managers, such as medical doctors or managing directors and chief executives); (2) Lower service (lower grade professional, administrative and managerial occupations; higher grade technician and supervisory occupations, such as nursing and midwifery professionals or physical and engineering science technicians); (3) Intermediate classes (higher grade white-collar workers and lower supervisory and lower technician occupations, such as general office clerks or information and communications technicians); (4) Small proprietors (small employers and self-employed in non-professional occupations, included in agriculture, fisheries and forestry, such as owner of a hairdresser's salon and shopkeepers); (5) Lower grade white-collar workers (lower services, sales, and clerical occupations, such as shop salespersons and protective services workers); (6) Skilled manual workers (lower technical

¹² Available at: <u>https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_labour_force_survey_-</u> documentation#Explanatory_notes_and_user_guide_for_the_core_variables

¹³ Documentation available at: https://www.ericharrison.co.uk/european-socio-economic-classification-esec.html

¹⁴ The empirical distributions of EGP and ESeC are very similar. But, currently, there are more systematic and better documented procedures for operationalising the ESeC scheme than the EGP scheme from various occupational classifications (Smallenbroek et al. 2022) and, in particular, from ISCO08.

occupations, such as food processing workers or blacksmiths, toolmakers, and related trades workers); and (7) Routine occupations (semi- and non-skilled workers, such as domestic, hotel and office cleaners and helpers or transport and storage labourers). The 7-class version combines in the new class 3 the original categories 3 and 6; and in the new class 4, the original categories 4 and 5. As argued above, the unemployed and others involuntarily excluded from the labour market are not considered to constitute a social class in their own right. The unemployed with work experience are classified in the class that corresponds to their last occupation. The unemployed with no prior work experience are assigned to the highest class of their household members, whenever available.

In addition to country of residence, other covariates to be considered in the analysis include sex, eight five-year age bands (20-24, 25-29,... 55-59), partnership status (with partner, without partner), five levels of educational attainment (Primary or less or ISCED=1 or less; Lower secondary or ISCE=2; Upper secondary or ISCED=3; Post-secondary or ISCED=4, and Tertiary or ISCED=5+), three degree of urbanization (cities, towns and suburbs, and rural areas), and migratory status (native, immigrant).

Main outcome to be analysed is unemployment, defined by Eurostat according to the guidelines of the International Labour Organization.¹⁵ The unemployment rate was estimated as the proportion of the number of people unemployed to the labour force or economically active population (employed plus unemployed) over a selected period. Calculated in this way, it is a prevalence rate and, as such, an imprecise measure of risk because the denominator for its calculation does not accurately identify the population at risk at the beginning of the observed period. So, the unemployment rate will be used here as a proxy for 'unemployment risk' and the term risk will be used only by convenience. As a secondary outcome for the compositional analysis, data on time spent in unemployment (in months) and the distribution of unemployment duration by social class are presented. This variable, originally coded in four categories, was grouped into only two: up to eleven months duration and 12+ months (usually referred to as long-term unemployed). Even so, given the exclusions imposed on the sample, the fact that this variable is only applicable to the unemployed, and the missing cases, using it implies a significant loss of statistical power (n=22,025) which inevitably limits the possibilities for detailed analysis.

3.2 Empirical strategy

A four-step empirical strategy is used in this paper. First, cross-tabulations of 2021 employment status (employed, unemployed, and economically inactive people) by country of residence, sex, age, partnership status, education, degree of urbanisation, country of birth, and social class are presented, and rates of unemployment are estimated for these categories for descriptive purposes. Next, the compositional aspects that define the class in relation to unemployment are addressed. Unemployment rates in each class assess the impact of unemployment in its composition; moreover, data are also presented on the class composition of the unemployed according to their duration in unemployment. Complementarily, the distribution by class of the unemployed is compared with that of the employed. The question of how the class structure of the employed population changes if the unemployed are included in addition to the employed is also addressed. Third, we present an analysis of the probability of being unemployed by social class estimated with Poisson regression models. Unemployment rate ratios are the key instrument. Finally, to refine the analysis and control for possible heterogeneity due to sex and national differences, a sex-by-class interaction is included in the

¹⁵ An unemployed person is someone aged 15 to 74; not employed during the reference week according to the definition of employment; currently available for work, i.e. available for paid employment or self-employment before the end of the 2 weeks following the reference week; actively seeking work, i.e. had either carried out activities in the four-week period ending with the reference week to seek paid employment or self-employment or found a job to start within a period of at most 3 months from the end of the reference week.

basic model and the sample is stratified by country of residence in order to estimate the relative probabilities of unemployment for different classes in each of the selected countries.

4 Findings

4.1 Unemployment in the composition of classes

Table 1 provides descriptive statistics for the analytical sample used in this paper. Along with other features of the sample, data allow to gauge the size of the seven classes in the ten selected countries. Almost four out of ten people are placed in the service classes, a result of the continuous process of upgrading the occupational structure in European countries (Oesch 2013). The three working classes (lower sales and services, skilled manual, and semi-/non-skilled workers) are, taken together, about the same size, although the reduced volume (11%) of the skilled working class is noteworthy. As expected, small proprietors —the traditional petty bourgeoisie plus the farmers— represent a modest fraction (7%) of the population in these age bands. Intermediate classes are similar in size to semi-/nonskilled workers.

Table 1 also shows the well-known basic (bivariate) associations of unemployment with some of its main micro and contextual determinants. The variation in unemployment rates by country puts Spain, followed by France and Portugal, in the lead, with a rate more than twice that of the ten countries as a whole. Among the countries with the lowest unemployment rates are the Czech Republic, the United Kingdom and Germany. There is hardly any difference in the unemployment rate between men and women and, in terms of age, unemployment peaks at young ages and then falls to stabilise around the age of 50. Partnered people are less likely to be unemployed than non-partnered persons. There is a negative, albeit small, relationship between unemployment and the degree of urbanisation, but a strong positive relationship with migration status: immigrants are considerably more unemployed than natives. Education is clearly and inversely related to unemployment, as can be seen from the decreasing rates as educational attainment levels increase.

As for the social class, there are unemployed persons in all classes, but obviously not to the same extent. Notice, for example, that unemployment rate in routine occupations is more than five times that of the service classes; or that the unemployment rate of lower white-collar workers is more than twice that of the intermediate classes. In fact, the proportion of unemployed is distributed across class establishing a certain gradient —the more advantageous the class position, the less unemployment contributes to its make-up. There are, however, two exceptions to this pattern: among small proprietors the fraction of unemployed is lower than that of the intermediate classes; and the unemployed fraction of skilled manual workers is lower not only than that of lower white-collar workers but also of white-collar routine workers.

	Employed	Unemployed	Inactive	Total	% UR
All	376,949	22,025	69,040	468,014	5.5%
Country					
Sweden	52,986	3,412	5,203	61,601	6.0%
Denmark	39,327	1,830	6,315	47,472	4.4%
Germany	76,192	2,652	13,242	92,086	3.4%
France	23,743	2,155	5,363	31,261	8.3%
United Kingdom	33,162	1,086	6,540	40,788	3.2%
Ireland	7,886	439	1,707	10,032	5.3%
Czechia	14,409	459	2,421	17,289	3.1%
Hungary	86,197	4,172	17,030	107,399	4.6%
Spain	33,082	5,132	8,909	47,123	13.4%
Portugal	9,965	688	2,310	12,963	6.5%
Sex					
Male	194,517	11,104	25,147	230,768	5.4%
Female	182,432	10,921	43,893	237,246	5.6%
Age					
20-24	25,641	3,937	16,350	45,928	13.3%
25-29	35,057	2,939	7,063	45,059	7.7%
30-34	41,942	2,486	6,315	50,743	5.6%
35-39	45,175	2,389	5,941	53,505	5.0%
40-44	53,652	2,526	5,827	62,005	4.5%
45-49	58,855	2,507	6,669	68,031	4.1%
50-54	60,615	2,654	8,280	71,549	4.2%
55-59	56,012	2,587	12,595	71,194	4.4%
Partnership					
No partner	175,993	14,074	39,324	229,391	7.4%
Partner	200,956	7,951	29,716	238,623	3.8%
Education					
Primary or less	7,375	1,456	5,807	14,638	16.5%
Lower second	44,762	5,773	17,351	67,886	11.4%
Upper second	157,659	8,211	30,196	196,066	5.0%
Post-second	22,810	916	2,905	26,631	3.9%
Tertiary	143,468	5,576	12,464	161,508	3.7%
Degree of urbanisation					
Cities	129,678	8,921	25,121	163,720	6.4%
Towns and suburbs	128,863	6,991	22,373	158,227	5.1%
Rural areas	118,408	6,113	21,546	146,067	4.9%
Migratory status					
Native	333,896	17,237	57,650	408,783	4.9%
Immigrant	42,658	4,721	11,325	58,704	10.0%
Social Class (ESeC)					
Higher service	62,586	1,291	5,934	69,811	2.0%
Lower service	90,636	2,016	8,310	100,962	2.2%
Intermediate	50,530	1,773	5,569	57,872	3.4%
Small proprietors	25,758	731	3,562	30,051	2.8%
Lower sales and services	52,312	4,688	11,444	68,444	8.2%
Skilled manual	39,482	2,282	6,192	47,956	5.5%
Semi-/non-skilled	47,337	5,474	11,857	64,668	10.4%

 Table 1: Descriptive statistics of the analytical sample and unemployment rates (UR) in 2021. Yearly

 data for ten selected European countries.

Source: Eurostat.

One important compositional aspect of the classes that deserves to be highlighted is the duration of unemployment in each class. Figure 1 presents the fraction of the unemployed in each class who have been out of the labour market, but looking for a job, for twelve months or more versus those who have been unemployed for less than one year. Overall, two out of three unemployed do not remain unemployed for more than eleven months and one third (33%) can be defined as long-term unemployed. Interestingly, it is the small proprietors who include the highest proportion (41%) of long-term unemployed, meaning that this class produces very few unemployed, but with long spells of unemployment.¹⁶ As expected, the high and low service classes have the lowest proportions of long-term unemployed. In contrast, semi- and nonskilled manual workers generate more long-term unemployed than average. Close to the average for all classes, the intermediate classes, lower white-collar workers and skilled manual workers do not differ significantly from each other.



Figure 1: Proportion of unemployed with 12+ month of duration in unemployment, by social class. With 95% CI.

Source: Eurostat.

Before delving into the differential risks of unemployment associated with class position, it is worth looking at a different aspect of class composition, this time from the perspective of the class distribution of the unemployed. The two panels in Figure 2 attempt to answer the question of how the unemployed are distributed by class compared to the employed. Since unemployment rates vary by class, the class distributions of unemployed and employed populations are very different, as can be seen in the left panel. While only 7% of the unemployed are attached to the higher salariat and an even smaller share (4%) to the small proprietors, between 25% and 30% of unemployed people are

¹⁶ Without longitudinal information, it is difficult to interpret these data correctly. Small proprietors are an occupationally heterogeneous group and self-employed and small employer statuses are often transitory between spells of paid employment (Georgellis et al. 2005). Furthermore, transitions from self-employment to dependent work are more frequent than transitions to unemployment (Lin et al. 1999). It si plausible that the unemployed coming from self-employment cross-sectionally observed in a given point in time is selected so that their propensity to remain unemployed is higher. Hetschko (2016) showed that losing self-employment is an even more harmful life event than losing dependent employment.

found in the lower sales and service occupations or in routine workers. The intermediate classes fall in between the two extremes. The right panel of the figure represents the cumulative distributions of employed and unemployed. Almost one in two employed persons (49%) are in the higher and lower service classes or small proprietors, but two out of three unemployed persons (68%) are located in the working classes (lower sales and services, skilled manual, and semi-/non-skilled).



Figure 2: Distribution by class of employed and unemployed (left panel). Accumulated distribution of employed and unemployed by class (right panel).

Source: Eurostat



Figure 3: Effect of allocating unemployed to the class structure of employed in % point change.

Source: Eurostat.

Given such unequal distributions, how does the map of the class structure change when the unemployed, based on information on the class position of their last job or the dominant class position in their households, are added to the employed population? Figure 3 shows the answer. The change is actually very small. The main reason for the limited impact of unemployment on the map of the class structure of the employed is obviously that the overall unemployment rate at these ages in the observed countries is generally very small (5.5%). This means that the contingent of people that is added to the employed population makes very little difference once it is distributed across their respective classes. If anything, adding the unemployed shapes an only slightly different class map in which the size of the working classes (lower sales and services, skilled manual, and semi-/non-skilled) increases by 1.4 percentage points and that of the service classes are not very high in number, but their unemployment rate is below average. Small proprietors are the smallest class, and their unemployment rate is low. What this means, however, is that when many empirical class analyses use only the employed population, they are not seriously distorting the class distributions.

4.2 Class and unemployment rates

Table 2 shows the results of a Poisson regression model on the unemployment (as officially defined) across European countries. This basic model, the results of which are expressed as rate ratios (RRs), includes social class (ESeC, 7 categories) together with selected covariates. Results confirm the basic bivariate associations with gender, age, partnership status, educational attainment, migratory origin, and two contextual factors as country of residence and degree of urbanisation. Controlling for covariates, unemployment is more likely among women, at younger ages (with a slight spike after the age of 50), among those not living with a partner, less educated persons, and immigrants. National variations show higher unemployment prevalence in Southern European countries (Spain and Portugal) plus France and Ireland; intermediate levels in Hungary; and moderate or very moderate levels (below 4%) in Czech Republic, the United Kingdom, Germany, Sweden, and Denmark.

Unemployment is unevenly distributed by social position, as can be expected from the type of employment relationships involved in each class. The higher and lower service classes and small proprietors have lower unemployment rates than the intermediate classes. Taking the higher salariat as the term of comparison, the adjusted unemployment rate ratio for the lower salariat is statistically indistinguishable from the reference (RR=1.1), the small proprietors slightly surpass it (RR=1.2) and the intermediate classes exceed it (RR=1.5). By contrast, among the working classes, lower white-collar workers (sales and clerks) multiply the unemployment risk of higher salariat by 3.0, skilled workers by 2.3 and semi-/nonskilled workers by 3.3. Furthermore, differences do not only occur at the extremes. For example, skilled workers show lower unemployment rates than white-collar workers (sales and clerks), but their unemployment risk is 1.5 times that of the intermediate classes.

Since the class position of women has been a persistent focus of dispute in class analysis, it is interesting to note the extent to which the relationship between class and unemployment differs for men and women. The basic model (Table 2) indicates that unemployment rates for women are slightly, but significantly, higher (RR=1.1) than for men. The average adjusted predictions of a new model with the same covariates but including the sex-by-class interaction (Figure 4) reflect relatively similar distributions between men and women across all the classes. In service classes, the probability of unemployment for women is, compared to men, equal or slightly lower; it is slightly higher among women in the intermediate classes and semi/unskilled workers; it is about the same for men and women among white-collar workers (sales and clerks); and considerably higher only among small proprietors and skilled workers. In other words, the differences in unemployment between men and women are only sizeable in two classes with limited numbers of women.

	IRR	Std.	z	P>z	[95% CI]	
Sex						
Male	1					
Female	1.110	0.018	6.59	0.000	1.076	1.145
Age						
20-24	1					
25-29	0.716	0.019	-12.28	0.000	0.679	0.755
30-34	0.575	0.017	-19.01	0.000	0.543	0.609
35-39	0.519	0.015	-22.12	0.000	0.489	0.550
40-44	0.454	0.013	-26.84	0.000	0.429	0.481
45-49	0.409	0.012	-30.42	0.000	0.386	0.433
50-54	0.413	0.012	-30.5	0.000	0.391	0.437
55-59	0.421	0.012	-29.33	0.000	0.397	0.446
Partnership						
No partner	1					
Partner	0.653	0.011	-24.78	0.000	0.632	0.676
Education						
Primary or less	1					
Lower secondary	0.898	0.032	-3.03	0.002	0.837	0.963
Upper secondary	0.556	0.020	-16.38	0.000	0.519	0.597
Post-secondary	0.508	0.026	-13.19	0.000	0.459	0.562
Tertiary	0.572	0.022	-14.39	0.000	0.530	0.617
Degree of urbanisation						
Cities	1					
Towns and suburbs	0.877	0.016	-7.23	0.000	0.846	0.908
Rural areas	0.826	0.017	-9.54	0.000	0.795	0.859
Migratory status						
Native	1					
Immigrant	1.460	0.030	18.12	0.000	1.401	1.521
Social Class (ESeC)						
Higher service	1					
Lower service	1.092	0.039	2.46	0.014	1.018	1.172
Intermediate	1.509	0.058	10.77	0.000	1.400	1.626
Small proprietors	1.192	0.058	3.62	0.000	1.084	1.312
Lower sales and services	2.982	0.103	31.63	0.000	2.787	3.191
Skilled manual	2.279	0.088	21.24	0.000	2.112	2.458
Semi-/non-skilled	3.321	0.119	33.63	0.000	3.096	3.561
Country of residence						
Sweden	1					
Denmark	0.768	0.033	-6.12	0.000	0.706	0.836
Germany	1.088	0.037	2.48	0.013	1.018	1.164
France	2.925	0.104	30.21	0.000	2.728	3.136
United Kingdom	1.027	0.044	0.63	0.527	0.945	1.117
Ireland	1.998	0.114	12.09	0.000	1.786	2.235
Czechia	1.241	0.069	3.88	0.000	1.113	1.385
Hungary	1.630	0.053	14.97	0.000	1.529	1.738
Spain	3.920	0.123	43.69	0.000	3.687	4.168
Portugal	2.158	0.104	16.03	0.000	1.965	2.371
Constant	0.055	0.003	-50.86	0.000	0.049	0.062

Table 2 Poisson rearession model	for the	probabilitv	(rate ratios)) of unem	plovment.
· · · · · · · · · · · · · · · · · · ·					···/ ···

Source: Eurostat.

Figure 4: Probabilities of unemployment by sex and social class (ESeC, 7 categories). Average adjusted predictions by a Poisson regression model, controlling for age, partnership status, educational attainment, country of residence, degree of urbanization, and country of origin. With 95% Cl.



Source: Eurostat

Another important source of variation in unemployment is country of residence. Substantial rate ratios between, for example, Spain and Denmark (RR=5.1) or France and Denmark (RR=3.8) can be observed. Giving this variety, it seems reasonable to think that the variation in unemployment across classes may depend on the country where one lives. Figure 5 shows average adjusted predictions of unemployment by a Poisson regression model stratified by country of residence and controlling for sex, age, partnership status, educational attainment, degree of urbanization, and country of origin. While there are similarities between countries, there are also important differences. First, in all countries there is a significant gap in unemployment levels between the salariat and the working classes. This gap is most visible in Spain, Portugal and France, but also in Sweden. Secondly, while in Sweden, Denmark, Germany, United Kingdom, Ireland and Czech Republic the prevalence of unemployment tends to be similar and statistically insignificant among the non-working classes, in France, Spain, Hungary and Portugal intermediate classes differ as they experience more unemployment than the salariat or the small proprietors. Thirdly, the highest probabilities of unemployment are found in the semi-/nonskilled working class, except in Spain, France and Portugal, where lower white-collar workers (sales and clerks) exhibit the highest levels of unemployment. Finally, in all ten countries, without exception, skilled manual workers have the lowest unemployment probabilities among the working classes, an indication that education and training can be a powerful shield against unemployment.

Figure 5: Probabilities of unemployment by country of residence and social class. Average adjusted predictions by Poisson regression models stratified by country of residence, controlling for sex, age, partnership status, educational attainment, degree of urbanization, and country of origin. With 95%



A final aspect that deserves attention is the extent to which the distance between classes in terms of unemployment varies across countries. Figure 6 shows the distance between three pairs of classes measured by their respective unemployment RRs. Unemployment rate ratios have been estimated for the pair formed by the intermediate classes and services workers (sales and clerks) in order to assess the gap in the higher and lower fractions of white-collar classes. Ratios have also been estimated for two pairs of classes at the extremes of the spectrum: high salariat versus services (sales and clerks) workers; and high salariat versus semi-/nonskilled workers. The average distance between the higher and lower fractions of white-collar workers (RR=2.1) is smaller than that between higher salariat and lower services workers (RR=3.0) and between higher salariat and semi/nonskilled manual workers (RR=3.2). The gap between the two segments of white-collar work tends to be similar across countries with the exception of Denmark (RR=2.5) and Sweden (RR=3.2). The same pattern of relatively little variation across countries with the exception of the two Scandinavian countries is visible in the other two comparisons: while, compared with that for higher salariat, the relative risk of unemployment for white-collar workers in lower services hovers around 3.0 on average, in both Denmark (RR=3.5) and Sweden (RR=6.6) it is significantly higher; and if in the non-Scandinavian countries semi-/nonskilled manual workers have a relative risk of unemployment 2.5 times that of higher salariat, in Denmark (RR=3.8) and Sweden (RR=7.8) it is much higher. The experience of the Scandinavian countries seems illustrative. The width of the gradient between classes in terms of unemployment does not seem to depend on the overall level of unemployment, but rather on the low levels of unemployment in the service and intermediate classes, one of the distinctive features of the Scandinavian countries (see Figure 5). In fact, unemployment rates for the service classes in Sweden and Denmark are the lowest of all selected countries; unemployment rates for the intermediate classes are also, together with the Czech ones, the lowest.

Figure 6: Class distances in unemployment. Unemployment rates ratios for three pairs of classes in ten European countries. Rate ratios from Poisson regression models stratified by country of residence, controlling for sex, age, partnership status, educational attainment, country of origin, and degree of urbanization. With 95% Cl.



Source: Eurostat

5 Discussion

Because of its detrimental consequences for the individuals and societies that experience it, unemployment is a major problem in many post-industrial economies. In some European countries, particularly those in the South, high levels of unemployment have become persistent features of their labour markets, causing uneasiness and alarm among their citizens. But even in countries that have not reached such high rates or where they are not as enduring, unemployment is a matter of serious concern for scholars, policy makers and other stakeholders. The academic consensus recognises unemployment as a complex phenomenon with a multiple aetiology (Janoski, Luke & Oliver 2014). In this regard, it is important to stress that this paper is not concerned with the macroeconomic forces, microeconomic processes or institutional arrangements that drive or inhibit unemployment (Borjas 2019; Pissarides 2000). The purpose of this paper is limited to analysing a much more specific aspect of unemployment, of mainly sociological interest: the dynamics that link the phenomenon of unemployment and social class. The basic idea is to consider that unemployment is, at least in part, an effect of class position and, as such, one of the manifestations of the inequality of life chances that derive from belonging to a given class. Viewing unemployment as an effect of class also implies the possibility of treating it as a relevant mechanism for the reproduction of class inequalities.

The analysis begins by clarifying from a theoretical point of view why unemployment may be a consequence of class. If, as neo-Weberian approaches assume, classes are defined as sets of occupations whose performance involves different types of employment relationships, one would expect the degree of job security and stability —and hence the unemployment rate— to be higher in classes subject to employment contracts than in classes subject to service relationships. However, to operationally link unemployment with social class, the social class of the unemployed needs to be determined. To this end, the possibility of that the unemployed constitute a social class is ruled out on two grounds: they do not maintain employment relations during the time they are unemployed and, given the intensity of the transition flows into and from unemployment, they are very unlikely to achieve, as a group, a minimum degree of demographic or other sort of class formation. Evidence from empirical analysis of class composition reveals some characteristics that justify not considering the unemployed as a class per se. Two out of three of the unemployed had been in this situation for less than a year. These are short durations and imply too intense flows to and from unemployment to be able to contribute effectively to demographic identity or class formation of unemployed people. Not considering the unemployed to be a class, criteria are provided that allow them to be assigned a class, namely the class corresponding to the occupation held in the last job for the experienced unemployed and the family class for the unemployed with no previous experience.

Under these premises, the empirical analysis focuses on two processes that underlie the dynamics between class and unemployment: how class position conditions the risk of being unemployed and how unemployment impacts on class composition. The analysis is based on harmonised LFS-EU data for ten countries representing the variety of geographical regions, welfare regimes, labour markets and socio-political traditions prevailing in Europe. The sample was limited to the population aged 20-59 and the dependent variable is the official unemployment rate in 2021. The seven-class version of the ESeC (Rose & Harrison 2010) has been used to implement the empirical analysis. At the European level, the results show a clear gradient whereby the unadjusted unemployment rate of the working classes (low-level white-collar workers, skilled manual workers, and semi/nonskilled workers) far exceeds the rate of the service classes. The unemployment rates of the small proprietors and intermediate classes lie between the two extremes. These results confirm main findings of previous studies conducted under the perspective of class analysis in Great Britain, Germany, Austria, Denmark, Finland, and Spain (Gallie et al. 1998; Latye et al. 2000; Polavieja & Richards 2001; Elias & McKnight 2003; McGinnity & Hillmer 2004; Luchini & Schizzerotto 2010; Lahtinen, Sirniö & Martikainen 2020; Martínez-Pastor 2020). Although these studies used different data, methodologies, and definitions of unemployment risks, they agreed on showing that unemployment was not a class-neutral phenomenon: unemployment risk was not homogeneously distributed across classes and tended to be negatively associated to class position, with the working classes exposed to higher risks than the service classes. Given the class distribution of unemployment rates, the contribution of the unemployed and employed to each class is very different: while four out of ten employed belong to the service classes, only two out of ten unemployed are located in these classes. As previously noted (Davies & Elias 2010), unemployment tends to be concentrated among those in occupations with low skill requirements. However, these compositional differences do not mean that excluding the unemployed from the class structure changes the class map and class sizes very much. In fact, given that the total unemployment rate in the selected countries does not exceed 6%, excluding the unemployed does not seriously distort the picture of the class structure obtained by considering only the employed.

The analysis of adjusted rates corroborates that using a multivariate regression model and controlling for factors such as gender, age, education, family status, migration status, as well as country and degree of urbanisation of the municipality of residence, class inequalities in unemployment persist. The service classes and small proprietors have considerably lower unemployment rates than the working classes. The intermediate classes are in the middle ground. In other words, social classes behave in the labour market as would be expected of them given the type of employment relationships that define them: service employment relationships are associated with lower levels of job insecurity and instability than contract employment relationships. Two specifications can be made here. First, the distribution of unemployment by class is relatively homogeneous for men and women, with similar or slightly higher levels of unemployment for women, apart from two classes in which the presence of women is relatively low (small proprietors and skilled workers) where female unemployment rates are visibly higher. And second, in terms of cross-country variations, some commonalities (significant gap between the unemployment rates of the salariat and working classes) should be underlined; but differences are also notable (in most countries the highest unemployment rates are among semi/nonskilled workers, although in France, Portugal and Spain the highest prevalence of unemployment is in the lower white-collar class). It is interesting in this respect to note that the relative distance (ratio of unemployment rates) of different classes tends to be stable across countries, except in the two Scandinavian countries in the sample. In Sweden and Denmark, the distance separating salariat from working classes (between higher service class and lower white-collar workers, and between higher service class and unskilled workers) is significantly longer than in the other countries. The same is true for the gap between the two fractions, higher and lower, of white-collar workers, which is wider in Scandinavian countries than elsewhere. However, these larger gaps are not due to the high unemployment rates of the disadvantaged classes as much as to the low rates of the salariat and intermediate classes.

Although the ESeC has been shown to have a high degree of predictive validity for unemployment risk at the European level and in each of the ten countries observed, concerns have recently emerged that such schemata may have become obsolete for a full understanding of post-industrial societies and economies. In particular, skill-biased technological change and offshoring are reportedly de-composing the traditional working class as the number of assemblers, machine operators, farm labourers, office workers, or sales assistants has shrunk tremendously (Oesch and Piccitto 2019). The massive application of information technologies and widespread computerisation have governed a process that artificial intelligence may accelerate in the near future. As the bulk of the changes involve a significant reduction of jobs where physical strength and non-ICT machines are used rather than task shifting within jobs, far-reaching changes in the sectoral distribution of the labour force and in the occupational structure are to be expected (Bisello et al. 2019). These changes will necessarily affect the class structure of contemporary post-industrial societies. Indeed, new classifications and schemata have already been proposed to try to capture these new class structures. One of the most conspicuous proposals is that of Oesch (2006; 2022), who builds his scheme based on four vertical levels of skill requirements and four horizontal types of work logics. Table A1 in the appendix shows the unemployment probabilities (adjusted averaged predictions) in the ten observed countries from a Poisson regression model similar to that in Table 2, but this time with social class operationalised using the simplified version of the eight-class scheme of Oesch (2006). Results confirm those obtained previously with ESeC: the unemployment risk of service workers, production workers and office employees is considerably higher than that of all other classes. Among large employers and high self-employed professionals unemployment is almost unknown; at a slightly higher level are small business owners, (semi-)professional technicians, managers, and socio-cultural (semi-)professionals. If the reduction to four classes schema (Oesch 2022) is used, the class gradient of unemployment risk leaves no room for doubt: compared to the traditional upper-middle class, the adjusted risk of unemployment is 1.4 times in the salaried middle-class, 1.8 times in the lower-middle class, and 3.5 times in the working class.

In short, social class defined in terms of the usual neo-Weberian and other schemes is a good predictor of the unemployment rate at the European level. The ability of class to predict unemployment is a very solid result. It performs well both across the entire class map -i.e. both between classes at the poles of the distribution and between middle positions— and over the ten selected countries of the sample used in this paper. In different European regions and under different welfare regimes, institutional systems and political traditions, the association of class and unemployment is robust in all segments of the class structure. It is true that there are certain peculiarities probably related to the different occupational structures of the countries, but the regularities are visible and telling. In this sense, the results presented in this paper support the validation tests of these class schemas previously conducted (Smallenbroek et al. 2022) and, in particular, those that specifically examined the effects of class on the likelihood of becoming unemployed (Lucchini & Schizzerotto 2010). Such classifications prove to have not only a high degree of construct and criterion validity, but also external validity to measuring occupational advantage and disadvantage in different national contexts. On the other hand, from a more substantive point of view, these findings imply that the phenomenon of unemployment may be operating as an important mechanism for the reproduction of class inequalities. The disadvantages and detrimental consequences of unemployment will end up accumulating in the same class positions if not only the unemployment prevalence rates, but also the inflows into unemployment (McGinnity & Hillmert 2004; Lahtinen et al. 2020), durations of unemployment and the processes of exit (Bernardi et al. 2000) are structured by class.

6 References

Ares, M and van Ditmars, M.M. (2023): Intergenerational Social Mobility, Political Socialization and Support for the Left under Post-industrial Realignment. *British Journal of Political Science*, 53: 536–554.

Barone, C., Hertel, F.R., and Smallenbroek, O. (2021): The rise of income and the demise of class and social status? A systematic review of measures of socio-economic position in stratification research, *Research in Social Stratification and Mobility*, 78:1-15.

Bernardi, F., Layte, R., Schizzerotto, A. and Jacobs, S. (2000): Who Exits Unemployment? Institutional Features, Individual Characteristics, and Chances of Getting a Job. A Comparison of Britain and Italy. In Gallie D and Paugam S, *Welfare Regimes and the Experience of Unemployment*, Oxford: Oxford University Press, pp. 218–239.

Bihagen, E., Nermo, M. and Erikson, R. (2010): Social Class and Employment Relations: Comparisons Between the ESeC and EGP Class Schemas Using European Data. In D. Rose and E. Harrison (Eds.). *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge, pp. 89-113. Bisello, M., Peruffo, E., Fernández-Macías, E. and Rinaldi, R. (2019). *How computerisation is transforming jobs: Evidence from Eurofound's European Working Conditions Survey*. Seville: European Commission, JRC117167.

Blossfeld, H.P., Mills, M. and Bernardi, F. (Eds.) (2006): *Globalization, Uncertainty and Men's Careers. An International Comparison*. Cheltenham: Edward Elgar.

Borjas, G.J. (2019): Labor Economics. New York: McGraw-Hill.

Breen, R. (2005): Foundations of a neo-Weberian class analysis. In E.O. Wright (Ed.), *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 31–50.

Brousse, C., Monso, O. and Wolff, L. (2010): Stable and Consistent with the Employment Relations Theoretical Background? Does the Prototype ESeC Show These Qualities with French Data? In D. Rose and E. Harrison (Eds), *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge, pp. 39–60.

Caínzos, M. and Voces, C. (2015). Paro y voto: ¿afecta al voto la experiencia de desempleo? *Revista de Estudios Políticos*, 168: 115-150.

Cooper, D. (2014): The Effect of Unemployment Duration on Future Earnings and Other Outcomes. *Working Papers* No. 13-8. Federal Reserve Bank of Boston.

Crompton, R. (1989): Class theory and gender. *British Journal of Sociology*, 40(4): 567–587.

Crompton, R. (2008): *Class and Stratification*, 3rd edition. Cambridge: Polity Press.

Crompton, R. (Ed.) (1999): *Restructuring Gender Relations and Employment: The Decline of the Male Breadwinner*. Oxford: Oxford University Press.

Davies, R. and Elias, P. (2010): The application of ESeC to three sources of comparative European data. In D. Rose and E. Harrison (Eds) *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge, pp. 61–86.

Elias, P. and McKnight, A. (2011): Earnings, Unemployment and the NS-SEC. In P. Elias and A. McKnight, *A Researcher's Guide to the National Statistics Socio-economic Classification*. London: Sage, pp. 2–31.

Erikson, R. and Goldthorpe, J.H. (1992): *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.

Erikson, R., Goldthorpe, J.H. and Portocarero, L. (1979): Intergenerational Class Mobility in Three Western European Societies: England, France and Sweden. *The British Journal of Sociology*, 30(4):415-41.

Esping-Andersen, G. (Ed.) (1993): *Changing Classes. Stratification and Mobility in Post-Industrial Societies*. London: Sage.

Eurostat (2022): *EU Labour Force Survey Database User Guide*. Version: November 2022- Available at: https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS_Database_UserGuide_2021.pdf

Eurostat (2023): Eurostat euroindicators, 37/2023.

Evans, G. and Mills, C. (1998): A Latent Class Analysis of the Criterion-Related and Construct Validity of the Goldthorpe Class Schema. *European Sociological Review*, 14(1):87-106.

Evans, G. and Mills, C. (2000): In search of the wage-labour/service contract: new evidence on the validity of the Goldthorpe class schema. *The British Journal of Sociology*, 51(4):641-661.

Gallie, D. (1994): Are the Unmployed an Underclass? Some Evidence from the Social Change and Economic Life Initiative. *Sociology*, 28: 737-57.

Gallie, D. and Paugam, S. (2000): *Welfare Regimes and the Experience of Unemployment*. Oxford: Oxford University Press.

Gallie, D., White, M., Cheng, Y. and Tomlinson, M. (1998): *Restructuring the Employment Relationship*. Oxford: Clarendon Press.

Georgellis, Y., Sessions, J.G. and Tsitsianis, N. (2005). Self-Employment Longitudinal Dynamics: A Review of the Literature. *Economic Issues*, 10(2): 51, https://ssrn.com/abstract=921029.

Goldthorpe, J.H. (1982): On the Service Class: Its Formation and Future. In A. Giddens and G. Mackenzie (Eds.), *Social Class and the Division of Labour*. Cambridge: Cambridge University Press, pp. 162–185.

Goldthorpe, J.H. (1983): Women and Class Analysis: In Defence of Conventional View. *Sociology*, 17(4): 465–488.

Goldthorpe, J.H. (1984): Women and Class Analysis: a reply to the replies. *Sociology*, 18(4): 491–499.

Goldthorpe, J.H. (1997): The "Goldthorpe" class schema: Some observations on conceptual and operational issues in relation to the ESRC Review of Government Social Classifications. In D. Rose and K. O'Reilly (Eds.), *Constructing Classes: Towards a new social classification for the UK*. Swindon: ESRC/ONS.

Goldthorpe, J.H. (2007): On Sociology, 2 vols. Stanford University Press.

Goldthorpe, J.H. (2012): Back to Class and Status: Or Why a Sociological View of Social Inequality Should Be Reasserted. *Revista Española de Investigaciones Sociológicas*, 137: 43–58.

Goldthorpe, J.H. and Marshall, G. (1992): The promising future of class analysis: a response to recent critiques. *Sociology*, 26(3): 381–400.

Goldthorpe, J.H. and McKnight, A. (2006): The economic basis of social class. In S.L. Morgan, D.B. Grusky and G.S. Fields (Eds), *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, Stanford: Stanford University Press, pp.109–133.

Goldthorpe, J.H., Llewellyn, C. and Payne, C. (1987): *Social Mobility and Class Structure in Modern Britain*. Oxford: Clarendon Press.

Grusky, D.B. and Galescu, G. (2005): Foundations of a neo-Durkheimian class analysis. In E.O. Wright, *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 51–81.

Harrison, E. and Rose, D. (2010): From derivation to validation. Evidence from UK and beyond. In Rose, D. and Harrison, E. (Eds) *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge, pp. 39–60.

Heath, A. and Britten, N. (1984): Women's jobs do make a difference. *Sociology*, 18(4): 475–490.

Hetschko, c. (2016). On the misery of losing self-employment. *Small Business Economics*, 47: 461–478.

Jann, B. (2019): iscogen: Stata module to translate ISCO codes. Available from: http://ideas.repec.org/c/ boc/bocode/s458665.html.

Janoski, T., Kuke, D. and Oliver, C. (2014): *The Causes of Structural Unemployment. Four Factors that Keep People from the Jobs They Deserve*. Cambridge: Polity Press.

Katrňák, T. (2012): Is Current Czech Society a Social Class-Based Society? The Validity of EGP and ESeC Class Schemes. *Sociológia*, 44(6):678–703.

Lahtinen, H., Sirniö, O. and Martikainen, P. (2020): Social class and the risk of unemployment: Trends, gender differences and the contribution of education. *Acta Sociologica*, 63(3): 303–321.

Layard, R., Nickell, S. and Jackman, R. (2005): *Unemployment. Macroeconomic Performance and the Labour Market*. Oxford: Oxford University Press.

Layte, R., Levin, H., Hendrickx, J. and Bison, I. (2000): Unemployment and Cumulative Disadvantage in the Labour Market. In D. Gallie and S. Paugam, *Welfare Regimes and the Experience of Unemployment*, Oxford: Oxford University Press, pp. 153-74.

Lin, Z., Picot, G. and Yates, J. (1999). The Entry and Exit Dynamics of Self-Employment in Canada. *Statistics Canada Analytical Studies Working Paper*, No. 134. Available at SSRN: https://ssrn.com/abstract=182648 or http://dx.doi.org/10.2139/ssrn.182648

Lucchini, M. and Schizzerotto, A. (2010): Unemployment risks in four EU countries: A validation study of the ESeC. In D. Rose and E. Harrison (Eds) *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge, pp.235–244.

Marshall, G., Roberts, S. and Burgoyne, C. (1996): Social Class and Underclass in Britain and the USA. *British Journal of Sociology*, 47(1): 22–44.

Marshall, G., Roberts, S., Burgoyne. C., Swift, A. and Routh, D. (1995): Class, Gender, and the Asymmetry Hypothesis. *European Sociological Review*, 11: 1–15.

Martínez Pastor, J.I. (2020): Origen social y paro: ¿importa la ocupación de los padres para evitar el desempleo? *Revista Internacional de Sociología*, 78(3):e161. <u>https://doi.org/10.3989/ris.2020.78.3.19.005</u>

Marx, K. (1963): *The Eighteenth Brumaire of Louis Bonaparte*. New York: International Publishers.

Marx, K. and Engels, F. (1998): *The German Ideology*. New York: Prometheus.

McGinnity, F. and Hillmert, S. (2004): Persisting class inequality? Comparing class-specific unemployment in early working life in Britain and West Germany. *European Societies*, 6(3): 383–408.

Mitnik, P.A. and Cumberworth, E. (2018): Measuring Social Class with Changing Occupational Classifications: Reliability, Competing Measurement Strategies, and the 1970–1980 U.S. Classification Divide. *Sociological Methods & Research*, 50(1): 265–309.

OECD (2018). OECD Employment Outlook 2018. Paris: OECD Publishing. https://doi.org/10.1787/empl_outlook-2018-en.

Oesch, D. (2006): *Redrawing the class map: Stratification and institutions in Britain, Germany, Sweden and Switzerland*. Basingstoke: Palgrave Macmillan.

Oesch, D. (2013): *Occupational change in Europe. How technology and education transform the job structure*. Oxford: Oxford University Press.

Oesch, D. (2022): Contemporary Class Analysis. JRC Working Papers Series on Social Classes in the Digital Age, 2022/01.

Oesch, D., & Piccitto, G. (2019). The polarization myth: Occupational upgrading in Germany, Spain, Sweden, and the UK, 1992–2015. *Work and Occupations*, 46(4), 441-469.

Parkin, F. (1971). *Class Inequality and Political Order: Social Stratification in Capitalist and Communist Societies*. New York: Praeger.

Pissarides, C. (2000): Equilibrium Unemployment Theory. Cambridge and London: The MIT Press.

Polavieja, J.G. and Richards, A. (2001): Trade Unions, Unemployment and Working-Class Fragmentation in Spain. In N. Bermeo (Ed.), *Unemployment in the New Europe*. Cambridge: Cambridge University Press, pp. 203–244.

Roberts, K. (2016): Unemployment. In S. Edgell, H. Gottfried and E. Granter (Eds.), *The Sage Handbook of the Sociology of Work and Employment*. London: Sage, pp. 469–484.

Rose, D. and Harrison, E. (Eds.) (2010): *Social Class in Europe: An Introduction to the European Socio-Economic Classification*. London: Routledge.

Runciman, W.G. (1990): How Many Classes are There in Contemporary British Society? *Sociology*, 24: 377–96.

Smallenbroek, O., Hertel, F. and Barone, C. (2022): Measuring Class Hierarchies in Postindustrial Societies: A Criterion and Construct Validation of EGP and ESEC Across 31 Countries. *Sociological Methods & Research*, 1–41. DOI: 10.1177/00491241221134522.

Standing, G. (2011): *The Precariat: The New Dangerous Class*. London and New York: Bloomsbury Academic.

Standing, G. (2014): A Precariat Charter. From denizens to citizens. London: Bloomsbury Academic.

Stanworth, M. (1984): Women and Class Analysis: a reply to Goldthorpe. *Sociology*, 18(4): 159-170.

Tahlin, M. (2007): Class clues. European Sociological Review, 23(5): 557–572.

Van Parijs, P. (1987). A revolution in class theory. *Politics and Society*, 15(4): 453-482.

Weeden, K.A. and Grusky, D.B. (2012): The Three Worlds of Inequality. *American Journal of Sociology*, 117(6): 1723-1785.

Weininger, E.B. (2005): Foundations of Pierre Bourdieu's class analysis. In E.O. Wright (Ed.), *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 82–118.

Wirth, H., Gresch, C., Müller, W., Pollak, R. and Weiss, F. (2010): Measuring Social Class: The Case of Germany. In D. Rose and E. Harrison (Eds) Social Class in Europe: An Introduction to the European Socio-Economic Classification. London: Routledge, pp. 114-37.

Wright, E.O. (1980): Class and occupation. Theory and Society, 9(1): 177-214.

Wright, E.O. (2015): Understanding Class. London: Verso.

Wright, E.O. (Ed.) (1997): *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University Press.

Wright, E.O. (Ed.) (2005): Approaches to Class Analysis. Cambridge: Cambridge University Press.

7 Appendix



Figure A1. Effect of allocating unemployed to the class structure of employed in % point change.

Source: Eurostat

Figure A2 Probabilities of unemployment by social class (Oesch, 4 categories). Average adjusted predictions by a Poisson regression model, controlling for age, partnership status, educational attainment, country of residence, degree of urbanization, and country of origin. With 95% CI.



Source: Eurostat

	2021 GDP per capita in PPS	Gini coefficient	Distribution of the workforce across economic sectors		_ % women in	% employed	Maximum duration	
	(EU27 2020=100)	disposable income⁺	Agriculture	Industry	Services	the work force	with tertiary education	of unemployment benefit payments [†]
Sweden	123	26.8	1.5	18.4	80.1	47.7	49.0	14
Denmark	133	27.0	1.7	18.9	79.4	50.9	46.0	39
Germany	120	31.2	1.3	27.9	70.8	48.0	33.6	12
France	104	29.3	2.6	19.5	77.9	49.8	46.0	24
United Kingdom	101	32.8*	1.4	18.2	80.3	50.0	45.2	6
Ireland	218	26.9	3.9	19.3	76.9	48.8	59.2	12
Czechia	92	24.9	3.3	37.8	58.9	47.1	24.7	3
Hungary	75	27.6	6.1	34.6	59.3	47.4	24.5	3
Spain	83	33.0	4.6	21.4	74.0	47.3	48.1	24
Portugal	75	33.0	3.5	21.9	74.6	50.1	30.7	24

Table A1 Aggregated indicators of the ten selected countries

Source: Eurostat

* From EU-SILC survey

* Data from the World Bank database (<u>https://data.worldbank.org/indicator/SI.POV.GINI</u>)

[†] Duration in months. OECD (2018)

Table A2 Probabilities of unemployment by social class (Oesch, 8 categories). Average adjusted predictions by a Poisson regression model, controlling for age, partnership status, educational attainment, country of residence, degree of urbanization, and country of origin. With 95% Cl.

	Margin	SE	P>z	[95% CI]	
Self-employed professionals and large employers	0.017	0.002	0.000	0.013	0.020
Small business owners	0.019	0.001	0.000	0.017	0.020
Technical (semi-)professionals	0.022	0.001	0.000	0.020	0.024
Production workers	0.055	0.001	0.000	0.053	0.057
(Associate) managers	0.024	0.001	0.000	0.023	0.026
Clerks	0.043	0.001	0.000	0.041	0.045
Socio-cultural (semi-)professionals	0.024	0.001	0.000	0.022	0.025
Service workers	0.059	0.001	0.000	0.058	0.061
Service workers	0.059	0.001	0.000	0.058	0.061

Source: Eurostat

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: <u>https://europa.eu/european-union/contact_en</u>

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by electronic mail via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: <u>https://europa.eu/european-union/index_en</u>

EU publications

You can download or order free and priced EU publications from EU Bookshop at: <u>https://publications.europa.eu/en/publications</u>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <u>https://europa.eu/european-union/contact_en</u>).

The European Commission's science and knowledge service Joint Research Centre

JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



EU Science Hub ec.europa.eu/jrc

9 @EU_ScienceHub

- **f** EU Science Hub Joint Research Centre
- in EU Science, Research and Innovation

EU Science Hub