

## **Job types and job quality in Europe**

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### **Abstract**

This paper shows how an analysis of job types can deepen our understanding of job quality and how job quality varies across twenty-seven European countries. First, using the European Working Conditions Survey 2005, a taxonomy of six job types is developed and their quality established. This suggests that there are different types of high and low quality jobs. Second, institutional theory is drawn on to examine why job quality varies cross-nationally. The results of a multilevel analysis indicate that national differences in institutional regime (social democratic, continental, liberal, southern European, transitional) result in cross-national variation in the both the level of job quality (i.e., the overall proportions of high and low quality jobs) and the nature of job quality (i.e., the particular types high and low quality jobs found). It is concluded that institutional theory is able to explain the level but not the nature of cross-national variation in job quality.

### **Keywords**

job quality, job types, institutions, comparative, European

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A taxonomy of job types that illustrates the different ways in which jobs typically combine work and employment-related factors (e.g., work organisation, wage, flexibility) offers a number of key benefits for the study of job quality<sup>1</sup>. Firstly, it can detail the different ways that jobs combine factors indicative of high job quality with factors indicative of low job quality. Secondly, it can provide a means of estimating the overall or total quality of a job, e.g., by establishing the extent to which a job type has factors indicative of high job quality. Thirdly, by combining these two sources of information, it is possible to establish whether there are different types of high-quality job and different types of low-quality job. Despite these benefits, few empirical studies of job types exist and their scope is limited to a focus on one job factor, e.g., work organisation (Valeyre et al., 2009). To broaden and deepen our understanding of job quality, the first aim of this study to develop a taxonomy of job types using all the main work and employment-related factors of a job and to establish the overall job quality of each job type.

A taxonomy of job types also offers particular benefits for research examining why cross-national variation in job quality occurs; a key theme in the job quality literature. A number of studies have successfully tested institutional theories to provide strong evidence that cross-national variation in job quality is a result of differences in national institutional regime (e.g., Gallie, 2007; 2009; Goergen et al., 2009). But current studies have focused on a particular facet of job quality, e.g., work organisation or training (Gallie, 2009; Holman et al., 2009; Goergen et al., 2009). So it has yet to be established whether cross-national variation in the total quality of a job is a result of differences in national institutional regimes. Such an analysis can be conducted

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<sup>1</sup> In this paper job quality is defined as the extent to which a job has work and employment-related factors that foster beneficial outcomes for the employee, particularly, psychological well-being, physical well-being and positive attitudes such as job satisfaction (Green, 2006; Warr, 1990). A job type is defined as a job with a particular set of work and employment related factors.

using job types, as they provide an estimate of the total quality of a job. Another benefit is that job types can be used to illuminate differences between countries in both the level and nature of job quality. For example, two countries may have a low level of job quality (i.e., each has a high proportion of low quality jobs) but the types of low quality job in each country might differ greatly. Such insights cannot be gained readily from studies only comparing the mean level of job factors between countries.

Promoting better quality jobs has been a central aim of the European Union's employment strategy since 2000 (European Commission, 2003) and is an important aim of European trade unions (European Trade Union Confederation, 2011). Knowing how institutional regimes in Europe might affect the achievement of better quality jobs is clearly important to key European stakeholders and has been a significant element in academic debates on job quality (e.g., Gallie, 2007; Green, 2006). However, a limitation of existing institutional studies of job quality is that they are often based on a restricted set of European countries. This is addressed in this study by using the European Working Conditions Survey<sup>2</sup> 2005 data set that includes a representative sample of employees from the twenty-seven countries in the European Union. The second aim of this study is therefore to examine whether institutional theory predicts cross-national variation in job quality within the European Union. The results of this study are particularly relevant to policy makers and other stakeholders in Europe, as they offer a detailed understanding of how the level and nature of job quality varies within and between countries and the factors that shape job quality, thereby enabling policies to be targeted more accurately.

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<sup>2</sup> The five-yearly European Working Conditions Survey was started in 1990 by the European Commission to map working conditions in Europe. By 2005 the fourth survey had expanded to include 27 EU member states and four non-member states, e.g., Norway, Turkey. The survey includes questions on all the key dimensions of job quality. For more information see <http://www.eurofound.europa.eu/ewco/>

## **Job quality and job types**

Job quality can be defined as the extent to which a job has work and employment-related factors that foster beneficial outcomes for the employee, particularly, psychological well-being, physical well-being and positive attitudes such as job satisfaction (Green, 2006; Warr, 1990). The factors indicative of high job quality are set out in Table 1. They have been selected because of the strong evidence that they promote employee well-being and positive job attitudes and because they cover the five main dimensions of a job, namely, work organisation, wages and payment system, security and flexibility, skills and development, and engagement and collective representation (Bustillo et al., 2009; Grimshaw and Lehndorff, 2010). For example, a high quality job may have high job resources, high challenge demands, as well as high pay, job security and development opportunities. As a result, it is likely that this job will result in high levels of employee well-being and positive job attitudes. This approach to job quality is in keeping with an objectivist understanding of job quality, which focuses on objective features of a job and assumes that these are the predominant cause of employee experiences, e.g., employee well-being. This can be contrasted with a subjectivist approach, which focuses on employee work preferences and their perceived fulfilment (Brown, Charlwood, Forde & Spencer, 2007; Bustillo, et al., 2009). An objectivist approach is adopted in the paper, as objective work conditions have been shown to shape the experience of work over and above personal preferences (Green, 2006; Parker & Wall, 1999) and because employee experiences cannot be defined solely in terms of preference fulfilment or satisfaction (Sen, 1985).

Job quality has been shown to vary across Europe (Tangian, 2007). But important questions remain about the diversity of high and low-quality jobs in Europe. In particular, is it

the case that all low quality jobs are of a similar type with a common set of job factors, e.g., low paid, high job demands, unsocial working hours? Or are there different types of low quality jobs? For example, one type of low quality job might typically combine low pay and a temporary contract, while another type of low quality job might typically combine very high job demands, and long unsocial working hours.

Inferring the nature of high and low quality job types in Europe from existing theories is difficult, as relevant theories provide different indications as to the types of job quality that might occur. For example, according to strategic human resource management theories, two basic types of job quality might be expected (Schuler and Jackson, 1995; Wright and McMahon, 1992). The first is a low quality 'low-commitment' job characterised by Taylorist work organisation (low task discretion, variety and skill requirements), low pay, little training, low job security (e.g., temporary contracts) and low working time flexibility. The second is a high quality 'high-commitment' job characterised by empowered work organisation (high discretion, variety and skill requirements) allied to higher pay, and greater levels of training, working time flexibility and job security. In contrast, the job demands-control theory of job design (Karasek & Theorell, 1990) indicates that four types of job quality might occur, each with a different combination of job demand (e.g., workload) and task discretion. Active jobs combine high discretion and high demands; high strain jobs combine low discretion and high demands; passive jobs combine low discretion and low demands; and low-strain jobs combine high discretion and low demand. Each job type has a different impact on employee well-being. Active jobs are seen to result in the highest levels of employee well-being, as employees are able to use their discretion to cope with demands, which in turn is likely enhance well-being. Consequently, active jobs can be classed as high quality jobs (Beckers et al., 2004). In contrast, employees in

high-strain jobs have little control over high job demands and this undermines their ability to cope, leading them to experience high levels of strain. As such high-strain jobs can be viewed as low quality jobs. Employees in passive and low-strain jobs have few challenge and developmental opportunities, and little opportunity to exhibit task mastery; all of which may lead to low to moderate levels of well-being. These jobs can therefore be viewed as having a low to moderate level of job quality.

Inferring the nature of high and low quality job types in Europe from empirical studies is also difficult, as they provide different indications of the types of job quality that might occur. Some studies of strategic human resource management indicate the existence of two types of job quality, namely high and low-commitment jobs (Batt, 2002; Delbridge, 2005; MacDuffie, 1995). Other studies report finding the four job types specified by the job demands-control model or job types very similar to these (Taris et al., 2003; Taris and Kompier, 2005). For example, Valeyre et al (2009), using a European-wide data set and focusing only on work organisation, found four job types; discretionary learning (e.g., high job discretion and task complexity), lean production (e.g., high teamwork, task complexity and timing constraints with moderate job discretion), Taylorist (e.g., low discretion and complexity with high timing constraints) and simple jobs (low on all variables). Except for the lean production jobs, the job types reported by Valeyre and colleagues are very similar to those of the job demands-control model, i.e., active jobs and discretionary learning, high-strain and Taylorist, passive and simple jobs. Other taxonomies of job types have also been reported with regard to different work and employment-related factors. For instance, Chung et al. (2007), found six types of working time flexibility in Europe: worker orientated (e.g., flexible work hours, overtime, parental leave, early retirement), company orientated (e.g., similar to worker orientated but no flexible working hours and use of atypical

working hours), life course (e.g., part-time work, parental leave, early retirement), day-to-day (e.g., flexible work hours, atypical work hours, part-time work), overtime only, and no working time flexibility.

The Valeyre et al. (2009) and Chung et al. (2007) studies show that jobs may contain factors indicative of high and low job quality. This variability was also found in a study by Hewlett and Luce (2006). Their study examined senior managers' jobs across a wide variety of work and employment-related factors and they identified a particular type of job, which they called an 'extreme job'. Of relevance here is that extreme jobs combine high quality factors, e.g., high pay, high job control, challenging demands, with low job quality factors, e.g., extremely long hours and very high workloads. Overall, these empirical studies indicate that different types of job quality may occur and that, to varying degrees, they may contain job factors that are indicative of both high and low job quality.

From the preceding discussion it is clear that there is little theoretical agreement on the types of high and low quality jobs that might occur in Europe, whilst empirical studies of job types are based on only one of the five main dimensions of a job, e.g., work organisation (Valayre et al., 2009). We therefore lack a taxonomy of job types that illustrates the different ways that jobs typically combine all the main work and employment-related factors of a job. This limits our understanding of job quality in Europe, as we do not possess a clear understanding of whether there are different types of high and low quality jobs; an important prerequisite when studying the distribution of job quality across different contexts, e.g., institutional regimes. This study therefore seeks to address the following research question, namely, in Europe, what are the main job types and what is the job quality of each job type?

## **Institutions regimes, job types and job quality**

Institutional theories assert that a country's institutional regime will influence the level of job quality in that country, e.g., the proportion of jobs in a country that are of a high quality job type and the proportion that are of a low quality job type. As such, national differences in institutional regimes should lead to cross-national variation in job quality (Gallie, 2007; Holman et al., 2009). A number of institutional theories are applicable to the study of job quality in Europe. For example, the varieties of capitalism approach distinguishes between the liberal regimes of UK and Ireland and the coordinated regimes of continental European and Nordic countries (Hall and Soskice, 2001). In contrast, the work of Amable (2003) distinguishes between social democratic (i.e., Nordic states), continental (e.g., Germany France), liberal (e.g., the U.K.) and southern European regimes (e.g., Spain, France). This broader geographical coverage is more applicable to this study given that the data comes from across Europe. This study therefore distinguishes between these four institutional regimes and, because the data set also includes central and eastern Europe countries, a fifth 'transitional' institutional regime is included on the basis of work by Whitely (1999) and Goergen et al. (2009). Another advantage of Amable's work is that it uses various criteria to distinguish between institutional regimes, such as product markets, financial systems, and educational systems. But Gallie (2009), using employment regime theory, suggests the most relevant of these criteria when examining institutional influences on job quality are employment policies (e.g., full employment policies, employment rights, welfare provision) and the relative capacity of organized labour (Esping-Anderson, 1990; Korpi, 2006).

But how do the five institutional regimes differ with regard to employment policies and the relative capacity of labour, and how might these institutional properties influence job quality?



According to employment regime theory, social democratic regimes have policies designed to extend employment and employment rights throughout the working population. In addition, the participation of organised labour in decision making is highly institutionalised within organisations (e.g., works councils) and government. This increases the capacity of organised labour to achieve its aims, e.g., promoting high employment levels, collaborating with employers to develop industry specific and vocational training programmes and enhancing low paid workers' wages (Culpepper and Thelen, 2007; Gallie, 2000; Kristensen and Lilja, 2010). A strategy to promote employment growth and high levels of employment may, if successful, protect union members from unemployment, increase the value of employees' skills and tighten the labour market. A tight labour market can, in turn, increase the capacity of employees and organised labour to secure better job and employment conditions (e.g., wages, job security, flexible working) and to resist practices deemed deleterious to well-being, e.g., standardization (Dobbin and Boychuk, 1999; Gustavson, 2007; Wallerstein, 1999). Organised labour's aim to promote training may lead to a more highly skilled workforce (Lasonen and Rauhala, 2000), which may help to secure higher wage levels and permit the design of more complex jobs (Prais et al., 1989). Complex jobs typically have high levels of discretion and tend to be intrinsically motivating and more satisfying (Parker and Wall, 1999). Social democratic regimes are therefore likely to promote job factors that are indicative of high job quality.

Continental regimes are, according to employment regime theory, characterised by organised labour having a more consultative role within organisations and an influence that is partly dependent upon the party of government. One implication of this is that organised labour has a weaker capacity to realise its aims, e.g., increasing wages. Another is that the capacity of organised labour is stronger in places where mobilizing the workforce is easier, such as the core

employees of large firms (Culpepper, 1999; Hyman, 2001). As a result, employment and working conditions may be better among the core employees of large firms than among employees with non-standard contracts or those working in smaller firms (Streeck, 1991; Thelen and Kume, 1999). The overall level of job quality in continental regimes is likely to be lower than that in social democratic regimes for two reasons. First, even in the core workforce, organised labour may have less capacity to secure better employment conditions. Second, employment conditions may be lower in non-core employees and therefore depress the overall mean. Continental regimes are therefore likely to have relatively high levels of job quality but at a lower level than in social democratic regimes.

Liberal regimes are characterised by employment regime theory as having little state regulation of working conditions which may result partly from key institutional actors (e.g., employers, employer associations) assuming that working conditions and employment levels are best regulated by the market (Gallie, 2007). Organised labour tends to have little involvement in decision-making within firms or government (Hyman, 2001), thereby limiting its capacity to influence working conditions. The lower levels of employment protection and employment create a relatively fluid labour market, which may make employers less willing to train because returns on such investments are less likely (Capelli et al., 1997; Finegold and Soskice, 1988). In turn, lower employee skill levels may inhibit the design of more complex jobs, which is likely to lead to jobs with lower discretion, higher levels of standardization and lower wage rates (Prais et al, 1989). Liberal regimes countries are therefore likely to have a lower level of job quality than social democratic or continental regimes.

Employment regime theory characterises southern European regimes as having relatively little state intervention with regard to the regulation of working conditions and organised labour

as having a relatively weak influence on working conditions (Amable, 2003). In addition, it has been found that state-sponsored training and education is limited, incentives for employers to invest in training are dampened due to low job security, and employees show little initiative for lifelong learning. This results in lower employee skill levels (Goergen et al., 1999). As with liberal regimes, the low levels of employee skill inhibits the design of complex jobs, leading to low quality work organisation and lower wage rates (Prais et al, 1989). Transitional regimes can be characterised as having relatively little state intervention with regard to the regulation of working conditions, an organised labour movement that is relatively weak and autocratic management structures that are relatively weak: all of which limit the job discretion of employees and the influence of organised labour (Whitley, 1999). A degree of economic liberalisation has also decreased job security and increased the use of low cost training (Goergen et al., 1999). As such, job quality in southern European and transitional regimes is likely to be low and lower than in liberal regimes as a result of differences in education and training systems and managerial practices.

In summary, there are strong reasons to believe that national differences in institutional regimes will result in cross-national variation in job quality in Europe. Furthermore, as an institutional regime with a higher level of job quality will have a higher proportion of high quality jobs (and a lower proportion of low quality jobs), it can be suggested that social democratic regimes will have the highest proportion of high-quality jobs, continental regimes the second highest, liberal regimes the third highest, and that southern European and transitional regimes will have the lowest proportion of high quality jobs. To investigate this proposal further, the following research question is set: What is the distribution of high and low quality job types across different institutional regimes in Europe?

## **Method and results**

The method and results are reported in three stages. The first stage develops a taxonomy of job types, the second estimates the job quality of each job type, and the third examines the distribution of job types in different institutional regimes.

### **Stage 1. Developing a taxonomy of job types in the EU**

#### *Method*

*Procedure.* To develop a taxonomy of job types a two-step cluster analysis was conducted using thirty-eight measures of work and employment related factors. Advantages of two-step cluster analysis over other cluster analysis methods are that it can include categorical and continuous variables and be used with very large data sets (Chiu et al., 2001; Nouriss, 2003). In the first step, each case is assigned to an existing precluster or placed in a new precluster depending on which assignment maximizes a log-likelihood function. In the second step, a standard agglomerative clustering algorithm is used to group these preclusters into a range of cluster solutions. The optimal solution (i.e., number of clusters) is chosen using the Bayesian Inference Criterion (BIC) for each solution and the solution that has the greatest change in distance between the two closest clusters in the second stage. Another advantage of two-step analysis is that the cluster solution is chosen based on objective criteria rather than subjective judgements as required with traditional clustering methods. Simulation studies indicate that two-step analysis is able to reproduce 'true' clusters (SPSS Technical Report, 2007). As cluster analysis results can be affected by the order of case entry, the stability of the cluster solution was checked by conducting four additional two-step analyses, each using data in a different order.

Similar cluster solutions increase the confidence that the identified clusters are not a methodological artefact.

*Sample.* The sample was drawn from the EWCS 2005 data set which is based on a stratified and clustered design with a ‘random walk’ to obtain a representative sample of employees in each country. All interviews were conducted face-to-face in the respondent’s own house and respondents describe their own job (Parent-Thirion et al., 2007). The sample size was 16047 and included data from all twenty-seven EU countries.

*Measures.* Thirty-eight measures were developed to represent the five main dimensions of job quality (Grimshaw & Lehndorff, 2010) (See Table 2 and, in the Supplementary Materials Appendix , Table 1A). Within each dimension I developed measures to reflect key constructs in relevant theoretical models (e.g., job design theories, Parker & Wall, 1999) and which represent significant aspects of job quality (Bustillio et al., 2009). Multi-item measures were developed when possible using multiple correspondence analysis for binary items and factor analysis for continuous items (Results available on request). All items were recoded when necessary, so that high scores represent higher levels of a particular factor. The internal validity of each multi-item measure is shown in Table 2 and demonstrates that measures have a good internal validity.

### *Results*

The first two-step cluster analysis identified a six cluster solution as the best solution (see Table 2A in the Appendix). The resulting six clusters contained 2413 (15.9%), 1894 (11.8%), 2811 (17.5%), 3024 (18.8%), 2603 (16.2%) and 3302 (20.6%) cases. Four further cluster

analyses on differently ordered data also identified a six cluster solution and their correlation with the first solution was 0.95, 0.95, 0.92 and 0.80. This indicates that the chosen cluster solution is stable and that cases are generally being assigned to the same cluster across different analyses. A summary of the mean scores for each cluster is provided in Table 3 and the mean scores of each measure for each cluster are detailed in Table 3A in the Appendix. The nature of each cluster was interpreted by examining key differentiating characteristics and also in relation to previously identified job types. The interpretation of each cluster now follows.

*i. Active jobs.* The work organisation of jobs in this cluster is characterised by high levels of job resource such as job discretion ( $M = 1.84$ ) and social support ( $M = 3.63$ ). For example, 83.3% of jobs in this cluster involved having control over work methods and 74.9% of jobs involved receiving assistance from colleagues. Some job demands are high, such as job complexity ( $M = 1.82$ ) and cognitive demand ( $M=3.31$ ). But other job demands typically occur at a lower than average level, particularly workload ( $M = 3.53$ ) which is lower than in all other job types. The combination of high job resources and high job demands such job complexity and cognitive demand is a distinctive feature and very strongly resembles the ‘active jobs’ of the job demands-control model (Karasek & Theorell, 1990). This cluster was therefore labelled as ‘active jobs’.

With regard to the skills and development factors, active jobs have a moderate but higher than average level of development opportunities ( $M = 3.34$ ) and training ( $M = 1.34$ ). They typically have a moderate to high level of pay ( $M = 6.62$ ) but few have pay enhancements, e.g., group pay. Active jobs are further characterised by high levels of job security ( $M = 4.22$ ), high working time flexibility (e.g., all jobs involved a choice over working time) and standard working hours, e.g., low weekend work. An analysis using the International Standard

Classification of Occupations (ISCO) (See Table 4A in the Appendix) indicates that occupations with a relatively high proportion of active jobs are: senior managers (e.g., departmental manager), professionals (e.g., engineers), technicians and associate professionals (e.g., nurses) and clerks (e.g., accountancy clerks).

*ii. Saturated jobs.* As most job factors in this cluster are high or higher than average, jobs in this cluster were labelled 'saturated'. Work organisation is similar to that in active jobs, i.e., high job resources and high job demands. But key differences with active jobs are higher workload ( $M = 4.00$ ) and interaction demands ( $M = 4.60$ ), more atypical working hours (e.g., evening work, weekend work) and longer hours. In short, employees in saturated jobs appear more likely to be exposed to high demands over long durations and during atypical hours than employees in active jobs.

With regard to skills and development factors, although development opportunities in saturated jobs are at a moderate level ( $M = 3.39$ ), almost two-thirds (63.7%) involved work-based training. Saturated jobs also had high wages ( $M = 6.73$ ), with 55% having some form of compensatory pay, which is higher than the average (37.8%). Saturated jobs are further characterised by high job security ( $M = 4.06$ ) and high working time flexibility. Occupations with relatively high proportions of saturated jobs are: senior managers (e.g., company director), professionals (e.g., doctors), technicians and associate professionals (e.g., nurses) and skilled agricultural workers (e.g., farmer).

*iii. Team-based jobs.* Jobs in this cluster were labelled as team-based, as all involved working in a team and the level of team autonomy was high - 65.5% of jobs involved team members

collectively deciding task allocation. Work organisation is further characterised by a combination of high job resources (e.g., job discretion,  $M = 1.69$ ; social support,  $M = 3.75$ ) allied to high job complexity demands ( $M = 1.79$ ). Other demands are at a moderate level, e.g., workload ( $M = 3.79$ ) and interaction demands ( $M = 4.08$ ). With regard to skills and development factors, training ( $M=1.31$ ) and development opportunities ( $M = 3.15$ ), these are at a moderate but slightly higher than average level. Pay is just above the average ( $M = 6.03$ ). Team-based jobs also combine high security ( $M = 4.06$ ) with low working time flexibility, as team-based jobs typically involve working the same fixed hours each week (70% have fixed working times) to a schedule set by the organisation. However, team-based jobs typically involve working standard hours, e.g., only 7.1% involve shift work. Occupations with relatively high proportions of team-based jobs are: professionals (e.g., computer programmer), technicians and associate professionals (e.g., physiotherapist) and craft and related trade workers (e.g., engine mechanic).

*iv. Passive-independent jobs.* Work organisation in this cluster is characterised by low job demand, e.g., workload ( $M = 3.60$ ), interaction demand ( $M= 3.77$ ), cognitive demand ( $M = 2.80$ ) and job complexity ( $M = 1.59$ ). A further feature is low job resources, e.g., job discretion ( $M = 1.53$ ) and low variety ( $M = 1.18$ ). This combination of low job demands and resources resembles the ‘passive jobs’ of job demands-control theory (Karasek & Theorell, 1990). Furthermore, jobs in this cluster are relatively independent in nature, as only 23.3% involved working in teams, none had a degree of team autonomy, and timing interdependency was low ( $M = 1.35$ ). For these reasons, jobs in this cluster were labelled as passive-independent. Such jobs are also characterised by low development opportunities ( $M = 2.75$ ), low levels of training ( $M = 1.14$ ) and the lowest level of engagement ( $M = 1.35$ ). Pay is just below average ( $M = 5.54$ ), although



job security is high ( $M = 4.07$ ). Working time flexibility is low, with high use of fixed time schedules ( $M = 1.77$ ) and organisationally set time schedules (98.2%). But passive-independent jobs typically have standard hours, e.g., only 14.7% involve evening work. Occupations with relatively high proportions of passive independent jobs are: clerks (e.g., secretaries), craft and related trade workers (e.g., painters), plant and machine operators (e.g., chemical processing operators) and elementary occupations (e.g., office cleaners).

*v. Insecure jobs.* All jobs in this cluster have a non-permanent contract and 43.7% agreed that they might lose their job in the next six months compared to the average of 26.7%. For these reasons, jobs in this cluster were labelled as insecure. Another key attribute is low pay ( $M = 3.87$  compared to the average of 5.70). Work organisation is characterised by a combination of low job resources (e.g., job control,  $M = 1.54$ ; variety,  $M = 1.36$ ) and low to moderate job demands (e.g., low cognitive demand,  $M = 2.64$ ; low job complexity,  $M = 1.60$ ; moderate workload,  $M = 3.69$ ). Insecure jobs are also characterised by low development opportunities ( $M = 2.83$ ) and low levels of training ( $M = 1.20$ ), with little working time flexibility, an organisationally set working time in 71.9% of jobs and fixed working hours in 60% of jobs. A small but significant proportion involve working non-standard hours, e.g., 28.1% involve evening work, 41.3% involve Saturday work. Occupations with relatively high proportions of insecure jobs are: clerks (e.g., receptionists), service workers (e.g., shop workers), skilled agricultural (e.g., gardeners), craft workers (e.g., brick layers) and elementary occupations (e.g., domestic cleaners).

*vi. High strain jobs.* In this cluster the level of workload is relatively high ( $M = 4.01$ ), as are physical demands ( $M = 3.85$ ), ambient demands ( $M = 2.56$ ) and job complexity ( $M = 1.68$ ). But cognitive demand ( $M = 3.03$ ) and job discretion ( $M = 1.50$ ) are relatively low. The combination of high job demands and low job discretion strongly resembles the ‘high-strain jobs’ of job demands-control theory (Karasek & Theorell, 1990). Jobs in this cluster can therefore be labelled as ‘high-strain jobs’. With regard to skills and development, the overall level of development opportunities is low ( $M = 2.76$ ) but training is at a moderate level ( $M = 1.29$ ), with 51.6% of employees in high-strain jobs participating in some form of work-based training in the last year. Pay is just below average ( $M = 5.67$ ) and a large proportion include some form of compensatory pay (60.1%). Job security is high ( $M = 3.87$ ) but flexibility is low, with working time set by the organisation in 99.5% of jobs. High-strain jobs typically involve working non-standard hours. Two thirds involve shift work, night work, Saturday work and working at least one ten hour day each month. Occupations with relatively high proportions of high-strain jobs are: service workers (e.g., police officers) skilled agricultural (e.g., deep sea fishing), craft workers (e.g., miners), plant and machinery operators (e.g., assembly line operators) and elementary occupations (e.g., rubbish collectors).

## **Stage 2. Estimating the job quality of job types**

### *Method*

*Procedure, measures and sample.* To estimate the job quality of each job type I first examined the extent to which a job type has job factors that are indicative of job quality. For example, a job type with many factors indicative of high job quality (e.g., high job discretion, high pay, flexible hours) was labelled as a high quality job type. Attention was also paid to job factors

such as job demands which, if excessive or combined with other factors such as long hours, may have a particularly detrimental effect on employee well-being and thus indicate a lower level of job quality (Karasek & Theorell, 1990). This approach is in keeping with the definition of job quality provided earlier.

The estimates of job quality were then validated in two ways. First, I examined the relationship between job types and employee well-being and job satisfaction. If an estimate is accurate, then a job type of a higher quality should be associated with a higher level of well-being and job satisfaction. To estimate the relationship between each job type and well-being and job satisfaction, a series of multilevel regression analyses were conducted with individuals (Level-1) nested within countries (Level-2). For each analysis, the level-1 dependent variable was either a well-being measure (physical well-being and psychological well-being, both entered as censored variables) or the job satisfaction measure (see Table 2 and, in the Appendix, Table 1A). The level-1 independent variables included dummy coded measures of job type with one omitted to act as the referent, as well as controls (employee gender, tenure, firm size, as well as four dummy coded economic sector measures for agriculture, manufacturing, construction and the public sector). Repeating the analysis with each job type as the referent enables the level of the dependent variable to be compared across all job types. The sample size was 16047.

Second, I examined the cross-tabulation of job types by International Standard Classification of Occupations (ISCO) (See Table 4A for full list of occupations). Previous job quality research (Tangian, 2007) suggests higher quality job types are more prevalent in occupations such as senior managers, professionals and technicians and associate professionals, while low quality jobs are more prevalent in elementary jobs, plant and machinery operators and service workers.

## *Results*

Based on the extent to which each job type has factors indicative of high job quality, active jobs are classified as high quality jobs, saturated and team-based as moderate quality jobs, passive jobs as low to moderate quality jobs, and insecure jobs and high-strain jobs as low quality jobs.

Active jobs have almost all the factors typically associated with high quality jobs, e.g., high job resources, a moderate workload with high challenge demands (cognitive demand and job complexity), high pay, high security and flexibility, and standard working hours (see Table 3 and Table 3a in the Appendix). This suggests a high level of job quality. Evidence for the validity of this estimate comes from the finding that active jobs are associated with significantly higher levels of job satisfaction ( $M = 3.24$ ), psychological well-being ( $M = 1.86$ ) and physical well-being ( $M = 1.83$ ) than all other jobs types (the only exception being the non-significant difference of physical well-being with insecure jobs) (See Table 4).

Saturated and team-based jobs have many features of high quality jobs, e.g., high job resources, challenge demands, above average pay, high job security. But each also has job factors indicative of low job quality. Saturated jobs combine a high workload with long hours and non-standard working hours; a particularly problematic combination with regard to well-being that may not be compensated by other job attributes (van der Hulst, van Veldhoven & Beckers, 2006; Kuper, Singh-Manoux, Siegrist, Marmot, 2002). Team-based jobs have a moderately high workload and low working time flexibility. Thus, for saturated and team-based jobs, high quality job factors are offset by some low quality factors, which suggests a moderate level of job quality. Evidence for the validity of this estimate comes from the finding that, in

comparison to active jobs, both saturated and team-based jobs have a significantly lower level of job satisfaction ( $M = 3.18$  and  $M = 3.11$  respectively) and psychological well-being ( $M = 1.80$  in both job types) and both are associated with relatively low physical well-being ( $M = 1.75$  and  $M = 1.77$ ).

Passive-independent jobs have some features of high quality jobs (i.e., high security, high standard working hours) but many features of low quality jobs, i.e., low job resources, low job demands, low skill development and little flexibility. The overall quality of passive-independent jobs can be described as low to moderate as they have many factors associated with low quality jobs and only a few factors associated with high quality jobs. The absence of many indicators of high quality jobs may explain why job satisfaction ( $M = 3.01$ ) is relatively low, while the lack of job demand may explain why psychological well-being ( $M = 1.82$ ) and physical well-being ( $M = 1.81$ ) are relatively high (Podsakoff et al., 2007).

Insecure jobs have many of the same low quality job features as passive jobs but also have low job security and very low pay. Insecure jobs can therefore be described having a low job quality. Evidence for the validity of this estimate comes from the finding that job satisfaction ( $M = 2.94$ ) is significantly lower than all other jobs except high-strain jobs, whilst psychological well-being ( $M = 1.79$ ) is significantly lower than all other jobs except passive and high-strain jobs. The lack of job demand might explain why physical well-being ( $M = 1.79$ ) is relatively high in comparison to other job types.

For high-strain jobs, a combination of low job resources, high job demands, little working time flexibility and non-standard working hours, mark this job type as having a particularly low level of job quality, despite the average pay level. Evidence for the validity of this estimate comes from the finding that that, in comparison to all other job types, high-strain jobs have

significantly lower levels of job satisfaction ( $M = 2.77$ ), psychological well-being ( $M = 1.73$ ) and physical well-being ( $M = 1.69$ ).

Further evidence for the validity of the job quality estimates comes from the distributions of job types across occupational groups (See Table 4A). As expected, occupations with higher proportions of high and moderate quality jobs types include senior managers, professionals and technicians and associate professions; while occupations with higher proportions of low quality jobs include service workers (especially high-strain jobs), agriculture and fishery workers (particularly insecure jobs), machinery operators (especially high-strain jobs), and elementary occupations. The results also show that job types occur across all occupations, demonstrating that job types are not simply a reflection of occupational structure.

### **Stage 3. Differences in job quality between institutional regimes**

#### *Method*

*Procedure and sample.* To examine the distribution of job quality between institutional regimes I conducted two sets of multilevel logistic regression analyses with individuals (Level-1) nested within countries (Level-2). The first set compared the distribution of two groups of job types, a higher quality group (active, saturated, team-based) and a lower quality group (passive-independent, insecure and high-strain). The second set of regressions examined the distribution of each job type. At level-1, the dependent variable was the job quality measure of interest (either job quality group or job type) and independent variables included a set of controls (see below). At level-2, I included one level-2 control (see below) and dummy coded measures of institutional regimes with one regime omitted to act as the referent. Repeating the analysis with

each regime as the referent enables the level of the dependent variable to be compared across all regimes. The sample size was 16047.

*Measures.* At level-1, the dependent variable was a dummy code for job quality group (coded one for higher quality job types, zero for lower quality job types) or job type. Level-1 independent variables included control variables for gender, tenure, firm size, and four dummy coded measures of economic sector (agriculture, manufacturing, construction, public sector). To account for differences in occupational structure between countries, a dummy measure of occupational group was included that distinguished between managerial, professional and associate professional occupations and all other occupational groups. At level-2, the twenty-seven European countries were dummy coded as belonging to one of five regimes: Social Democratic - Denmark, Finland and Sweden; Continental – Austria, Belgium, France, Germany, Luxembourg and the Netherlands; Liberal – Ireland and the United Kingdom; Southern European – Cyprus, Italy, Greece, Malta, Portugal and Spain; Transitional - Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The level-2 control variable was the mean standardized Gross Domestic Product per capita score for each country in 2005 (the same year as the data) (Eurostat, 2011) to account for any effect of economic growth on job quality.

### *Results*

The distribution of higher quality job types (active, saturated, team-based) across each institutional regime is presented at the top of Table 5. This shows that the proportion of higher quality jobs in each regime occurred in an order similar to that expected, i.e., social democratic

(66.1%), continental (52.1%), liberal (47.8%), transitional (33.5%) and southern European (30.2%). (The distribution of all lower quality jobs is simply the reverse of this). The regression analyses revealed that social democratic regimes have a significantly greater proportion of higher quality jobs than all other regimes ( $p < .05$ ). Continental regimes have a significantly greater proportion of higher quality jobs than liberal and southern European regimes ( $p < .05$ ). Liberal regimes have a significantly lower proportion of higher quality jobs than social democratic and continental regimes but a significantly higher proportion than southern European regimes ( $p < .05$ ). These results are generally in keeping with the expected distribution of high and low quality jobs across institutional regimes in Europe. But against expectations, the proportion of higher quality jobs in continental and liberal regimes was not significantly different to that in transitional regimes. However, the analysis of individual job types (see Table 5) reveals that continental and liberal regimes do have a significantly higher proportion of active job types (23.1% and 16.9% respectively) than transitional regimes (6.4%). This suggests that a distinguishing feature of continental and liberal regimes in comparison to transitional regimes is a greater capacity to produce jobs of the highest quality, i.e., active jobs.

The analysis of individual job types also revealed that the differences between institutional regimes for active and saturated jobs is broadly in line with expectations (see Table 5). This is particularly so for active jobs, as the total proportion in each regime is: social democratic, 28.7%, continental, 23.1%, liberal, 16.9%, southern European, 8.8%, and, transitional, 6.4%. Moreover, the proportion of active jobs between each regime is significantly different ( $p < .05$ ) except for the expected non-significant difference between southern European and transitional regimes. In contrast, the pattern of differences for team-based jobs and all three low quality job types is quite different to that expected. For example, the proportion of team-



based jobs is significantly higher in transitional regimes and there are no significant differences between other regimes (see Table 5). For high-strain jobs there are no significant differences amongst social democratic, continental and liberal regimes.

A further interesting aspect of the results is that each institutional regime has distinctive features with regard to the proportion of job types. For example, social democratic regimes have high proportions of active (28.7%) and saturated jobs (24.8%) but few passive-independent jobs (7.1%), while continental regimes have high proportions of active (23.1%) and passive-independent jobs (22.5%). Southern European regimes have particularly high proportions of passive-independent jobs (29.5%) and insecure jobs (21.9%) while transitional have high proportions of high-strain jobs (29.9%) and team-based jobs (19.1%).

With regard to control variables, women are more prevalent in active, team and passive-independent jobs and men in saturated, insecure and high-strain jobs ( $p < .05$ ). Larger organisations are more likely to have active, saturated, insecure and high-strain jobs, while small organisations are more likely to have passive jobs ( $p < .05$ ). Senior managers, professionals and associate professionals are more prevalent in higher quality jobs. GDP is not significantly related to the proportion of any job type.

## **Discussion**

The results of this study make a number of important contributions to the study of jobs and job quality in Europe. The study is the first to develop a taxonomy of job types in Europe based on the five main dimensions of job quality. The taxonomy identifies six job types, each of which is a unique combination of work and employment-related factors. While this taxonomy broadens and deepens our understanding of job types in Europe, it has sufficient similarities with

previous theoretical and empirical work to indicate that it is credible and valid. For example, the broad distinction in strategic human resource management theories between high- and low-commitment jobs is reflected in the difference between active, saturated and team-based jobs on the one hand, and passive-independent, insecure and high-strain jobs on the other. Furthermore, active, passive and high-strain jobs resemble three of the four job types of the job-demands control model, although there was no evidence for the fourth, low-strain jobs, which combine high control and low demands (Taris & Kompier, 2005). The active, passive and high-strain job types found in this study also bear some resemblance to three job types found by Valeyre et al. (2009). In particular, active jobs are similar to Valeyre et al's 'discretionary learning' jobs that combine high job discretion and job complexity, passive jobs are similar to their 'simple' jobs that combine low job discretion and low job demands, and high-strain jobs are similar to their 'Taylorist' jobs that combine low job discretion with high demands and timing interdependencies. The team-based job type is somewhat similar to Valeyre et al's 'lean production' job type (e.g., both involve team work) but a crucial difference is that team-based jobs do not have high timing interdependencies. Despite this, the similarity of active, passive and high-strain job types to the job types found by Valeyre et al. (2009) and other studies increases confidence in the validity of these job types.

Differences in job types from other studies are likely to result from this study examining job quality across all five main dimensions of job quality, across all job sectors and across twenty seven European countries. For example, the differences with Valeyre et al. (2009) are probably a result of that study only focusing on work organisation and excluding agricultural and public sector jobs. Indeed, the inclusion in this study of a wider set of work and employment-related factors probably explains why we found two additional job types, saturated and insecure

jobs. The resemblance of saturated and insecure jobs to job types found in other studies increases the confidence in their validity. Saturated jobs resemble the extreme jobs described by Hewlett and Luce (2006), both of which combine high task complexity, high workload, high pay and long and non-standard working hours; while insecure jobs, which had the lowest average level of pay, resemble job types described in studies of low paid work (Gautié and Schmitt, 2009).

Evidence for the validity of the job types can also be derived from their theoretically consistent associations with employee well-being and job satisfaction. The job-demands control model indicates that employee well-being in active jobs should be highest, at a moderate level in passive jobs, and lowest in high-strain jobs (Bakker et al., 2010; Karasek & Theorell, 1990). This is the exact pattern which occurred. In addition, theories of challenge and hindrance demands predict that combinations of high challenge demands (e.g., job complexity, cognitive demands) and high hindrance demands (e.g., physical demands, timing interdependency) will lead to low well-being and high job satisfaction (Podsakoff et al., 2007). This is exactly the pattern of demand, well-being and job satisfaction that occurred in saturated jobs.

The second contribution of this study is that it provides a more nuanced understanding of the typical ways in which the quality of jobs might differ. The job type taxonomy suggests that, although there may be one type of high quality job in Europe (i.e., active jobs), there are two moderate quality job types (i.e., saturated and team-based), and three low quality job types (i.e., passive-independent, insecure and high-strain). For example, passive-independent jobs are of a low quality because they combine low job resources and low job demands with little skill development and low pay, while high-strain jobs are of a low quality because they combine low job resources and high job demands with little working time flexibility and non-standard

working hours. The taxonomy also shows that not all jobs with high pay or high job discretion or cognitively demanding tasks are of the highest quality. These characteristics are found in saturated and active jobs but saturated jobs appear to have a more negative impact on psychological and physical well-being than active jobs. This may be because employees in saturated jobs are more likely to be exposed to higher demands over longer hours and at atypical hours than employees in active jobs. The ability to differentiate between active and saturated jobs shows the importance of including a wide range of job factors when examining job quality. Another interesting feature of the job types is the centrality of work organisation to four of the six job types, i.e., active, team-based, passive and high-strain jobs. This highlights the importance of work organisation to understanding differences in job quality and employee experiences of work (Humphrey et al., 2007). But it must be recognised that the experience of a job type might vary as a result of personal or contextual circumstances. For example, studies indicate that, although temporary work has a negative impact on well-being for many employees (Virtanen et al., 2005), temporary work may also be experienced positively for some people in certain contexts (De Cuyper, Isaksson & De Witte, 2005; Kalleberg, 2000). Future qualitative and quantitative studies could therefore be conducted to examine how personal and contextual factors shape employee experiences of job types.

The third contribution of this study is that it is the first to provide an empirical test of institutional theory in relation to the total quality of a job. This contrasts with previous studies that focus on one aspect of job quality (Gallie 2009; Goergen et al., 2009; Dobbin and Boychuk, 1999; Holman et al., 2009). However, the findings are consistent with the general thrust of previous studies, that cross-national differences in job quality within Europe are partly a result of differences in institutional regimes. Moreover, the pattern of cross national differences in job

quality is in keeping with the theoretical approach taken, i.e., employment regime theory. This suggests that the key elements of an institutional regime which shape job quality are employment policies and the relative capacity of organised labour (Amable, 2003; Gallie, 2009). For example, high quality jobs appear to be more prevalent in social democratic regimes due to employment policies that seek to promote full employment and extend employment rights to all and because of organised labour's strong capacity to influence decision-making within firms and government. In contrast, in southern European and transitional economies, low quality jobs appear to be more prevalent because the state does little to promote employment rights and because organised labour has little capacity to influence employment and working conditions.

Although the theoretical approach adopted in this paper was relatively effective at explaining the overall distribution of high and low quality jobs across European institutional regimes, it contained little to indicate how job quality might be expressed within a regime. This was particularly the case with team-based and low quality jobs. Neither of the institutional perspectives used in this study (Amable, 2003; Gallie 2009) provided an indication that the most common moderate or low quality job type in social democratic regimes would be saturated jobs, in continental regimes it would be passive jobs, in liberal regimes it would be insecure and high-strain jobs, in southern European regimes it would be passive-independent, insecure and high-strain jobs, or that in transitional regimes it would be passive-independent jobs and team-based jobs.

The specific expression of job quality in a particular institutional regime might be explained by contextual, organisational or individual factors not considered in the paper. For instance, the high proportion of high-strain jobs in transitional economies might be due to recent economic liberalisation resulting in higher job demands and the legacy of autocratic styles of

management from the communist era keeping job discretion low (Goergen et al., 2009; Whitley, 1999). It may also be possible that the difference in the proportion of passive jobs between social democratic and continental regimes is a result of differences in how organised labour can use its power. In continental regimes, organised labour might focus on protecting workers in some low paid jobs from being exposed to high job demands but might not attempt to increase job resources. Organised labour in social democratic regimes, in contrast, might focus on increasing job resources and protecting low paid workers from excessive demands. The particular expression of job quality in an institutional regime might also result from the interaction between individual and institutional factors. For example, although social democratic regimes might support the development of active jobs, the actions of employees or organisations might ‘convert’ active jobs into saturated jobs by adding longer hours and greater job demands. Indeed, the work of Hewlett and Luce (2006) highlights the role that senior managers play in increasing the demands of their work and the hours worked. Future research clearly needs to consider how institutional factors interact with contextual and organisational factors, as well as employee agency, to shape the expression of high and low quality jobs within an institutional regime.

The results of this study have implications for national and European policies that aim to promote better quality jobs. In particular, job quality policies should take into account the distinctive features of job quality within institutional regimes. For example, within transitional regimes, policies could focus on reducing the proportion of high-strain jobs, perhaps by getting management and organised labour to focus on increasing job resources and through the development of training programmes that encourage managers to have more participative styles of management. In contrast, within southern European and continental regimes, policies could

focus the development of joint strategies between organised labour and management to increase the job resources and job demands in passive jobs; although this might be more difficult in southern European regimes where organised labour is weaker. Policies in liberal regimes could target insecure jobs by encouraging companies to use fewer temporary staff or by improving the terms and conditions of temporary jobs. The European Agency Workers Directive, which states that temporary workers must have the same terms and conditions and permanent workers, might help achieve this. Finally, in social democratic regimes, policies could focus on reducing the level of saturated jobs, by ensuring that employees have the ability to limit working hours and workloads.

Although this study has a number of advantages, it also has some limitations. In particular, not all dimensions of the job were covered in equal detail, e.g., engagement and collective representation, but this is a limitation of the EWCS survey. Another limitation of this survey is that the results could simply reflect cross-national differences in employee preferences, which cause employees to report working conditions that are substantially different to their actual working conditions. However, this appears unlikely, as research indicates that proximal working conditions play a more important role than distal institutional factors in shaping employee preferences (Gallie, 2007) and there is little evidence that employee preferences unduly distort the perception of objective working conditions (Parker and Wall, 1999). The results might also be a reflection of unmeasured cross-national differences. However, the likelihood of this was reduced by controlling for such factors, e.g., GDP, occupational group. Another limitation of this study is that it did not test the exact mechanisms through which national institutions shape the nature of job quality. One possible further limitation is that the paper does not examine the variation of job factors within job types to establish whether each job

type was broadly comparable across different regimes. But evidence to suggest that there is a high degree of commonality comes from the fact that the cluster analysis did not detect clusters unique to particular regimes (which is likely to have occurred if job types are non-comparable across regimes) but found clusters spread over all regimes. It also needs to be recognised that two-step cluster analysis is sensitive to the entry order of cases and the range of variables entered. Although steps were taken to mitigate some of these effects, work is needed to replicate the job types in other data sets.

In conclusion, this study suggests that there are six types of job in the European Union which vary in quality, that high quality job types are far less prevalent than low quality job types, and that the level of job quality in any one country is partly dependent upon its institutional regime. Furthermore, although institutional theories appear helpful in explaining cross-national variation in the level of job quality, they appear less well equipped to explain cross-national differences in the nature of job quality. Clearly, an important avenue for future research on institutional regimes is to explain why particular types of high and low quality jobs occur within institutional regimes.

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**Table 1: Job factors indicative of high job quality**

<b>Job Dimension</b>	<b>Job factors indicative of high job quality</b>
<i>Work organisation</i>	<p>Job resources, e.g., job discretion and social support.</p> <p>Job challenge demands, e.g., high task complexity, cognitive demands, moderate workload.</p> <p>Job hindrance demands, e.g., low physical demands, low timing interdependencies (Humphrey et al., 2007; Parker and Wall, 1999; Podsakoff et al, 2007)</p>
<i>Wages and payment system</i>	<p>High pay and pay enhancements, e.g., compensation pay, group pay (Williams et al., 2006)</p>
<i>Security and flexibility</i>	<p>Permanent contracts</p> <p>Choice of working time/working time flexibility</p> <p>Working time, e.g., standard working hours and not working long hours (Parent-Thirion et al., 2007; Wooden, 2004)</p>
<i>Skills and development</i>	<p>Skill use, training, opportunities for skill development (Holman and Wall, 2002; Parent-Thirion et al., 2007)</p>
<i>Engagement</i>	<p>Consultation and voice opportunities (Bryson et al., 2004).</p>



**Table 2: Measures of job factors**

<b>Dimension</b>	<b>Sub-dimension</b>	<b>Factor</b>	<b>Definition</b>	<b>Scale and response categories</b>	<b>Internal validity</b>
Work organisation	Job resources	Job discretion	Extent to which employee has control over method and timing of work	1-2, No-Yes	.76
		Variety	Extent to which employee completes different types of tasks	1-2, No-Yes	.89
		Social support	Level of assistance provided by work colleagues	1-5, Almost never – Almost always	.70
	Job demands	Work in a team	Person works as part of a team	1-2, No-Yes	-
		Team autonomy	Team has control over methods of work	1-2, No-Yes	.73
		Physical demands	Physical task activities, e.g., lifting, walking,	1-7, Never-All of the time	.73
		Ambient demands	Ambient conditions, e.g., noise, temperature	1-7, Never-All of the time	.71
		Workload	Pace and amount of work	1-7, Never-All of the time	.76
		Cognitive demands	Intellectual and emotional demands	1-5, Almost never – Almost always	.70
		Interaction demands	Extent to which job involves interacting with others (but not work colleagues)	1-5, Almost never – Almost always	-
Timing Interdependency Complexity	Extent to which timing of work depends on others Extent to which job involves unforeseen problems, complex tasks and learning new things	1-2, No-Yes 1-2, No-Yes	.58 .60		
Wage and payment system	Wage level	Wage level (standardised within country into 10 bands)	1-10	-	
	Fixed salary	Remuneration includes a fixed salary	1-2, No-Yes	-	
	Performance payments	Pay for productivity	1-2, No-Yes	-	
	Compensation pay	Payment for working additional hours, dangerous conditions, Sunday work	1-2, No-Yes	.80	
	Group pay	Pay from group and company performance	1-2, No-Yes	.93	
Skills and development	Training	Level of training received	1-2, No-Yes	.65	
	Development opportunities	Good career development opportunities & opportunities to learn	1-5, Strongly agree – Strongly disagree	.73	
	Skill utilization	Job duties correspond with skills	1-2, No-Yes	-	

**Table 2: Measures of Job Factors (Continued)**

<b>Dimension</b>	<b>Sub-dimension</b>	<b>Factor</b>	<b>Definition</b>	<b>Scale &amp; response categories</b>	<b>Internal validity</b>
Security and flexibility	Security	Job security	Perception that might lose job in next 6 months (reverse scored)	1-5, Strongly agree – Strongly disagree	-
		Part-time/full-time	Part-time or full-time contract	1-2, No-Yes	-
		Permanent contract	Permanent contract	1-2, No-Yes	-
		Fixed contract	Contract of fixed length	1-2, No-Yes	-
		Agency contract	Agency contract	1-2, No-Yes	-
		Apprenticeship	Apprenticeship contract	1-2, No-Yes	-
	Flexibility	No contract	No contract	1-2, No-Yes	-
		Fixed-time schedules	Working same times each day and week	1-2, No-Yes	.71
		Shift work	Shift work	1-2, No-Yes	-
		Working time set by organisation	Organisation sets working time arrangements	1-2, No-Yes	-
		Choice of working time schedules	Choice of working time arrangements	1-2, No-Yes	-
		Adapt working time	Can adapt working time arrangements	1-2, No-Yes	-
		Night work	Worked in night in last month	1-2, No-Yes	-
		Evening work	Worked in evening in last month	1-2, No-Yes	-
		Sunday work	Worked on a Sunday in last month	1-2, No-Yes	-
		Saturday work	Worked on a Saturday in last month	1-2, No-Yes	-
10 hour day	Worked 10 hour day in last month	1-2, No-Yes	-		
Engagement & representation	Engagement	Engagement	Employee has discussions with boss concerning performance and is consulted on future changes	1-2, No-Yes	.71
Well-being	Physical well-being	Physical well-being	Free from physical health problems (hearing problems, vision, skin problems, backache, headaches, stomach ache, muscular pains, respiratory difficulties).	1-2, No-Yes	.93
		Psychological well-being	Free from psychological problems (stress, overall fatigue, sleeping problems, anxiety, irritability)	1-2, No-Yes	.88
	Job satisfaction	Overall satisfaction with the job	1-4, Not at all satisfied/V. satis.	-	

**Table 3. Job types: Summary of job quality dimensions**

<b>Job quality dimensions</b>							
	<b>Work organisation</b>		<b>Skills and development</b>	<b>Wage</b>	<b>Security and flexibility</b>		<b>Engagement and representation</b>
	<i>Job resources</i>	<i>Job demands</i>			<i>Security</i>	<i>Flexibility</i>	
<b>Active</b>	High	High complexity and mental demand workload moderate	Moderate to high	High	High	High work time flexibility and standard hrs	Moderate
<b>Saturated</b>	High	High	High	High	High	High work time flexibility and high non-standard hrs	High
<b>Team-based</b>	High	Moderate to high	Moderate	Above Average	High	Low work time flexibility and high standard hrs	Moderate
<b>Passive-independent</b>	Low	Low	Low	Low	High	Low work time flexibility and high standard hrs	Low
<b>Insecure</b>	Low	Mod workload, low mental demand and complexity	Low	Low	Low	Low work time flexibility and mod standard hrs	Moderate/low
<b>High-strain</b>	Low	High workload, mental demand low	Low to moderate	Average	High	Low work time flexibility and high non-standard hrs	Low/moderate

**Table 4: Employee well-being: Differences between job types**

	Job satisfaction							Psychological well-being							Physical well-being						
	<u>M</u>	Ac	St	Tm	Ps	In	HS	<u>M</u>	Ac	St	Tm	Ps	In	HS	<u>M</u>	Ac	St	Tm	Ps	In	HS
Active	3.24	-	H	H	H	H	H	1.86	-	H	H	H	H	H	1.83	-	H	H	H	ns	H
Saturated	3.18	L	-	ns	ns	H	H	1.80	L	-	ns	ns	H	H	1.75	L	-	L	L	L	H
Team-based	3.11	L	ns	-	H	H	H	1.80	L	ns	-	ns	H	H	1.77	L	H	-	L	L	H
Passive	3.01	L	ns	L	-	H	H	1.82	L	ns	ns	-	ns	H	1.81	L	H	H	-	ns	H
Insecure	2.94	L	L	L	L	-	H	1.79	L	L	L	ns	-	H	1.79	ns	H	H	ns	-	H
High-strain	2.77	L	L	L	L	L	-	1.73	L	L	L	L	L	-	1.69	L	L	L	L	L	-
Total	3.03							1.80							1.77						

Note: Read across rows. H indicates that the job type in the row is significantly higher than the job type in the column at  $p < .05$ . L indicates that the job type in the row is significantly lower than the job type in the column. NS indicates no significant difference. N = 16047.

**Table 5: Differences in job types between institutional regimes**

<b>Higher quality job types (active, saturated and team-based)</b>																		
	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>												
Soc Dem	66.1	-	H	H	H	H												
Cont	52.1	L	-	H	H	ns												
Liberal	47.8	L	L	-	H	ns												
Sth Eu	30.2	L	L	L	-	L												
Trans	33.5	L	ns	ns	H	-												
<b>Individual job types</b>																		
<i>High quality jobs</i>																		
<i>Moderate quality jobs</i>																		
<b>Active</b>							<b>Saturated</b>						<b>Team-based</b>					
	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>
Soc Dem	28.7	-	H	H	H	H	24.8	-	H	H	H	H	12.4	-	ns	ns	ns	L
Cont	23.1	L	-	H	H	H	14.2	L	-	ns	H	H	14.8	ns	-	ns	ns	L
Liberal	16.9	L	L	-	H	H	16.2	L	ns	-	H	ns	14.7	ns	ns	-	ns	L
Sth Eu	8.8	L	L	L	-	ns	8.7	L	L	L	-	H	12.8	ns	ns	ns	-	L
Trans	6.4	L	L	L	ns	-	8.0	L	L	ns	L	-	19.1	H	H	H	H	-
<i>Low quality jobs</i>																		
<b>Passive-independent</b>							<b>Insecure</b>						<b>High-strain</b>					
	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>	<b>%</b>	<b>SD</b>	<b>C</b>	<b>Lib</b>	<b>Sth</b>	<b>Tr</b>
SD	7.1	-	L	L	L	L	10.8	-	ns	L	L	ns	16.0	-	ns	ns	ns	L
Cont	22.5	H	-	H	ns	ns	10.7	ns	-	L	L	ns	14.7	ns	-	L	L	L
Liberal	12.6	H	L	-	L	ns	21.4	H	H	-	ns	H	18.2	ns	H	-	L	L
Sth Eu	29.5	H	ns	H	-	H	21.9	H	H	ns	-	H	18.4	ns	H	H	-	L
Trans	20.4	H	ns	ns	L	-	16.2	ns	ns	L	L	-	29.9	H	H	H	H	-

Note: Soc Dem = Social Democratic; Cont = Continental; Sth Eu = Southern European; Trans = Transitional.

Read across rows. H indicates that the job type in the row is significantly ( $p < .05$ ) higher than the job type in the column. L indicates that the job type in the row is significantly lower than the job type in the column. NS indicates no significant difference. N = 16047

**Table 6: Job type by institutional regime and country**

Regime	Country	Active	Saturated	Team-based	Passive	Insecure	High-strain
<b>Social democratic</b>		<b>28.7</b>	<b>24.8</b>	<b>12.4</b>	<b>7.2</b>	<b>10.8</b>	<b>16.0</b>
	Denmark	26.7	22.8	13.9	11.0	13.9	11.7
	Finland	22.0	22.9	15.1	7.3	11.2	21.5
	Sweden	33.3	27.0	10.5	4.7	8.4	16.1
<b>Continental</b>		<b>23.1</b>	<b>14.2</b>	<b>14.8</b>	<b>22.5</b>	<b>10.7</b>	<b>14.7</b>
	Austria	23.6	13.5	17.3	17.8	12.0	15.9
	Belgium	27.1	16.7	15.7	17.3	7.5	15.7
	France	22.5	9.8	11.3	29.9	11.0	15.5
	Germany	20.9	14.5	16.8	23.3	9.9	14.5
	Luxembourg	26.7	13.3	20.0	20.0	6.7	13.3
	Netherlands	31.5	21.8	13.2	6.1	14.5	12.9
<b>Liberal</b>		<b>16.9</b>	<b>16.2</b>	<b>14.7</b>	<b>12.6</b>	<b>21.4</b>	<b>18.2</b>
	Ireland	14.3	14.3	16.3	11.6	28.6	15.0
	United Kingdom	17.2	16.4	14.6	12.6	20.7	18.4
<b>Southern European</b>		<b>8.8</b>	<b>8.7</b>	<b>12.8</b>	<b>29.5</b>	<b>21.9</b>	<b>18.4</b>
	Cyprus	3.3	0.0	10.0	20.0	46.7	20.0
	Spain	7.0	8.2	13.7	28.8	25.6	16.7
	Greece	3.1	6.1	15.4	19.8	33.1	22.5
	Italy	12.9	11.3	10.2	29.9	16.2	19.6
	Malta	7.7	7.7	15.4	7.7	38.5	23.1
	Portugal	5.2	3.9	16.8	39.1	18.6	16.3
<b>Transitional</b>		<b>6.4</b>	<b>8.0</b>	<b>19.1</b>	<b>20.4</b>	<b>16.2</b>	<b>29.9</b>
	Bulgaria	1.3	4.5	22.0	21.1	18.8	32.3
	Czech Republic	6.8	14.7	16.5	18.7	12.9	30.2
	Estonia	8.3	18.8	27.1	12.5	8.3	25.0
	Hungary	6.1	3.8	16.3	29.9	16.3	27.6
	Lithuania	6.7	8.9	27.8	23.3	10.0	23.3
	Latvia	7.1	8.2	32.9	15.3	8.2	28.2
	Poland	7.4	8.3	17.1	18.0	23.4	25.8
	Romania	4.2	4.9	21.0	22.9	8.1	38.9
	Slovenia	10.8	13.3	22.9	10.8	13.3	28.9
	Slovakia	9.3	11.0	15.7	19.2	9.3	35.5
	% of each job type	<b>16.4</b>	<b>12.7</b>	<b>15.0</b>	<b>21.4</b>	<b>15.6</b>	<b>18.9</b>

Note: N = 16047

**[NOTE TO PRODUCTION:**

**Please publish the Appendix tables online-only as supplementary data – many thanks]**

**APPENDIX: SUPPLEMENTARY INFORMATION**

**Table 1A. Items used in measures**

<b>Measure</b>	<b>EWCS items</b>	<b>Measure</b>	<b>EWCS items</b>
<b>Work organisation</b>		<b>Security &amp; flexibility</b>	
Job discretion	q24aR, q24bR, q24cR	Fixed-time schedules	q16a_aR, q16a_bR, q16a_cR
Variety	q26aR, q26a_1R	Shift work	q16a_dR
Social support	q25aR, q25bR, q25cR	Working time set by organisation	17a response 1
Work in a team	q26bR	Choice of working time schedules	17a response 2
Team autonomy	q26b_1aR, q26b_1bR	Adapt working time	17a response 3
Physical demands	q11aR, q11cR, q11dR, q11eR	Night work	q14a
Ambient demands	q10bR, q10cR, q10dR	Evening work	q14b
Workload	q20b_aR, q20b_bR	Sunday work	q14c
Cognitive demands	q251R, q25mR	Saturday work	q14d
Interaction demands	q11j	10 hour day	q14e
Timing interdependency	q21aR, q21dR, q21eR	<b>Skill and development</b>	
Complexity	q23cR, q23eR, q23fR	Training	q28a_1R, q28cR, q28dR
<b>Wage &amp; payment system</b>		Development opportunities	q37c, q37e
Wage level	ef5	Skill utilization	q27 response b
Fixed salary	ef6aR	<b>Engagement &amp; representation</b>	
Performance payments	ef6bR	Engagement	q30aR, q30bR, q30cR
Compensation pay	ef6cR, ef6dR, ef6eR	<b>Well-being</b>	
Group pay	ef6gR, ef6hR, ef6iR	Physical well-being	q33a_a, q33a_b, q33a_c, q33a_d, q33a_e, q33a_f, q33a_g, q33a_h
<b>Security &amp; flexibility</b>		Psychological well-being	q33a_k, q33a_l, q33a_m, q33a_o, q33a_p
Job security	Q37a	Job satisfaction	Q36R
Part-time/full-time	q15a		
Permanent contract	q3b		
Fixed contract	q3b		
Agency contract	q3b		
Apprenticeship	q3b		
No contract	q3b		

Note: R means the item was reverse coded.

**Table 2A. Two-step cluster analysis**

<b>Number of clusters</b>	<b>Schwarz's Bayesian criterion (BIC)</b>	<b>BIC change(a)</b>	<b>Ratio of BIC changes(b)</b>	<b>Ratio of distance measures(c)</b>
1	577363.909			
2	544353.507	-33010.402	1.000	1.258
3	518216.413	-26137.094	.792	1.328
4	498675.985	-19540.428	.592	1.677
5	487249.670	-11426.315	.346	1.028
6	476152.224	-11097.445	.336	1.894
7	470553.511	-5598.714	.170	1.218
8	466057.077	-4496.434	.136	1.008
9	461600.278	-4456.799	.135	1.391
10	458552.104	-3048.174	.092	1.008

Note: N = 16047; a. The changes are from the previous number of clusters in the table. b. The ratios of changes are relative to the change for the two cluster solution. c. The ratios of distance measures are based on the current number of clusters against the previous number of clusters.



**Table 3A: Means of job quality measures by job types**

		Active job	Saturated job	Team- based	Passive job	Insecure	High- strain	Mean	Scale
	<b>Measure</b>								
Job resources	<b>Job discretion</b>	<b>1.84</b>	<b>1.74</b>	<b>1.69</b>	<b>1.53</b>	<b>1.54</b>	<b>1.50</b>	<b>1.63</b>	1-2
	Task order	83.9	73.9	67.2	48.4	48.6	44.5	59.6	% Yes
	Methods	83.3	77.4	71.0	53.2	54.8	51.7	63.9	% Yes
	<b>Variety</b>	<b>1.41</b>	<b>1.60</b>	<b>1.61</b>	<b>1.18</b>	<b>1.36</b>	<b>1.53</b>	<b>1.43</b>	1-2
	Rotating tasks	46.1	64.9	68.5	20.7	42.3	60.5	48.6	% Yes
	<b>Social support</b>	<b>3.63</b>	<b>3.76</b>	<b>3.75</b>	<b>3.06</b>	<b>3.34</b>	<b>3.42</b>	<b>3.46</b>	1-5
	From colleagues	74.9	76.6	81.6	57.9	70.1	74.8	71.5	% 4-5
	<b>Work in a team</b>	<b>57.9</b>	<b>76.8</b>	<b>100</b>	<b>23.3</b>	<b>53.2</b>	<b>68.1</b>	<b>60.4</b>	%
	<b>Team autonomy</b>	<b>1.26</b>	<b>1.37</b>	<b>1.50</b>	<b>1.00</b>	<b>1.23</b>	<b>1.23</b>	<b>1.24</b>	1-2
	Decide on distribution of tasks	34.4	46.6	65.5	0	29.5	30.7	31.8	% Yes
Job demands	<b>Physical demands</b>	<b>2.59</b>	<b>3.21</b>	<b>3.29</b>	<b>3.33</b>	<b>3.53</b>	<b>3.85</b>	<b>3.32</b>	1-7
	Tiring position	14.1	27.5	28.9	30.0	33.1	38.2	29.5	%4-7
	Standing walking	36.8	57.9	61.7	60.3	64.6	75.1	59.9	%4-7
	<b>Ambient demands</b>	<b>1.62</b>	<b>2.03</b>	<b>2.05</b>	<b>2.00</b>	<b>2.03</b>	<b>2.56</b>	<b>2.06</b>	1-7
	<b>Workload</b>	<b>3.53</b>	<b>4.00</b>	<b>3.79</b>	<b>3.60</b>	<b>3.69</b>	<b>4.01</b>	<b>3.76</b>	1-7
	Working at high speed	36.6	58.3	50.0	42.5	46.7	57.7	48.2	%4-7
	<b>Interaction demands</b>	<b>3.99</b>	<b>4.60</b>	<b>4.08</b>	<b>3.77</b>	<b>3.86</b>	<b>3.77</b>	<b>3.97</b>	1-7
	Interact non-work colleagues	51.6	63.0	53.0	47.9	47.8	47.3	51.0	%4-7
	<b>Timing interdependency</b>	<b>1.32</b>	<b>1.39</b>	<b>1.43</b>	<b>1.35</b>	<b>1.35</b>	<b>1.44</b>	<b>1.38</b>	1-2
	Dependent upon colleagues	40.9	53.6	57.1	34.7	44.0	55.0	46.8	% Yes
	Dependent upon machine	11.4	19.7	17.6	20.2	17.3	28.8	19.5	% Yes
	<b>Cognitive demands</b>	<b>3.31</b>	<b>3.52</b>	<b>3.43</b>	<b>2.80</b>	<b>2.64</b>	<b>3.03</b>	<b>3.09</b>	1-5
	Intellectual demands	64.2	59.3	59.4	39.4	35.6	43.7	49.0	%4-5
<b>Complexity</b>	<b>1.82</b>	<b>1.82</b>	<b>1.79</b>	<b>1.59</b>	<b>1.60</b>	<b>1.68</b>	<b>1.71</b>	1-2	
Unforeseen problems	89.0	90.5	85.9	71.2	71.0	79.1	80.2	% Yes	
Complex tasks	74.1	74.5	70.6	48.8	45.2	59.2	60.9	% Yes	
Learning new things	82.0	82.0	81.3	58.2	63.2	66.4	70.9	% Yes	

Note: N = 16047; % 4-5 is percentage responding either Often or Always; %4-7 is percentage responding 'Half the time' or greater; All scores are weighted by selection probability, non-response and country size, as recommended by Parent-Thirion et al., 2007

**Table 3A Continued: Means of job quality measures by job types**

		Active job	Saturated job	Team- based	Passive job	Insecure	High- strain	Mean	Scale
<b>Measure</b>									
Skills and development	<b>Training</b>	<b>1.34</b>	<b>1.39</b>	<b>1.31</b>	<b>1.14</b>	<b>1.20</b>	<b>1.29</b>	<b>1.27</b>	1-2
	Any training in last year	58.2	63.7	53.0	28.3	39.0	51.6	47.3	% Yes
	<b>Development opportunities</b>	<b>3.34</b>	<b>3.39</b>	<b>3.15</b>	<b>2.75</b>	<b>2.83</b>	<b>2.76</b>	<b>3.01</b>	1-5
	Career advancement opportunities	38.7	46.4	34.8	24.6	27.5	25.3	31.8	% 4-5
	Opportunities to learn	66.4	66.9	59.5	43.2	49.2	42.9	53.4	% 4-5
	<b>Skill utilization/Correspondence</b>	<b>52.6</b>	<b>49.0</b>	<b>56.7</b>	<b>52.8</b>	<b>49.4</b>	<b>51.6</b>	<b>52.1</b>	% Yes
Security	<b>Job security</b>	<b>4.22</b>	<b>4.06</b>	<b>4.06</b>	<b>4.07</b>	<b>3.48</b>	<b>3.87</b>	<b>3.96</b>	1-5
	% Disagreeing that might lose job	83.1	74.3	75.3	74.4	56.3	67.7	73.3	% 4&5
	<b>Full-time</b>	<b>81.3</b>	<b>85.1</b>	<b>88.6</b>	<b>85.4</b>	<b>69.1</b>	<b>89.5</b>	<b>83.4</b>	% Yes
	<b>Permanent contract</b>	<b>99.0</b>	<b>83.3</b>	<b>99.9</b>	<b>100</b>	<b>0.00</b>	<b>82.2</b>	<b>78.7</b>	% Yes
Flexibility	<b>Fixed-time schedules</b>	<b>1.35</b>	<b>1.15</b>	<b>1.70</b>	<b>1.77</b>	<b>1.60</b>	<b>1.32</b>	<b>1.50</b>	1-2
	<b>Working time set by organisation</b>	<b>0.0</b>	<b>1.3</b>	<b>100</b>	<b>98.2</b>	<b>71.9</b>	<b>99.5</b>	<b>66.1</b>	% Yes
	<b>Shift-work</b>	<b>2.9</b>	<b>30.0</b>	<b>7.1</b>	<b>6.0</b>	<b>10.3</b>	<b>58.5</b>	<b>19.7</b>	% Yes
	<b>Night work</b>	<b>0.6</b>	<b>49.7</b>	<b>2.6</b>	<b>1.7</b>	<b>6.5</b>	<b>65.4</b>	<b>20.6</b>	% Yes
	<b>Evening work</b>	<b>24.4</b>	<b>90.0</b>	<b>22.1</b>	<b>14.7</b>	<b>28.1</b>	<b>90.5</b>	<b>43.4</b>	% Yes
	<b>Sunday work</b>	<b>1.3</b>	<b>68.3</b>	<b>4.0</b>	<b>3.4</b>	<b>10.8</b>	<b>72.8</b>	<b>25.7</b>	% Yes
	<b>Saturday work</b>	<b>19.0</b>	<b>86.5</b>	<b>26.2</b>	<b>28.9</b>	<b>41.3</b>	<b>90.2</b>	<b>47.7</b>	% Yes
	<b>10 hour day</b>	<b>32.2</b>	<b>68.7</b>	<b>21.4</b>	<b>13.2</b>	<b>19.9</b>	<b>56.9</b>	<b>33.9</b>	% Yes
Wage & payment system	<b>Wage level</b>	<b>6.62</b>	<b>6.73</b>	<b>6.03</b>	<b>5.54</b>	<b>3.87</b>	<b>5.67</b>	<b>5.70</b>	1-10
	<b>Compensation pay</b>	<b>1.11</b>	<b>1.30</b>	<b>1.13</b>	<b>1.10</b>	<b>1.12</b>	<b>1.32</b>	<b>1.17</b>	1-2
	At least one type of compensation pay	27.3	55.0	31.9	26.5	29.0	60.1	37.8	% Yes
	<b>Group pay</b>	<b>1.10</b>	<b>1.09</b>	<b>1.06</b>	<b>1.02</b>	<b>1.02</b>	<b>1.04</b>	<b>1.05</b>	1-2
	At least one type of group pay	19.4	18.9	16.7	4.2	5.6	11.3	11.2	% Yes
Engagement	<b>Engagement and consultation</b>	<b>1.56</b>	<b>1.65</b>	<b>1.55</b>	<b>1.35</b>	<b>1.49</b>	<b>1.43</b>	<b>1.49</b>	1-2
	Consulted about changes	58.0	69.7	53.3	34.2	39.4	46.1	48.6	% Yes

**Table 4A: Percentages of job types by International Standard Classification of Occupations (ISCO)**

<i>ISCO category</i>										
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>0</b>
<i>Job type</i>	<b>Legislators, senior officials &amp; managers</b>	<b>Professionals</b>	<b>Technicians &amp; associate professionals</b>	<b>Clerks</b>	<b>Service workers, shop &amp; market sales workers</b>	<b>Skilled agriculture &amp; fishery workers</b>	<b>Craft &amp; related trades workers</b>	<b>Plant &amp; machine operators</b>	<b>Elementary jobs</b>	<b>Armed forces</b>
<b>Active</b>	25.4	17.9	21.9	23.9	11.2	4.1	8.9	4.9	7.6	3.4
<b>Saturated</b>	26.1	16.9	16.1	8.0	13.2	18.7	5.6	8.7	6.9	12.1
<b>Team</b>	18.7	25.0	19.1	16.8	11.1	16.3	22.2	13.4	12.1	8.6
<b>Passive</b>	9.0	16.1	14.1	24.1	16.4	9.8	21.0	20.8	25.2	5.2
<b>Insecure</b>	10.9	11.4	11.9	17.4	17.1	30.9	17.7	13.4	25.9	9.5
<b>High-strain</b>	9.8	12.7	16.9	9.9	30.9	20.3	24.6	38.6	22.4	61.2

Note: N = 15979

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