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Are there significant differences in quality of work and employment between 'old' and 'new' Europe?

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Introduction

The somewhat provocative distinction between 'old' and 'new' Europe was at one time quite fashionable among 'hawks' on the other side of the Atlantic, but it makes little sense from a European viewpoint. A better approach is to consider Europe's progress towards integration. This has involved a series of enlargements to new countries, resulting in ever greater variety within the European Union (EU), always with an implicit belief that new members would benefit by being brought up to the standards of existing members. The range of social and economic conditions within the Union increased significantly with the successive enlargements which took place between 2004 and 2007, and which were notable for the large numbers of new countries involved and for the inclusion, as well as of Cyprus and Malta, of 10 new Central and Eastern European Countries (CEECs). Much has been written as to the presumed or stated negative effects of the large-scale integration of these countries, on the European social model and labour markets, particularly on the quality of the latter. The purpose of this study is to assess whether, some years after these enlargements, there is any truth in the hackneyed division into 'old' and 'new' Member States and whether there are significant discernible differences in the quality of work and employment in the EU between various groups of countries ([1]).

In the first section, we examine in more detail the heterogeneous nature of the EU, and the various groups of countries which can be identified using certain economic, social and institutional criteria. The second section considers the various dimensions of the complex concept of 'quality of work and employment' (QWE), and how these can be reflected in indices for use in our analysis. The detailed results of these indices are presented in the third section, which also gives a quality of work and employment classification setting out the characteristics of good and bad jobs. Finally, the last section contains the conclusions to be drawn from this analysis.

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1. This study was carried out by the European Social Observatory, as the result of a request made by the European Trade Union Institute at the seminar 'Working Conditions Surveys: convergences and divergences', organised by the ETUI in Brussels on 26 and 27 March 2012
    http://www.etui.org/fr/Evenements/Seminar-sur-les-enquetes-Conditions-de-travail

1. Defining groups of countries

The size of enlarged Europe, as well as the differences between its Member States, make it difficult to carry out comparative analyses between the EU countries. The difficulty lies in comparing 27 countries with sometimes very different economic, social and political situations and which all, moreover, belong to the EU: an unusual grouping – a single market and economic and monetary union, subject to a complex set of common regulations in many areas, including those relating to the various aspects of QWE.

Because of this diversity, the most practical approach is to use methods which group together and synthesise the information available. One possible approach is to create clusters of countries whose societies are organised according to common social and political principles. A great deal of literature attempts to define such groups at European or world level. The approaches taken in these studies referred to different types of social and political organisation, such as social protection systems (Esping-Andersen 1990), labour markets and industrial relations (Begg et al. 2001, Gallie 2007) or production and governance systems underlying the 'varieties of capitalism' (Hancké et al. 2007, Amable 2003). Other studies have focused more on particular areas such as work organisation (Lorenz and Valeyre, 2005), 'flexicurity' systems (Tangian, 2005, Vermeylen, 2006) or have taken a multi-dimensional approach to job quality (Muñoz de Bustillo et al. 2009, Peña-Casas and Pochet 2009, Davoine et al. 2008). We lack the space here to describe all these approaches in detail ([2]); interestingly, however, the vast majority tend to identify the same four major groups of countries within 'old' Europe: Anglo-Saxon, Scandinavian social-democratic, Continental 'corporatist' and Mediterranean. Obviously, none of these groups is completely uniform: there is diversity within the groups, and a certain amount of hybridisation between them, particularly within the EU. Depending on the criteria used, then, some countries may be put into different groups (particularly the Netherlands, Austria, Ireland or France). This is one of the limitations of this type of approach. It would probably be better not to refer to groups or classes, in the statistical sense, but rather to 'families' of countries, since within a family there can be differences between the members of one close body.

However, although it seems relatively easy to define these groups for 'old' Europe, researchers are still having trouble incorporating the countries of 'new' Europe into the same conceptual framework. It is more difficult to relate the new Central and Eastern European Member States to the various models represented in the 15 older Member States. A number of studies, however, have attempted to link them to the broad groups of 'old European' countries (Lehman and

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2. For a review of the existing literature, cf. Peña-Casas and Pochet 2009, and Muñoz de Bustillo et al. 2009.

Muravyev 2011, Adam et al. 2009, Aidukaite 2009, Aspalter et al. 2009, Cerami and Vanhuysse 2009, Drahokoupil 2009, Hacker 2009, Fenger 2007, Lane 2007, Lane and Myant 2007, Cartapanis et al. 2006, Casey 2006, Vasconcelos Ferreira and Figueiredo 2005). Once again, we are not able to discuss the detail of these studies, and will just highlight their main conclusions. Firstly, the studies show that there are differences between the situations of the new member Central and Eastern European Countries, particularly in terms of economic and social development. Bulgaria and Romania should be taken separately from the others, because of their lower levels of economic and social development, and the structure of their economies (larger agriculture and industry sectors). In some areas, particularly those relating to the organisation of social welfare systems, certain CEECs can be seen as having 'affinities' with the EU-15 countries. These similarities hark back to the original principles underlying our social welfare systems, which have survived the 'Sovietisation' and transitional periods in these countries. The Czech Republic, Slovakia, Hungary and Slovenia, then, have similar systems to those of continental Europe, whilst the Baltic countries are closer to the Anglo-Saxon model, and Poland, Romania and Bulgaria are closer to Mediterranean systems. These similarities vary according to the criteria used in the analysis. Nevertheless, some authors, sometimes even those who have emphasised the affinities between certain CEECs and older EU Member States, feel strongly that the CEECs should still be considered as a separate group. They are, they claim, structured by a shared past within the Soviet Bloc and a transition to a market economy characterised by sometimes draconian reforms undertaken at the behest of the World Bank and the International Monetary Fund. We shall begin this study by considering these countries as a homogenous group, in order to see if this is an accurate assessment when discussing QWE.

Having reviewed the existing literature, we decided, for the purposes of our analysis, to divide the EU Member States into 6 main groups. The following table gives details of these groups.

Table 1: Typology of groups of countries

Anglo-Saxon	United Kingdom (UK), Ireland (IE)
Scandinavian	Denmark (DK), Sweden (SE), Finland (FI)
Corporatist	France (FR), Germany (DE), Austria (AT), Belgium (BE), Netherlands (NL), Luxembourg (LU)
Mediterranean	Spain (ES), Italy (IT), Portugal (PT), Greece (GR), Cyprus (CY), Malta (MT)
CEEC 8	Czech Republic (CZ), Slovakia (SK), Hungary (HU), Poland (PL) Slovenia (SI), Estonia (EE), Latvia (LV), Lithuania (LT)
CEEC 2	Romania (RO), Bulgaria (BG)

The following graph, which shows the share in total employment of the main types of economic activity, also shows the relevance of the above typology in terms of the major sectors of economic activity. The groups of 'older' European countries have strong service sectors, accounting for around three-quarters of jobs, a declining industrial sector (around 20% of jobs) and a small

agricultural sector providing little employment. The countries in the CEEC 8 group also have expanding service sectors, but these are smaller than those in the Europe-15 countries (accounting for 63.4% of jobs). Industry is also more important (29.5% of jobs), and agriculture now only represents a small share of the labour force (7.1%). The group made up of Bulgaria and Romania seems very different from the others. Service activities are still very much lagging behind (46.6% of jobs). The importance of industry is similar to the CEEC 8 group, but agriculture is still a very significant part of the economy, accounting for a quarter of the total number of jobs.

Graph 1: Share in total employment of the main sectors of the economy – 2010
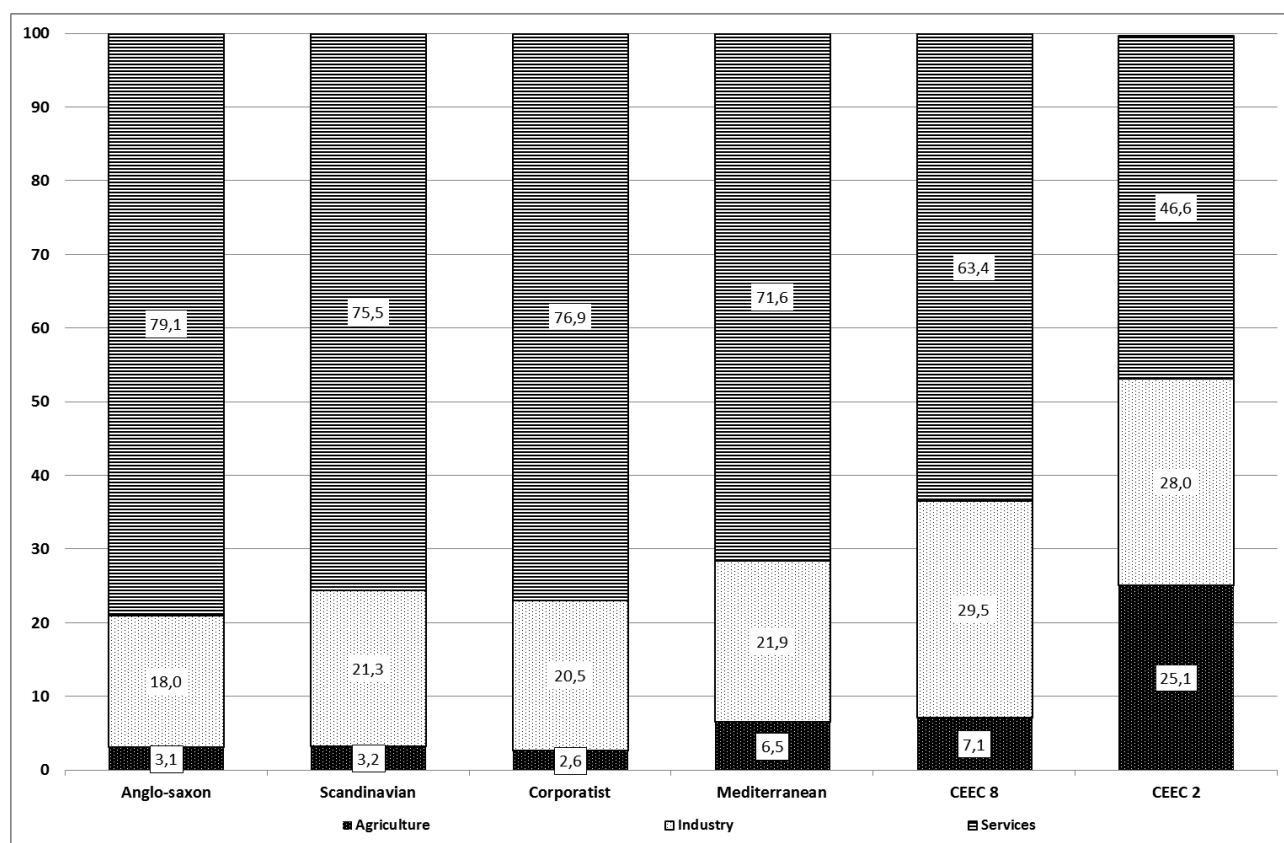
Source: on-line Eurostat data base, author's calculations

2. Definition and Operationalisation of QWE

2.1 Conceptual frameworks for QWE

Although much has been written as to the various dimensions of QWE, the various research trends have tended to focus on particular areas (pay, job satisfaction, alienation at work, health and safety, segmentation, skills and careers, working time and balancing work and non-working life), rather than taking a more integrated approach. Only as of around the year 2000 were attempts

made to define an integrated concept of QWE. This work was largely carried out within an institutional context, as QWE entered the political agenda of various international organisations.

In 2001, when launching the Lisbon Strategy, the EU set itself an objective not just to create jobs, but to create good-quality jobs. In the wake of this initiative, the Commission published a communication taking a multi-dimensional approach to QWE, referring to 10 aspects (European Commission, 2001) ([3]). That same year, the European Council adopted this approach and the set of indicators relating to it (the 'Laeken Indicators'), with a view to including it in the European Employment Strategy. Although this interest in QWE evaporated fairly quickly at European level as the Lisbon Strategy went through a series of revisions, the issue remained on the political agenda and reappears regularly ([4]). The Commission, then, is currently working on a new, more restrictive, definition of the concept of QWE, to be used in the Europe 2020 Strategy. Relevant bodies at EU level have also worked on the issue. The European Foundation for the Improvement of Living and Working Conditions (EUROFOUND) has defined a multidimensional approach to QWE to be used in its work (EUROFOUND, 2002). The European Trade Union Institute (ETUI) has produced a regularly-updated QWE index in order to track developments in Europe (Leschke et al., 2012, 2008a and b). The need for and the need to defend job quality is a point regularly put forward by trade union and civil society organisations.

At an international level, the International Labour Organization (ILO) has been applying its concept of 'decent work' since the end of the 1990s. This approach, based on four aspects (employment, social security, workers' rights and social dialogue) which are essential to develop an individual's 'capabilities', has since then been extended and made more operational, to become one of the key concepts underpinning the activities and tasks of the ILO. The ILO has now adopted a conceptual framework for decent work, based on multiple indicators and which is currently at the end of its test phase, for international use. The United Nations have incorporated this operational framework for decent work into the structure of the Millennium Development Goals, at the very heart of their international activities. It is, moreover, acknowledged and supported by the EU in its external policy activities. The UN Economic Commission for Europe, attempting to develop a 'decent work' concept appropriate to the situation in Europe, has stressed the considerable similarities between the EU and ILO concepts, and has reduced the concept of QWE to seven key dimensions ([5]) (UNECE, 2010).

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3. Intrinsic job quality, skills, life-long learning and career development, health and safety at work, flexibility and security, work organisation and work/life balance, inclusion and access to the labour market, gender equality, diversity and non-discrimination, social dialogue and worker involvement, overall economic performance and productivity.
4. For a detailed analysis of European QWE indicators, cf. Peña-Casas 2009.
5. (a) safety and ethics of employment; (b) income and benefits from employment; (c) working hours and balancing work and non-working life; (d) security of employment and social protection; (e) social dialogue; (f) skills development and training; (g) workplace relationships and work motivation.

Once again, we lack space here to give details of these various conceptual frameworks, except to provide a summary of the key aspects covered ([6]). These frameworks, developed by international institutions, have similar good and bad points. One flaw is that they all include indicators relating more to the quantity of employment than to its quality. They have also been criticised for being too diverse, and not sufficiently focused on objective aspects of work (Green, 2006). However, the broader concept of QWE advocated by these institutions also reflects the definition of job quality as a complex political concept, determined by more than working circumstances. It is a political concept, since these frameworks are designed to reflect the political agenda of the particular institution, to evaluate the situation, and, where appropriate, to set objectives and monitor progress towards these. It is also a complex issue, since it is difficult to consider what some describe as the intrinsic quality of a job (autonomy, intensity, arduousness, social and physical environment) separately from aspects of the employment relationship determined by institutions and policies (pay, working time, contracts, social and physical security, career development, workers' rights and equality of treatment). The distinction and complementarity between quality of work and quality of employment are therefore essential when carrying out a comparative analysis within a social and political set-up such as the EU. For this reason we have preferred here to use the concept of quality of work and employment, rather than referring to just one of these aspects.

Basing ourselves on these approaches, we selected six key dimensions of QWE to be used in this study. Each one is made up of a number of specific areas:

- The dimension of **socio-economic security** is made up of two areas: adequacy of income and job security. Apart from the level of pay as such, adequacy of income includes sub-areas such as pay progression, perceived fairness of pay, and in-work poverty. Job security includes such sub-areas as perceived and objective job insecurity, and career prospects.

- **Training and learning** is made up of areas relating to training received and requested, as well as cognitive aspects of work, in so far as work may help individuals to progress in their jobs and professional careers.

- The third dimension covers questions relating to the **health and safety of workers**. This incorporates many aspects, and has received by far the most attention in the relevant literature. It covers areas relating to the subjective perception of the link between state of health and work, physical health problems related to work, frequent exposure to physical and psycho-social risk factors as well as the performance of arduous tasks.

- The next dimension is that of **work organisation,** which can be sub-divided into two areas: work intensity, and autonomy and degree of control over one's work.

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6. For a detailed review of the existing literature on existing QWE models, cf. Muñoz De Bustillo et al 2009.

- The fifth dimension covers a number of issues relating to **working time**, including the frequency of atypical working hours and of involuntary part-time work. It also covers options available to help balance work and non-working life.

- Finally, the last dimension is made up of various issues relating to **workers' rights and fairness for all**. Workers' rights include rights relating to the information and consultation of workers, as well as whether they can put forward their views or enjoy protection from harassment, violence at work, and discrimination based on individual characteristics. This dimension also covers gender equality.

The next table shows the 16 areas and 6 main dimensions used in the analysis

Table 2: Aspects and sub-areas of QWE

	DIMENSIONS	**AREAS**
	Socio-economic security	Adequate income
		Job security
	Training and Learning	Training
		Cognitive aspects of work
QUALITY OF WORK AND EMPLOYMENT	Health and safety	Perceived health problems
		Physical health problems
		Arduous nature of tasks
		Exposure to physical risk factors
		Exposure to psycho-social risk factors
	Work organisation	Pace and intensity of work
		Autonomy and control
	Working time	Atypical working hours
		Involuntary part-time
		Balancing work and non-working life
	Rights and fairness	Workers' rights
		Gender equality

2.2 Methodological aspects

2.2.1 Data

The data source used for this analysis was the fifth European Working Conditions Survey (EWCS), carried out in 2010 by the European Foundation for the Improvement of Living and Working Conditions (EUROFOUND). The EWCS began in 1990 as a 'simple' survey of working conditions, but has become more complex over the years, and now includes a whole range of questions

covering both intrinsic aspects of work and issues relating to quality of employment ([7]). The respondents are European residents aged 15 or above and in work. The EWCS covers 34 European countries ([8]), and is an invaluable source of data for assessing QWE in Europe, particularly since it is the only survey of its kind. Like all surveys, however, the EWCS is not perfect. It only comes out every 5 years, but this is a minor flaw, since most aspects of QWE are structural in nature and change only slowly over time. This feature does, however, make it a less useful tool for annual political monitoring - the frequency usually preferred by political decision-makers. The major weakness of the EWCS is its small sample-size. The survey was originally designed to calculate aggregate European data (for the EU-27, EU-15, EU-12 etc.), so it has sometimes been found to contain insufficient data for disaggregation to national level for the smaller European countries ([9]). The method of analysis used in this study goes some way towards getting round the problem of small national samples by using groups of countries and aggregate indices. By doing so, however, it loses some detailed information on national situations.

Our analysis covers the 27 EU countries, and refers only to the situation of employees. It was decided to focus solely on salaried workers, since the analysis covered many variables which were only relevant to and measured for these workers. Nevertheless, a similar analysis should also be carried out for specific groups such as the self-employed, using a suitable methodology. The final sample used in the analysis was 28,998 workers.

2.2.2 Constructing synthetic indices

Synthetic indices were constructed, in order to reflect properly the multidimensional nature of QWE. These indices can be designed in a number of ways. We will not explore these in detail, but will just recall some methodological precautions to be taken when interpreting the indices ([10]).

Synthetic indices only give an approximate picture of the complexity of the areas concerned. Their consistency must also be checked against the variables included in the index. They are rather like the tip of an iceberg, the base of which needs to be examined in detail in order to have a true picture of the scale of the iceberg itself.

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7.   For a detailed overview of the EWCS 2010 and its results, cf. Parent-Thirion et al. 2012.
8.   The EU-27 plus Norway, Croatia, Turkey, Former Yugoslavian Republic of Macedonia, Albania, Montenegro and Kosovo.
9.   In this respect, the situation for the 5th EWCS was far better than for previous surveys, largely because the national sample-size was doubled. All countries now have a sample of at least 1,000 individuals, except for the larger European countries, which now have samples of 1,500 (United Kingdom, Italy and Poland) or 2,000 people (Germany). Some countries have also chosen to take up EUROFOUND's offer to provide funding for a national extension to the survey. Belgium (4,000), France (3,000), and Slovenia (1,400) chose to avail themselves of this possibility.
10. For a discussion of the advantages and disadvantages of synthetic indices, cf. Leschke et al. (2011) and Muñoz del Bustillo et al. (2009).

One question which always arises in connection with indices is how to carry out a proper weighting of the various dimensions included. This point is even more relevant in an area as complex as QWE, assessed by individuals. We decided to give equal weight to each dimension and area.

There will always be some subjectivity involved in drawing up indices, in terms of the choices made by the researcher and the nature of the EWCS data, made up of individual impressions of workers. This subjectivity is, however, acceptable as long as the choices made are clearly indicated. Table A, in the annex, gives a detailed breakdown of the indicators and variables used for the areas and dimensions chosen to measure QWE. Using 106 specific indicators, 53 variables were produced to illustrate the various areas of QWE. These variables were created to highlight work and employment situations generally identified in the literature as being detrimental to worker well-being. Since, however, these are negative characteristics, the indices calculated must be interpreted as indications of poor QWE. The higher the value of the indices for an individual, therefore, the worse the quality of his work and employment.

This assessment of QWE uses a method of pyramidal aggregation. Firstly, for each individual, the variables making up the areas are examined, and a yes/no answer given as to whether this characteristic exists. The variables are then added up for each area. The more negative characteristics apply to an individual's working/employment situation, the higher his score will be. Sub-indices are created for the various areas, using the non-weighted average of the variables; these are then standardised to vary between 0 and 1. These sub-indices are then themselves aggregated, to create indices for the dimensions. Finally, a synthetic index for QWE is calculated using the dimension indices. It must be stressed that this final index, while it does have a certain synthetic value, should be treated with care, since we chose to give equal weight to all the dimensions and areas. The indices relating to the various individual dimensions and areas are, in this regard, more consistent both internally and when compared with each other.

3. Analysis of QWE

3.1 Dimensions of QWE

3.1.1 Socio-economic security Index (SESI)

The social and economic security provided by a job is an important dimension of QWE, particularly over the last few years, when Europe has been hard hit by a series of economic crises. It is, however, difficult to measure, since it combines objective and subjective elements. The socio-economic security index (SESI) combines two sub-indices. The first of these measures inadequacy of remuneration. It is not just the level of income which is important; one qualitative aspect of

income is that it should provide the worker with a sufficient standard of living for him and his household to live decently, with the prospect of future pay progression. It is important for a worker's well-being to feel that he is being paid fairly for the work carried out. The second sub-index measures aspects relating to job security. This is measured both in terms of *a priori* objective negative aspects (non-permanent contracts, short-term temporary contracts) and of more subjective aspects relating to workers' perceptions of whether their job is secure, of potential career prospects or of how likely it is that they would be offered another job should they lose their current situation. Graph 2, below, show the value of these indices for each group of countries.

Graph 2: Dimension and area socio-economic security indices - 2010

	Anglo-saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
Inadequate income	0,41	0,3	0,4	0,44	0,56	0,58
Employment insecurity	0,37	0,35	0,36	0,4	0,36	0,36
SESI	0,39	0,33	0,38	0,42	0,46	0,47
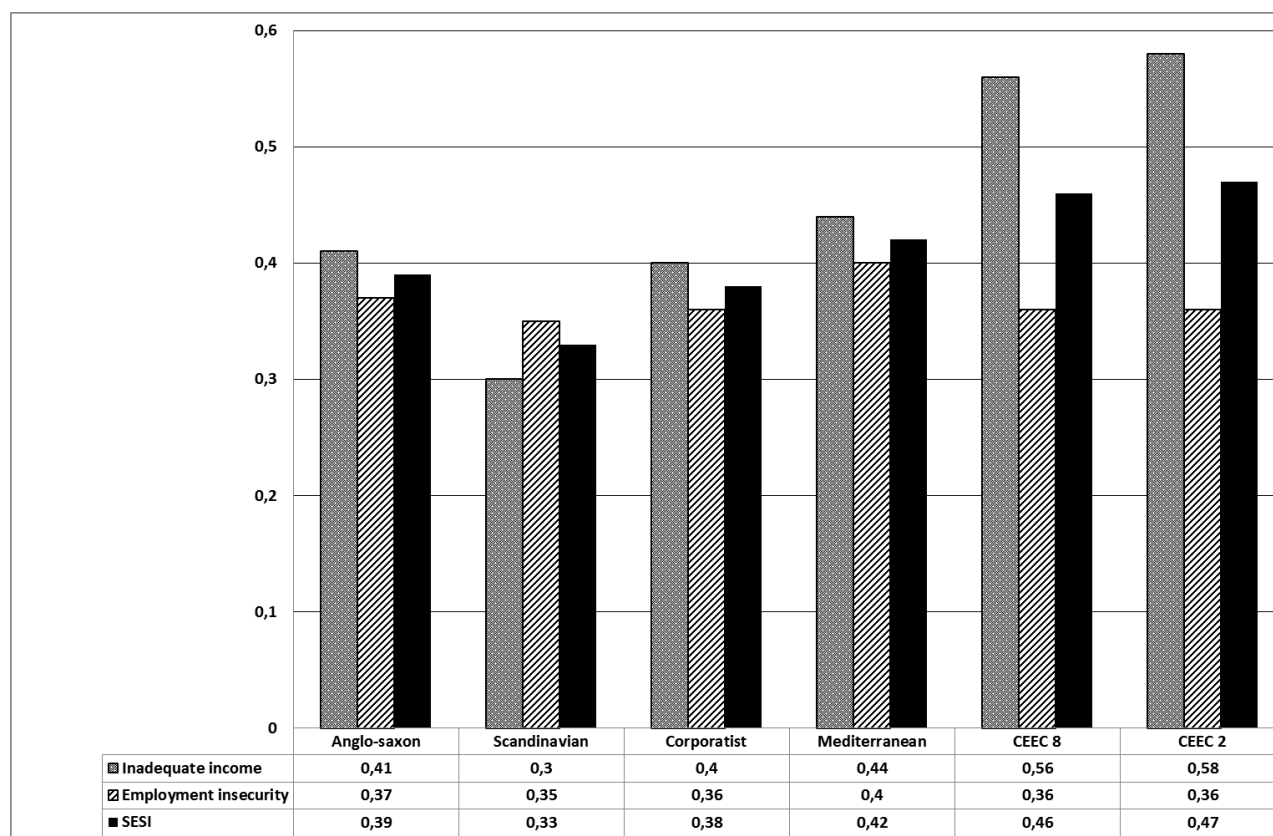
Source: European Working Conditions Survey / EUROFOUND; author's calculations

The broad range covered by the SESI index (0.33 to 0.47) shows that there is a marked difference between the groups of European countries in terms of socio-economic security. At either end of the scale are, on the one hand, the two CEEC groups and, on the other, the Scandinavian group. The three other groups of countries lie between these two extremes. Their SESIs are clearly better than those of the CEEC groups, but are notably worse than the Scandinavian group, which is far ahead of other European countries in terms of socio-economic security. There are clearly considerable variations within Europe. If we examine the sub-indices making up the SESI, we can see that the major differences between groups of countries relate to inadequacy of income, where there are large gaps between the Scandinavian group (0.3) and the two CEEC groups (around

0.57). The job insecurity index does not vary much from country to country, remaining at around 0.36, although it is higher for the Mediterranean group.

As we stressed earlier, clustering countries into large groups allows us to synthesise information, making it less complex and more robust in terms of statistics. The risk with this method, however, is that it can mask internal variations between countries and within groups. We can see this when we consider national socio-economic security figures (cf. Table B, annex). The Scandinavian group still performs the best in this aspect, and there is little differentiation between its countries. Within the Anglo-Saxon group, the situation is clearly better in the United Kingdom (0.34) than in Ireland (0.41). In the Corporatist group, the SESI levels of Belgium, Luxembourg and Austria are better (at around 0.34) than those of the other countries, particularly Germany and the Netherlands, which fare worst in their group (at around 0.4). Within the Mediterranean group, there seems to be a division between one sub-set of countries (Spain, Italy and Malta: around 0.34) and the rest of the group, with higher levels of socio-economic insecurity (around 0.39). There are also differences within the CEEC 8 group: socio-economic security is far better in the Czech Republic (0.3), and to a lesser extent in Slovenia, Lithuania and Poland (around 0.34) than in the rest of the group (around 0.39). The CEEC 2 group is more homogenous, since the SESI gives similar results for Bulgaria and Romania (around 0.45).

3.1.2 Training and Learning Index (TLI)

The opportunities offered by a job for cognitive learning are also important when assessing QWE. Chances to learn new things allow workers to progress in their job, but also in any future occupation. Acquiring new skills, or developing existing ones, helps to provide added job security to workers throughout their working lives. The training and learning index (TLI) is made up of two sub-indices. The first of these measures the lack of access to training, or unmet requests for training. The second measures a lack of various cognitive aspects of work which could help to encourage learning at work and the development of skills. The figures for these indices are shown in Graph 3, below.

Graph 3: Dimension and area indices for Training and Learning (TLI)

	Anglo-saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
▨ Lack training	0,6	0,58	0,71	0,8	0,71	0,84
▧ Lack learning	0,24	0,23	0,28	0,35	0,27	0,34
■ TLI	0,42	0,41	0,5	0,58	0,49	0,59
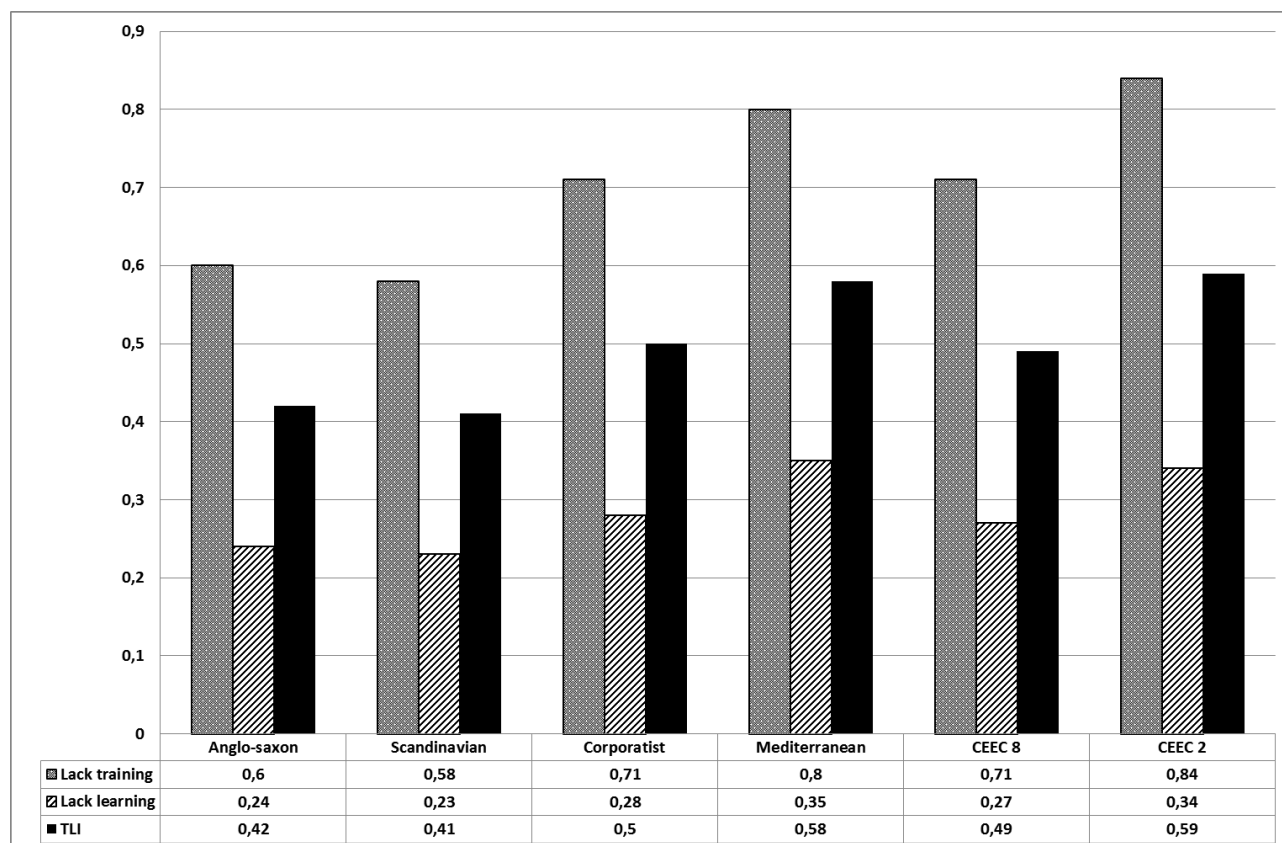
Source: European Working Conditions Survey / EUROFOUND; author's calculations

The TLI figures allow us to split the EU country groups into three main categories. Ths first is made up of the Anglo-Saxon and Scandinavian groups, which have the least negative training and learning figures compared to the other groups. Nevertheless, the high TLI value shows that even in these countries, many workers have insufficient access to training and to jobs with learning potential. The next, intermediate category, is made up of the Corporatist and CEEC 8 groups, whose TLI values hover at around 0.5. Finally, the Mediterranean and CEEC 2 groups have the highest values. There are significant differences between these three categories, both in terms of lack of training and in terms of jobs with little learning potential.

The relation between the two sub-indices is the same for all the groups, yet their levels vary a great deal. The very high values for the index on lack of training (0.58 – 0.84) show that the vast majority of workers in Europe, from whichever country or group of countries, are still quite disadvantaged in this area. Clearly, much still needs to be done to improve the situation. In comparison, the index showing jobs with little learning potential shows lower values (0.23 – 0.35). Its importance, however, should not be underestimated, since individuals trapped for long periods of time in this sort of job have very few prospects of their situation eventually improving.
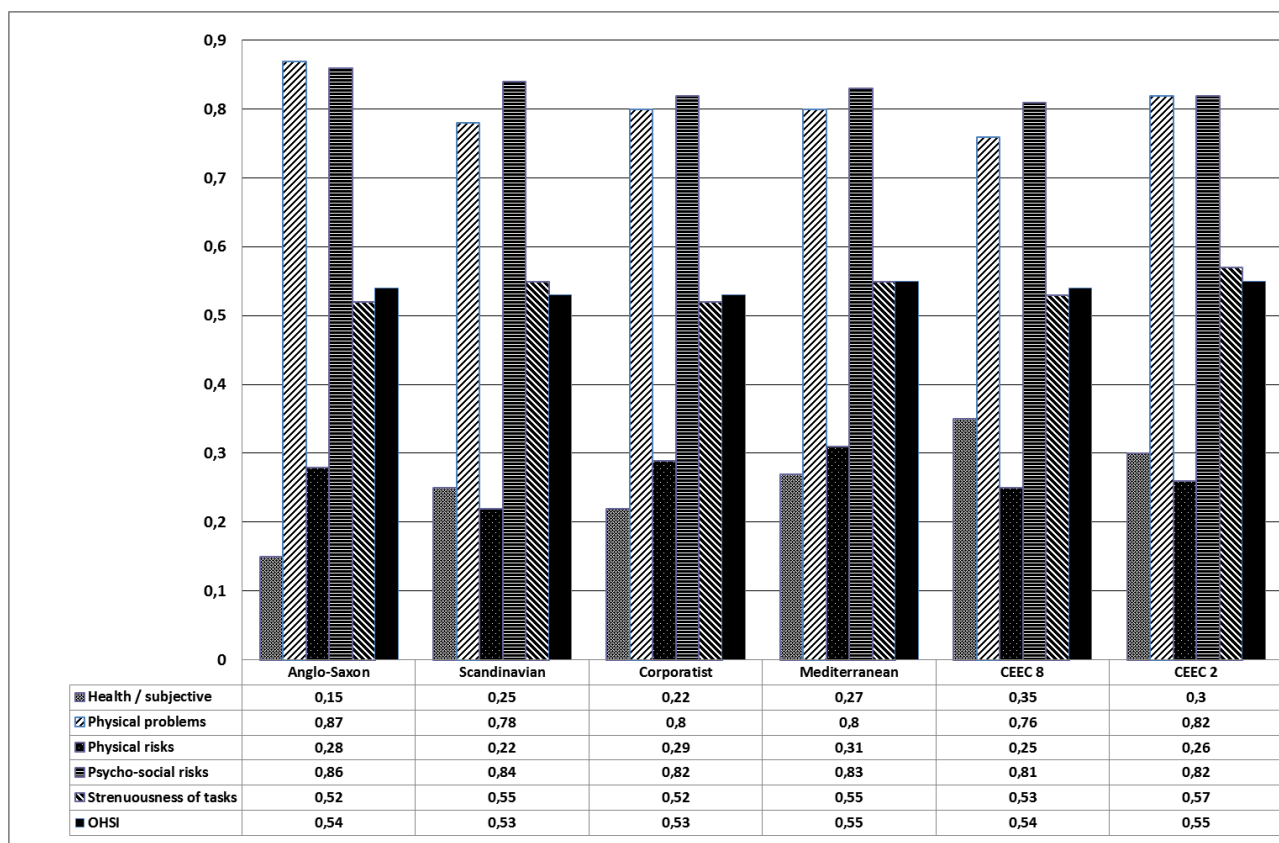
Once again, there are variations within the groups of countries (cf. Table B, annex). Within the Anglo-Saxon group, Ireland's figures are again significantly worse (0.46) than those of the United

Kingdom (0.4). The Scandinavian group has good figures for TLI, but this is largely thanks to Finland, whose index is the best in the EU (0.37), but also significantly better than those of the two other Scandinavian countries. Within the Corporatist group, there is a division between, on the one hand, the Netherlands and Austria, whose results are similar to those of the Anglo-Saxon or Scandinavian countries (at around 0.44) and, on the other hand, France and Germany, the two larger countries in the group, whose performance in this area is clearly worse (0.56 and 0.51 respectively). Belgium and Luxembourg lie between these two extremes. Taken as a whole, the CEEC 8 group has a similar TLI to that of the Corporatist group. It also has similar internal variations. At one extreme are Slovenia and Slovakia, with similar index levels to those of the Anglo-Saxon or Scandinavian countries. Hungary and Lithuania, however, have a clearly higher figure (around 0.55), whilst the rest of the group lie between these two extremes. The countries from the Mediterranean and CEEC 2 groups perform far worse in this area than the other groups. Some countries, however, do better than others, particularly Spain, Portugal, Malta, and, to a lesser extent, Romania (around 0.55). Greece has the highest TLI in the EU (0.64), followed closely by Bulgaria (0.61), and, more surprisingly, Italy (0.6).

3.1.3 Occupational Health and Safety Index (OHSI)

The health and safety aspect of QWE is certainly one of those which has been most studied, and for which the positive and negative links with the physical and mental well-being of workers are best documented. The information available in the EWCS has enabled us to construct indices on as many as 5 areas relating to occupational health and safety. These areas concern the subjective negative perception of the link between state of health and work, physical health problems related to work, frequent exposure to physical and psycho-social risk factors and the carrying out of arduous tasks. Graph 4, below, shows values for the dimensional occupational health and safety index (OHSI) and for the various area indices.

Graph 4: Dimension and area occupational health and safety indices - 2010

	Anglo-Saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
▦ Health / subjective	0,15	0,25	0,22	0,27	0,35	0,3
▨ Physical problems	0,87	0,78	0,8	0,8	0,76	0,82
▩ Physical risks	0,28	0,22	0,29	0,31	0,25	0,26
☰ Psycho-social risks	0,86	0,84	0,82	0,83	0,81	0,82
▧ Strenuousness of tasks	0,52	0,55	0,52	0,55	0,53	0,57
■ OHSI	0,54	0,53	0,53	0,55	0,54	0,55

Source: European Working Conditions Survey / EUROFOUND; author's calculations

The most striking feature is that the OHSI scarcely varies between the groups of countries. It stands at around 0.55 for all groups. The concentration of this index around a similar central value could indicate a fairly even level of occupational health and safety across the EU, notably given the existence of a relatively consistent body of legislation in Europe. If we examine the area indices, we can see that two of these, relating to physical health problems and exposure to psycho-social risks, give far higher values than the others. These two indices, like most of the others, vary generally only slightly between the groups of countries, which shows that these are areas for attention throughout the EU. The only area index to vary more widely between groups relates to a worker's perception that work is having a negative impact on his health. Since this is a subjective index, variations may be due to social and cultural differences between countries. An analysis of the area sub-indices also shows that for some of them there are significant differences between groups of countries. The Scandinavian and Anglo-Saxon groups, which up to now have both scored well in terms of QWE, differ greatly on the indices relating to physical health problems and exposure to physical and environmental risk factors. The value of the indices is clearly more positive for the Scandinavian group than for the Anglo-Saxon group. For these two indices, the results for the CEEC 8 group are similar to those of the Scandinavian group.
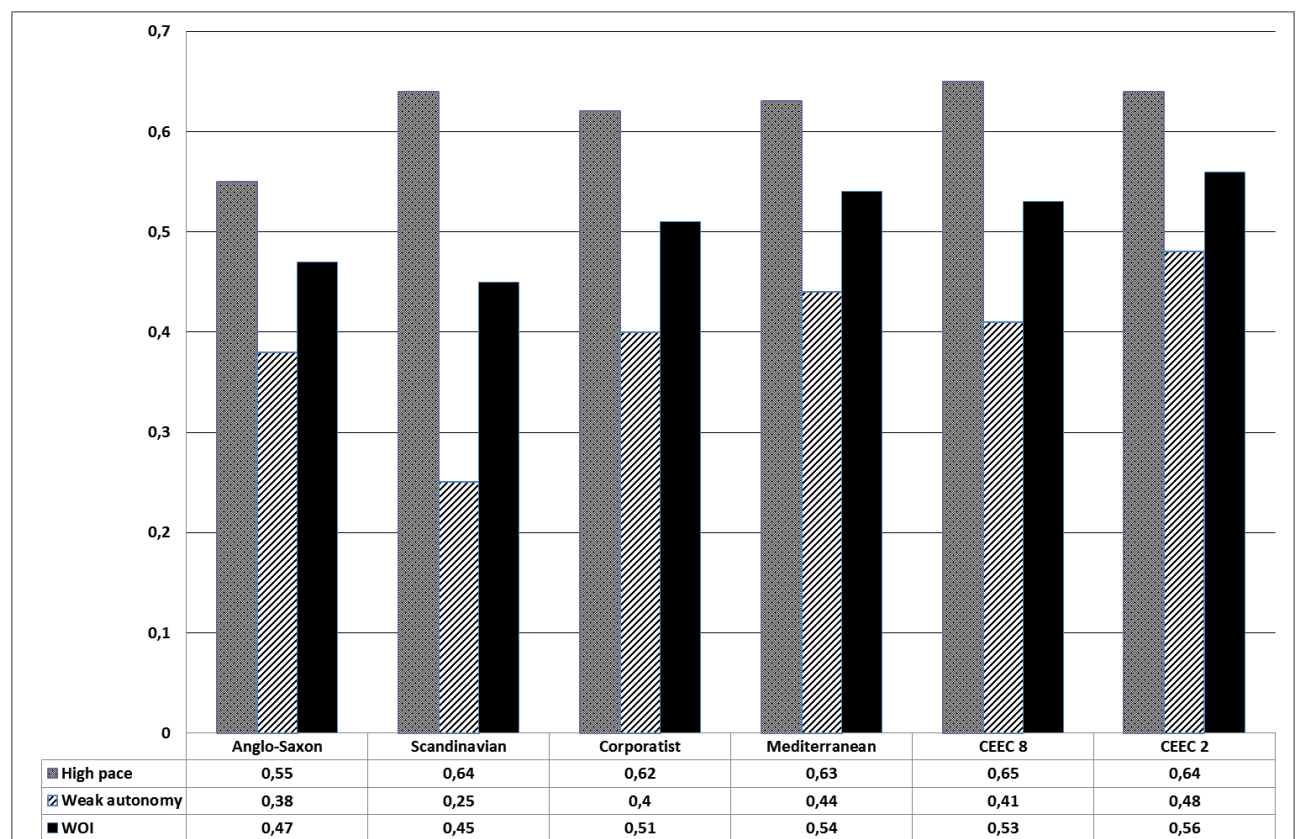
Unsurprisingly, the OHSI values of individual European countries do not vary a great deal (cf. Table B, annex). The OHSI varies between 0.5 for the Czech Republic and 0.57 in Slovenia. The

fact that these two countries are in the same group shows strong internal variation within this group, in which the Czech Republic, Slovakia and Lithuania out-perform other group-members. These countries are also largely responsible for the high score of the CEEC 8 group. The other groups show little variation between countries.

3.1.4 Work Organisation Index (WOI)

Work organisation is an intrinsically important dimension of QWE. The literature has highlighted the combined importance of two areas: work intensity and the autonomy enjoyed by workers in carrying out their tasks. A job which is intense and where the worker lacks autonomy and control is therefore seen as a poor quality job, potentially leading, in particular, to work-related stress (Karasek and Theorell, 1990). The dimensional work organisation index (WOI) is thus made up of two areas relating to, firstly, various characteristics of intense work, and, secondly, a lack of autonomy and control when carrying out the tasks required by the job. Graph 5, below, shows the values of these indices.

Graph 5: Dimensional and sub-dimensional work organisation indices - 2010

	Anglo-Saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
High pace	0,55	0,64	0,62	0,63	0,65	0,64
Weak autonomy	0,38	0,25	0,4	0,44	0,41	0,48
WOI	0,47	0,45	0,51	0,54	0,53	0,56

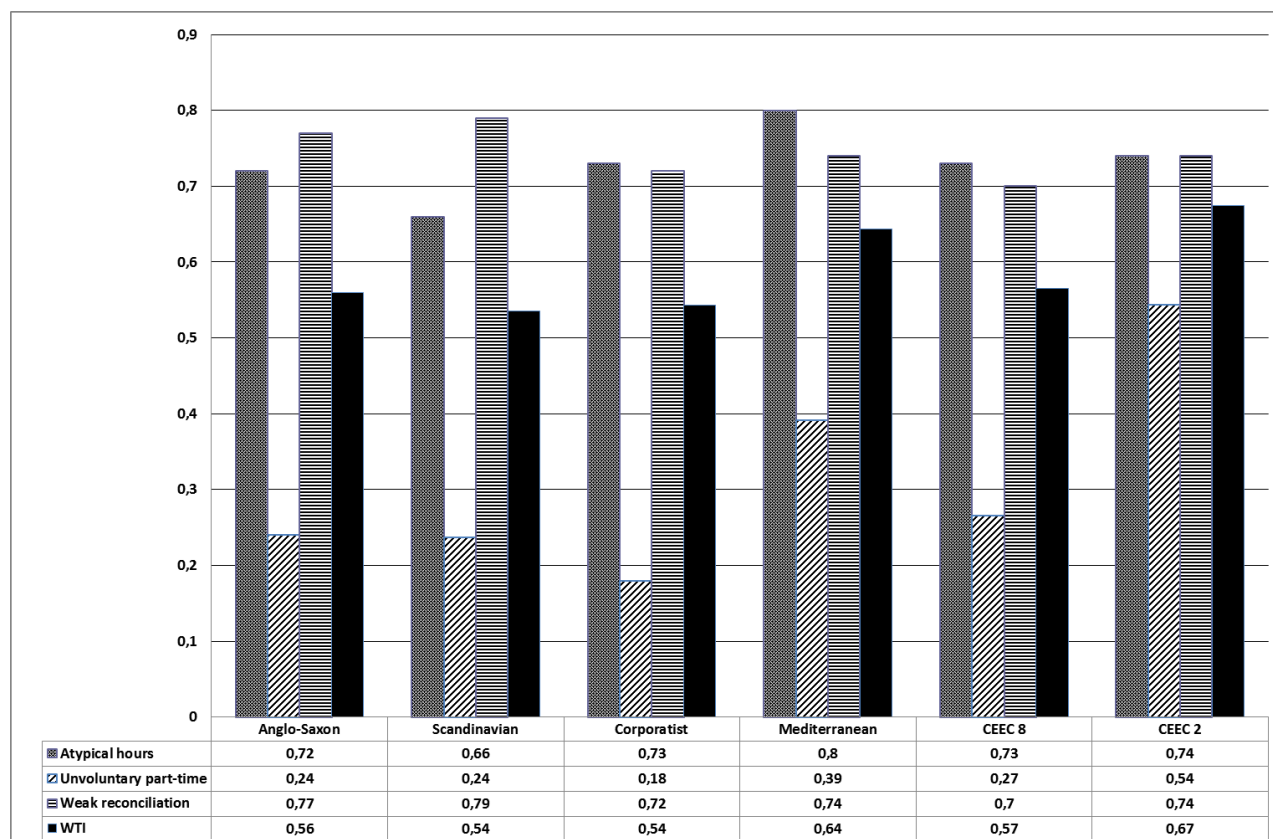**Source:** European Working Conditions Survey / EUROFOUND; author's calculations

The WOI varies less than other dimensional indices. The same sort of hierarchy between groups of countries can be observed as for previous QWE dimensions, apart from the dimension of occupational health and safety. The Anglo-Saxon and Scandinavian groups score best in the EU on

work organisation. Nevertheless, when we examine the individual areas, the two groups differ. The Anglo-Saxon group performs better in terms of work intensity, whilst the Scandinavian group scores higher on work autonomy. The quality of work organisation is a little lower in the Corporatist group. The Mediterranean and CEEC 8 groups have similar and slightly lower scores. The CEEC 2 group has the poorest quality of work organisation. Most of the differences between the groups are accounted for by variations in the degree of work autonomy. Work intensity seems to be at an equivalent level in all country-groups, apart from the Anglo-Saxon countries, where the pace of work is less intense.

In terms of individual scores, there are no major differences within the various groups (cf. Table B, annex). The countries in the Anglo-Saxon and Scandinavian groups have more or less identical scores within their groups. Within the Corporatist group, Luxembourg, Germany and Austria have a lesser quality of work organisation than the other members. This is also the case for Greece, Cyprus and Portugal in the Mediterranean group, and for Poland, Latvia and Slovakia within the CEEC 8 group. Finally, within the CEEC 2 group, Bulgaria has the worst quality of work organisation of all the EU Member States.

3.1.5 Working Time Index (WTI)

The time spent at work is an important parameter for QWE. When too much time is spent there, or when it is organised in such a way as to be irregular or damaging to life outside work, working time can seriously impact worker well-being, resulting, in particular, in stress and negative consequences for physical and mental health. Working time also includes more social aspects of employment. Modulating working time is one form of flexibility increasingly used by companies in recent years, particularly in the recent economic crises. A job cannot be considered to be of good quality if the working hours are not the result of an individual choice by the worker, but, rather, are subject to constraints from the employer or to labour market conditions. A reduction of working hours has a knock-on effect on many other dimensions of QWE, such as, for example, the ability to earn an adequate income or to have access to vocational training. Another social aspect of employment, which is becoming increasingly significant in research as well as in the EU's political agenda, relates to how easy it is to combine work with life outside work. The dimensional working time index (WTI) is made up of three areas reflecting these various aspects. Graph 6, below, shows the results of these indices.

Graph 6: Dimension and area working time indices - 2010

	Anglo-Saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
▩ Atypical hours	0,72	0,66	0,73	0,8	0,73	0,74
☑ Unvoluntary part-time	0,24	0,24	0,18	0,39	0,27	0,54
☰ Weak reconciliation	0,77	0,79	0,72	0,74	0,7	0,74
■ WTI	0,56	0,54	0,54	0,64	0,57	0,67

Source: European Working Conditions Survey / EUROFOUND; author's calculations

Once again, we can see that the WTI is fairly high in all groups of countries, which tends to suggest that many European workers fare quite badly in this dimension of QWE. The WTI is the best in the Corporatist and Scandinavian groups, although their performance is not too far ahead of the Anglo-Saxon and CEEC 8 groups. At the other end of the scale, the WTI values are significantly higher for the Mediterranean and CEEC 2 groups. The area indices reveal further differences. The Scandinavian group performs best on atypical working hours, and the Mediterranean group has by far the worst figures for this index. There are big variations between certain groups of countries in the area of involuntary part-time work. The Corporatist group, and, to a lesser extent, the Anglo-Saxon and Scandinavian groups, have the lowest values for this index. In the Mediterranean, and especially the CEEC 2 group, the index reaches significantly higher levels, indicating far poorer QWE. The index relating to the balancing of working and non-working life does not vary much between groups of countries. This is quite surprising, as we expected greater polarisation for this index. It is equally surprising to see that the best-performing group for this area index is the CEEC 8 group. This result is largely due to the specific variables used to construct this particular index ([11]).

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11. Workers whose working hours fit in very poorly with their social or family-related commitments outside work / workers who must often work overtime to meet work-related demands / workers who state that it is dificult for them to take one or two hours off work for personal or family reasons.
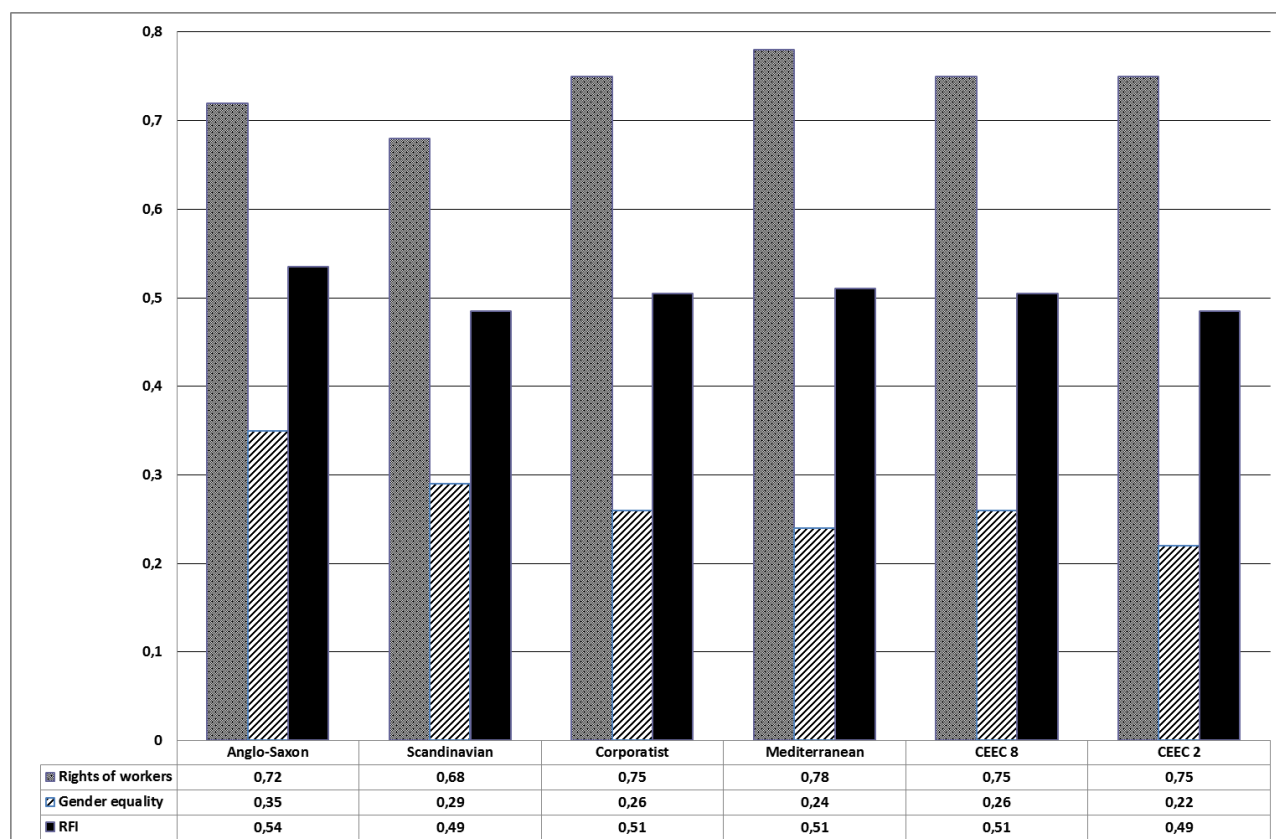
If we look at the distribution of WTI values between individual countries, we can see that conditions vary more between countries and within the groups of countries (cf. Table B, annex). The good WTI result of the CEEC 8 group is largely due to the scores of the Czech Republic and Slovenia, which have the lowest values in the EU, whilst the other countries in the group fare less well. Within the Anglo-Saxon group, the United Kingdom figure is again much better than that of Ireland. There is more variation within the Scandinavian group for this index than for the other QWE indices; Denmark out-performs the other countries in the group. Within the Corporatist group, France stands out as having a distinctly worse WTI than the other countries in the group. Within the Mediterranean group, which, together with the CEEC 2 group, has the worst results in the EU, Greece does better than the other countries in the group, contrary to its performance relative to the other indices so far.

3.1.6 Rights and Fairness Index (RFI)

One final dimension which must be considered in a full overview of QWE covers various aspects linked to the rights of workers, and of people in general. The awareness of having rights, which are effectively respected, and of being treated fairly at work, has a positive impact on worker well-being, as does the protection afforded by these rights against possible mistreatment. The EU, as a political body, has an extensive and relatively consistent body of legislation concerning the protection of these rights. It is nevertheless the Member States which are generally responsible for enforcing this legislation, and there may be differences between them concerning some aspects. However, although this dimension, rights and fairness, is clearly important, it is quite difficult to measure using quantitative indicators. The dimensional rights and fairness index (RFI) calculated here can give only a very rough assessment of the situation. It is made up of three area indices. The first of these relates to worker rights, and covers aspects such as information and consultation of workers, their ability to put forward their views, and exposure to harassment, violence at the workplace or discrimination ([12]). Two other areas cover questions relating to fundamental rights, such as respect for gender equality and non-discrimination against individuals. Gender equality is assessed by looking at the number of women in supervisory posts, and by a variable on the relative presence of the genders in the working environment. It is, then, a very approximate method of measuring this aspect. The incidence of discrimination is, by its very nature, a more subjective area, since it is self-reported. Graph 7, below, shows the results obtained for these various indices.

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12. Although the right not to be discriminated against on the basis of one's personal characteristics is a universal fundamental right, we decided to include it here under workers' rights. This choice makes sense, since the reference sample is made up exclusively of employees, and the EWCS questions on discrimination relate to the workplace.

Graph 7: Dimension and area rights and fairness indices - 2010

	Anglo-Saxon	Scandinavian	Corporatist	Mediterranean	CEEC 8	CEEC 2
Rights of workers	0,72	0,68	0,75	0,78	0,75	0,75
Gender equality	0,35	0,29	0,26	0,24	0,26	0,22
RFI	0,54	0,49	0,51	0,51	0,51	0,49

Source: European Working Conditions Survey / EUROFOUND; author's calculations

Clearly the highest values are those of the index on workers' rights, showing that this is an area of QWE which deserves careful attention. This is particularly true since it is a key area for trade union action. There are few differences between the various groups of countries in the RFI figures. The Anglo-Saxon group alone stands out from the other groups by its higher value. If we analyse the individual areas, the results of this Anglo-Saxon group are somewhat paradoxical. It performs better, in relative terms, than the other groups of countries on workers' rights (except in comparison to the Scandinavian group) but far worse on gender equality. A similar contradiction applies to the Scandinavian group, although to a lesser extent. Once again, we can see that the two CEEC groups have results which are similar to those of the other groups, and even better in some areas. This is particularly so for the CEEC 2 group, whose RFI is the lowest in the EU, and which proves to be the group where gender equality is best respected. The contrast between the two sub-dimensions of the RFI is due partially to the choice of indicators used to assess gender equality, which largely focus on the percentage of women at the workplace ([13]).

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13. Workers who claim not to be developing in a mixed working environment / workers whose immediate supervisor is not a woman.

An analysis of the RFI values for individual countries again shows a certain degree of diversity within the groups of countries (cf. Table B, annex). These differences, however, are relatively small, since the range of results between countries is quite narrow. The RFI varies between 0.47 in Romania and 0.54 in the United Kingdom. The two countries in the Anglo-Saxon group show similar results. Within the Scandinavian group, Sweden scores slightly less well than the other countries in the group. The figures for the Corporatist group countries cover the whole range, although France has a worse result than the other countries. The Mediterranean-group countries tend to be among the countries which fare less well on this index, but they stay within a small range. The CEEC 8 group also has fairly even results. The good RFI score of the CEEC 2 group is essentially due to Romania, whose index is significantly lower than that of Bulgaria.

3.2 Synthetic QWE Index

Our analysis of QWE, based up to now on the use of various dimension indices, shows that there is some consistency among the groups of countries which we established *a priori*, but also within these, in terms of national situations. A certain hierarchy of QWE in Europe has emerged, with at one end the Scandinavian and Anglo-Saxon groups, and at the other the CEEC groups. This does not however apply to all aspects of QWE. Equally, a country may have very different results for one particular dimension, and stand out within its group or compared to other countries in general. Some countries seem to have better QWE indices than the other countries in their group. This is true, for example, for the United Kingdom, the Benelux countries and Austria, or for the Czech Republic, Slovakia and Slovenia among the CEECs. Only in the Scandinavian group is there considerable homogeneity among its members. This analysis also shows that although it is possible to identify groups of countries in the EU with similar levels of QWE, the distinction is subtler than simply drawing a line between 'old' and 'new' Europe.

To gain a clearer overview of QWE in Europe, it is certainly useful to use one overall index bringing together the various dimensional indices. It is a practical way to deal with such diverse information, although we should remember its limitations when interpreting its results. Although one synthetic index is able to summarise much information, it also masks the diversity of the various aspects which make up QWE, as well as any variations between groups of countries and between countries. Our analysis shows that situations vary not only between the dimensional indices, but also between the area indices which make them up. It also shows that the indices often only cover a very small range of figures, particularly between groups of countries. It is difficult for an indice as synthetic as the QWE indice to identify differences between groups when these are relatively small. Finally, we chose not to give a weighting to the area and dimension indices. The synthetic index therefore represents an average of the dimension indices and tends to iron out differences. Table 3, below, shows the results of the various dimension indices, as well as giving a synthetic QWE index for the groups of countries.

Table 3: Dimension indices and QWE index for the groups of countries

|	SESI	TLI	OHSI	WOI	WTI	RFI	**Overall QWE index**
Anglo-Saxon	*0.39*	*0.42*	*0.54*	*0.47*	*0.58*	*0.54*	**0.48**
Scandinavian	*0.33*	*0.41*	*0.53*	*0.45*	*0.56*	*0.49*	**0.45**
Corporatist	*0.38*	*0.50*	*0.53*	*0.51*	*0.54*	*0.51*	**0.49**
Mediterranean	*0.42*	*0.58*	*0.55*	*0.54*	*0.64*	*0.51*	**0.54**
CEEC 8	*0.46*	*0.49*	*0.54*	*0.53*	*0.57*	*0.51*	**0.52**
CEEC 2	*0.47*	*0.59*	*0.55*	*0.56*	*0.67*	*0.49*	**0.56**

Source: European Working Conditions Survey / EUROFOUND; author's calculations

Firstly, the relatively high value of the QWE index in all groups shows that QWE is a considerable issue for all of them. The range of variation of the index also indicates a certain hierarchy between the groups. The Scandinavian group stands out, with a better QWE than the other groups. It is followed by the Anglo-Saxon and Corporatist groups, which achieve similar scores. The CEEC 8 group is next, followed by the Mediterranean group. The CEEC 8 group is closer to the Anglo-Saxon and Corporatist groups than is the Mediterranean group. The distance between the latter and the CEEC 2 group, whose QWE is the worst in Europe, is, however, relatively small. The relatively good performance of the CEEC 8 group, as well as the poor scores of the Mediterranean group, show, at any rate, that as regards QWE, it is not possible to simply contrast 'old' and 'new' Europe.

The hierarchy of groups of European groups of countries does however tend to vary depending on the dimensions of QWE being examined. Only the Scandinavian group is constantly at the forefront of QWE in Europe, for all dimensions. The Anglo-Saxon group fares less well in the areas of socio-economic security and working time. The Corporatist group scores well on socio-economic security, occupational health and safety and rights, but less well on training and learning or work organisation. The CEEC 8 group has less good results for the dimensions of socio-economic security and work organisation, but does well on the other aspects, particularly occupational health and safety and rights. The Mediterranean group generally does less well than the other groups for most dimensions of QWE, apart from rights, and, to a lesser extent, occupational health and safety. Finally, the CEEC 2 group is clearly the group with the least good QWE, although it does better in the area of rights, and is at a similar level to the others in terms of occupational health and safety.

If we look at national QWE indices, we see, once again, that there are variations within groups of countries. Graph 8, below, classifies European countries by the value of their QWE index (cf. also Table B, annex).

Graph 8: QWE index by country and groups of countries - 2010
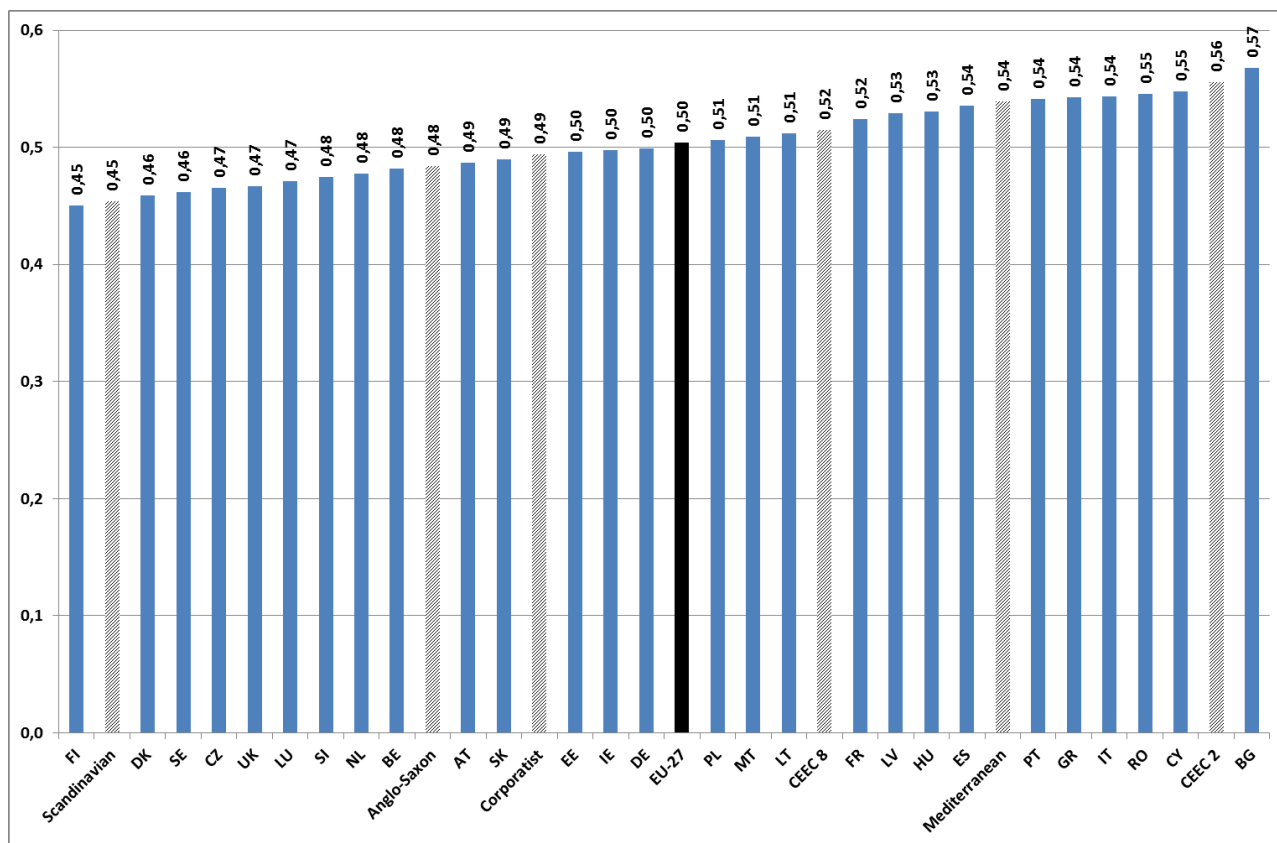
Source: European Working Conditions Survey / EUROFOUND; author's calculations

The Scandinavian countries clearly form a homogeneous block with the best QWE in the EU. The same is true for Bulgaria and Romania at the other end of the scale. Within the Anglo-Saxon group, the United Kingdom scores better than Ireland on QWE. The other groups have more internal diversity. Some countries in the CEEC 8 group (the Czech Republic, Slovenia, Slovakia, Estonia and Poland) form a sub-group with similar performances to those of most countries in the Corporatist group. Next is a set of countries which includes the rest of the CEEC 8 countries and those in the Mediterranean group. Several countries, therefore, tend to go beyond the bounds of their group, particularly in the CEEC 8 group, where the Czech Republic, Slovakia and Slovenia in particular are up with the leading countries, at least in terms of QWE.

3.3 QWE Clusters

Up to now, our analysis has given us a better idea of the QWE situation in the EU. Using pre-defined groups of countries, with similar economic, social and institutional characteristics, it shows that for QWE there are fairly consistent groups of countries within the EU, but that certain individual Member States perform differently from the other countries in their groups. Whilst, however, this analysis shows that it is possible to identify various groups of countries, and that it is not helpful to use the hackneyed division into 'old' and 'new' Europe, it teaches us nothing as to

the number and nature of poor quality jobs. In this section, we carry out a cluster analysis in order to determine the various types of QWE highlighted by the area indices. This should allow us to identify groups of individuals with similar characteristics, yet sufficiently different from other individuals. We have used the so-called 'K-Means clusters' method, which is most suitable for our type of data. The QWE clusters identified using the area indices are shown in Table 4, below. We decided to identify only three clusters, in order to highlight the QWE clusters at each end of the range.

Table 4: QWE clusters, using the area indices

	Cluster 1 – High QWE	Cluster 2 – Intermediate QWE	Cluster 3 – Low QWE
Economic security	.37	.43	.60
Job security	.35	.37	.38
Training	.59	.74	.81
Jobs where little is learnt	.25	.30	.31
Perceived health problems	.25	.24	.35
Physical health problems	.80	.80	.78
Arduous work	.24	.29	.27
Exposure to physical risks	.84	.83	.80
Exposure to psycho-social risks	.53	.53	.54
Pace of work	.63	.62	.63
Autonomy and control	.35	.42	.44
Atypical working hours	.70	.75	.75
Involuntary part-time	.04	.06	.06
Balancing work and non-working life	.75	.72	.72
Workers' rights	.71	.76	.76
Gender equality	.28	.25	.25
N	*7698*	*15724*	*5874*
Total %	*26.3%*	*53.7%*	*20.1%*

Source: European Working Conditions Survey / EUROFOUND; author's calculations

The first QWE cluster refers to the best quality jobs. Generally speaking, the area indices have a lower value for this cluster than for the other clusters. Individuals falling within this cluster tend to benefit from greater socio-economic security, better options for learning, better work organisation, and, to some extent, more convenient working hours. The tasks they perform are also less arduous, and they have more autonomy in and control of their work. Just over a quarter of European employees (26.3%) are in good quality jobs.

The second QWE cluster contains jobs which could be classified as being of intermediate or average quality. In this cluster, the values of the area indices tend to oscillate between those of the other clusters, being closer to one or the other. This is by far the biggest cluster, accounting for 53.7% of employees, as a result, particularly, of our choice to identify only 3 QWE clusters.

The third cluster is that with the worst QWE. Workers in this cluster generally have lower levels of socio-economic security, more limited access to training and jobs with learning potential and more difficult work organisation conditions. One out of every five European workers (20.1%) is in a poor quality job. That's quite a few! Given the total number of employees in the EU in 2010, almost 36 million employed workers are in low quality employment! Although we cannot make direct comparisons, this is a similar proportion to that observed by other studies (Holmann and Macclelland 2011, Greenan et al. 2010, Peña-Casas and Pochet 2009, Davoine et al. 2009). Clearly, then, there is a core group of European workers in poor quality jobs.

Having defined the QWE clusters, it is interesting to see how countries and groups of countries are distributed among them. This will show us whether the divergent trends highlighted by the dimensional analysis can be confirmed. Table 5, below, illustrates the distribution of the countries and groups of countries between QWE clusters.

Table 5: QWE clusters by country and group of countries

		Cluster 1 – High QWE	Cluster 2 – Intermediate QWE	Cluster 3 – Low QWE	N
Anglo-Saxon	IE		811		811
	UK	1333			1333
Scandinavian	DK	958			958
	FI	906			906
	SE	880			880
Corporatist	BE		3343		3343
	DE		1863		1863
	FR		2557		2557
	LU		845		845
	NL	820			820
	AT	819			819
Mediterranean	GR			651	651
	ES		870		870
	IT		1102		1102
	CY		782		782
	MT		851		851
	PT		777		777
CEEC 8	CZ		795		795
	EE			908	908
	LV			933	933
	LT			882	882
	HU			846	846
	PL		1128		1128
	SI	1162			1162
	SK	820			820
CEEC 2	BG			890	890
	RO			764	764
	total	*7698*	*15724*	*5874*	*29296*
	%	*26.3%*	*53.7%*	*20.1%*	*100.0%*

Source: European Working Conditions Survey / EUROFOUND; author's calculations

This does not of course mean that all workers from the same country are always in the same cluster, but only that a significant number of them have similar enough QWE characteristics to be grouped together. The cluster analysis confirms the trends identified by the analysis of QWE dimensions, while qualifying them somewhat. Only two groups of countries show uniform results at national level. All individuals from the Scandinavian group are in the high QWE cluster. At the other end of the scale, all individuals from the CEEC 2 group can be found in the low QWE cluster. There are more differences between countries in the other groups. In the Anglo-Saxon group, the British workers are in the high QWE cluster, whilst their Irish counterparts are in the intermediate cluster. In the Corporatist group, most countries are in the intermediate cluster, but the

Netherlands and Austria have a higher QWE. The same holds for the Mediterranean group, most of the members of which have intermediate QWE, apart from Greece, which is in the low QWE cluster. There are even greater differences within the CEEC 8 group, whose workers are spread between all three clusters: it is a very heterogeneous group. Slovene and Slovak workers have high levels of QWE, whilst Polish and Czech workers are in the intermediate cluster. The other countries in the group are in the low QWE cluster.

In terms of countries and groups of countries, the results of the cluster analysis largely confirm, therefore, the results of the analysis of QWE dimensions, while fine-tuning them a little. The cluster analysis, for example, helps better to identify 'hybrid' countries where the situation is less clear-cut. Looking at the distribution of EU countries between QWE clusters, three main groups can be identified:

- *High QWE*:   United Kingdom, Denmark, Sweden, Finland, Netherlands, Austria, Slovenia and Slovakia;

- *Intermediate QWE*:   Ireland, Belgium, Germany, France, Luxembourg, Spain, Italy, Portugal, Cyprus, Malta, Czech Republic and Poland;

- *Low QWE*:   Greece, Estonia, Lithuania, Latvia, Hungary, Bulgaria and Romania.

This shows once again that the simple division of countries into 'old' and 'new' Europe is far from helpful in terms of QWE. Whilst most of the groups we defined at the outset do show fairly uniform results in terms of QWE, this is clearly less the case for the CEEC 8 and Anglo-Saxon groups, where there are clear differences between countries. These internal differences in QWE also confirm that it would be wrong to group all the Central and Eastern countries together in just one category.

4. Conclusions

The starting point for this study on QWE was the supposed split within the EU between 'old' Europe, with high levels of economic and social development and better QWE, and 'new' Europe, seen as less developed and essentially offering low quality jobs. We rejected this simplistic approach at the outset, in favour of a method based on groups or 'families' of countries, generally felt by previous studies to be relatively cohesive in terms of their economic, social and institutional characteristics. It was therefore likely that this cohesiveness would also be reflected in the quality of their labour markets and work. Whilst this typology does work quite well for the countries of 'old' Europe, it fits less well when we try to incorporate the new EU Member States.

The synthetic QWE index identifies a certain hierarchy of the various country-groups within the EU. At the top of the range is the Scandinavian group, followed closely by the Anglo-Saxon group, both of which have higher QWE levels than the other groups. At the other end of the scale is the group made up of Bulgaria and Romania, whose QWE is significantly worse than that of the rest of the EU. As if often true for this sort of typology, the other groups of countries are in less clear-cut positions, somewhere between these two extremes. Taken as a whole, the Corporatist group scores lower than the Scandinavian and Anglo-Saxon group in terms of QWE, but still performs generally better than the Mediterranean and CEEC 8 groups. It is, however, difficult to establish a clear hierarchy between these last two groups, as their QWE scores are often quite similar, or can be good in one area and less good in another. An analysis of the dimensional indices allows us to qualify this view somewhat. There is a clear hierarchy for the indices on socio-economic security, training and learning and work organisation. Here there is a considerable gap between the Scandinavian and Anglo-Saxon groups and the rest of the EU. However, the results of the occupational health and safety index show only slight variations between the groups, as is the case for the index on workers' rights. The CEEC 8 group has a greater spread of results in the QWE categorisation. Its QWE for training and learning is equivalent to that of the Corporatist group, and it is between the latter and the Mediterranean group on training and learning and working time. For the other indices, the scores of the CEEC group are equivalent to those of the Mediterranean group. Finally, the CEEC 2 group has considerably worse figures than the other groups on training and learning and working time, but is not far behind the Mediterranean group when it comes to the other indices. All this indicates that the QWE situation in the EU is too complex to be adequately described by a simple contrast between 'old' and 'new' Member States.

In a previous study, we highlighted, using EWCS data, the existence of a QWE hierarchy in 2005 in the EU. At that time, however, the new Member States were still performing less well than the Mediterranean group (Peña-Casas and Pochet, 2009). Our analysis showed then that the QWE scores of the groups of countries in the EU had tended to converge over the period 1995-2005,

but that they were tending to converge towards some middle point, rather than towards the best values in the range. The Anglo-Saxon group was progressing and getting closer to the Scandinavian group, with the highest QWE, the Corporatist and Mediterranean groups had stagnated at around the same QWE levels, and the group of new Member States was quite far behind. Although these two studies are not strictly comparable in terms of groups of countries and QWE indices, our later analysis seems to show that this trend has continued, or, rather, that the CEEC 8 group has converged more quickly towards the centre whilst little has changed for the other groups.

Our analysis of the situation in individual countries also shows that the groups are not homogeneous, and that there are sometimes significant differences in QWE between their members. The Scandinavian group alone is made up of countries which all have the best QWE rates. In the Anglo-Saxon group, the United Kingdom scores much better than Ireland, whose results are closer to those of the Corporatist-group countries. In this latter group, a marked difference can be seen between, on the one hand, the Netherlands and Austria, which have a QWE rate similar to that of the Scandinavian countries and the United Kingdom, and, then the other countries in the group, which perform less well. Within the Mediterranean group, Greece stands out as having a far lower QWE, similar to that of the CEEC 2 group. The variations are most striking within the CEEC 8 group, which confirms that, looking beyond their recent history, we should not consider all these countries to be the same. Some of them, such as the Czech Republic, Slovakia, Slovenia and, to a lesser extent, Poland, have relatively high QWE levels, while the other countries in the group have a far lower QWE.

Finally, our analysis shows that QWE is still an important issue for all European labour markets, although the extent of the problem may vary between countries. The relatively high values observed for some of the dimensional indices, and for the synthetic QWE index, show that in a good number of European countries a significant proportion of workers are in jobs which could be described as being of poor quality. Our study put this figure at around 20% of European workers – a conclusion which is borne out by the findings of other, previous studies (Holmann and Macclelland 2011, Greenan et al. 2010, Peña-Casas and Pochet 2009, Muñoz de Bustillo et al. 2009). What this means in practical terms is that a significant number of people - around 36 million employees in Europe - are in poor quality employment. It is therefore vital to put the need for a qualitative improvement in employment back onto national and European political agendas, particularly at a time of crisis, with soaring unemployment rates and an ever-increasing number of workers living in poverty. Improving QWE is one way to create a more sustainable type of employment and to contribute to a sustainable approach to 'smart' economic growth. The objective is not only to improve productivity, but also to ensure better consumption options for workers and their households, less damage to health with the resulting savings for countries.

The Europe 2020 Strategy, which took over from the Lisbon Strategy in laying down the direction for structural reforms to improve economic and social circumstances, to be carried out by the EU Member States between now and 2020, still contains a reference to the importance of QWE in this context. This reference, however, is often neglected in favour of reforms tending towards greater flexibility in work and more precarious employment, all subject to tough budgetary austerity and constraints. The Europe 2020 Strategy focuses primarily on the quantity rather than the quality of jobs as a principal growth factor. This is a narrow viewpoint, which is not borne out by the facts. It is, for example, striking to note that the countries with the best QWE are also those with the highest employment rates. This suggests that it is ineffective to focus solely on the quantitative side of employment without considering its qualitative aspect, especially when thinking in the medium or long terms. Neither is it a coincidence that the difference between the countries with the best QWE ratings and the others is particularly clear in aspects such as socio-economic security, training and jobs with learning potential and work organisation. These are dimensions closely bound up with a sustainable approach to employment, which looks further ahead than the short term. Europe 2020 defined 'smart' growth as one of its three fundamental pillars, together with sustainable and inclusive growth. In this context, improving QWE should be considered as an essential lever to attain economic growth meeting these three criteria, whilst contributing to the well-being of European workers and citizens.

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Annex

Table A: Dimensions, areas and variables of QWE

Socio-economic security	**Income security**	Negative wage progression (reduction or stagnation)
		Workers considering themselves poorly paid
		The working poor (main breadwinners unable to 'make ends meet')
	Job security	Workers without permanent contracts
		Temporary workers with contracts of less than a year
		Workers stating that they would find it hard to find a new job were they to lose their current position.
		Workers who do not feel that their jobs offer good career prospects.
		Workers who say they are afraid of losing their jobs.
Training and Learning	**Training**	Workers receiving no training paid for by the employer or at work.
		Workers who have requested training but have not received any
	Jobs with little learning potential	Workers who do not have to meet precise quality standards in their work
		Workers who are not required to assess the quality of their work
		Workers whose job does not require them to resolve unexpected problems
		Workers whose job involves repetitive tasks
		Workers whose job does not involve complex tasks
		Workers whose job does not entail learning new things
		Workers whose job does not involve the use of various skills
Health and Safety	**Subjective perception**	Workers who think that their work is affecting their health, or involves risks to their health
	Physical health problems	Workers who have had one of the following physical problems: hearing, skin, backache, muscular pains in shoulders or neck, muscular pains in lower limbs, stomach ache, respiratory difficulties, cardiovascular diseases, injuries, depression or anxiety, overall fatigue, insomnia, other.
	Arduous tasks	Workers whose job involves: tiring or painful postures, lifting or moving people, carrying or moving heavy burdens, standing for long periods, repetitive movements of hands or arms, dealing with people outside their work place, dealing with discontented customers/patients
	Exposure to physical risks	Workers with considerable exposure to physical risks (vibrations, noise, high or low temperatures, fumes, toxic vapours, contact with chemical products, cigarettes, infectious products)
	Exposure to psycho-social risks	Workers with considerable exposure to psycho-social risks (work contrary to their personal values, emotional involvement, stress, risk of injuring others or losing the company money, etc.)

Work organisation	**Pace**	Workers whose pace of work involves: fast pace of work, tight deadlines, pace dependent on others, working to performance targets, dependence on a machine/movement/product, directly monitored by supervisor
	Autonomy and control	Workers whose working time is organised exclusively by their employer
		Workers who may not chose or change the order of their tasks, working methods or pace of work
		Workers who have no say in the setting of quantified targets
		Workers not involved in defining how work is organised
		Workers who have no say in the choice of their working partners
		Workers who do not know what exactly is expected of them at work
		Workers with no influence on important decisions relating to their work
		Workers whose division of tasks is decided on by their boss
		Workers whose division of tasks is not decided on by those involved in the rotation
		Workers not working in a team with shared tasks which it can plan
		Workers in teams whose members can not decide on the division of tasks
		Workers in teams whose members can not decide who should be in charge
		Workers in teams whose members can not decide on a working agenda
Working time	**Atypical hours**	Workers who regularly work atypical working hours (nights, evenings, Saturdays, Sundays, more than 10 hours a day)
		Workers who do not work the same number of hours/day or the same number of days or hours each week
		Workers not working for fixed time slots, or working by rotation or shifts
		Workers experiencing frequent changes of working timetable at short notice
	Involuntary part-time	Part-time workers who would prefer to work longer hours - as a proportion of total part-time workers
	Balancing work and non-working life	Workers whose working hours clash with their social or family commitments outside work
		Workers who often have to work overtime to meet working demands
		Workers who state that it is very difficult for them to take one or two hours off for personal or family reasons
Rights and fairness	**Workers' rights**	Workers whose employer does not encourage their involvement in important decisions
		Workers who state that during the past year they have not been able to raise questions related to problems at work with a trade union representative
		No worker representation
		Workers who claim to have received little or no information concerning occupational health and safety risks

		Workers who have been exposed to a form of harassment (verbal abuse, unwanted sexual attention, humiliating threats and behaviour, physical violence, psychological harassment, sexual harassment)
		Workers suffering discrimination in the past year (age, ethnicity, nationality, gender, religion, disability, sexual orientation)
	Gender equality	Workers stating that they are not developing in a mixed working environment
		Workers whose immediate supervisor is not a woman

Table b: Dimensional and QWE indices by country - 2010

	SESI	TLI	OHSI	WOI	WTI	RFI	QWE Index
IE	0.41	0.46	0.54	0.47	0.59	0.52	*0.50*
UK	0.34	0.40	0.53	0.47	0.52	0.54	*0.47*
DK	0.34	0.44	0.53	0.45	0.51	0.48	*0.46*
FI	0.36	0.37	0.52	0.44	0.54	0.48	*0.45*
SE	0.34	0.42	0.53	0.44	0.54	0.50	*0.46*
BE	0.33	0.48	0.54	0.51	0.53	0.50	*0.48*
DE	0.40	0.51	0.51	0.54	0.54	0.50	*0.50*
FR	0.37	0.56	0.54	0.52	0.63	0.52	*0.52*
LU	0.35	0.48	0.53	0.47	0.51	0.49	*0.47*
NL	0.39	0.43	0.53	0.50	0.53	0.49	*0.48*
AT	0.35	0.45	0.53	0.56	0.54	0.49	*0.49*
GR	0.42	0.64	0.57	0.55	0.57	0.51	*0.54*
ES	0.38	0.54	0.56	0.53	0.69	0.52	*0.54*
IT	0.39	0.60	0.54	0.53	0.68	0.52	*0.54*
CY	0.44	0.58	0.55	0.58	0.65	0.49	*0.55*
MT	0.38	0.54	0.57	0.50	0.58	0.49	*0.51*
PT	0.43	0.55	0.53	0.55	0.67	0.52	*0.54*
CZ	0.30	0.50	0.50	0.52	0.49	0.49	*0.47*
EE	0.37	0.48	0.56	0.50	0.55	0.52	*0.50*
LV	0.40	0.52	0.55	0.55	0.64	0.52	*0.53*
LT	0.34	0.55	0.53	0.52	0.62	0.52	*0.51*
HU	0.41	0.57	0.54	0.52	0.62	0.52	*0.53*
PL	0.34	0.52	0.55	0.57	0.56	0.50	*0.51*
SI	0.35	0.42	0.57	0.52	0.49	0.51	*0.48*
SK	0.38	0.44	0.52	0.55	0.56	0.49	*0.49*
BG	0.45	0.61	0.56	0.59	0.69	0.51	*0.57*
RO	0.47	0.57	0.55	0.56	0.66	0.47	*0.55*

*   For Luxembourg, Cyprus, Malta and Latvia, the results should be interpreted with caution, due to the small size of the sample.