# University of Strathclyde

# **Department of Work, Employment & Organisation**

# Mental Health Among Young Workers: The Impact of Job Quality

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#### ABSTRACT

Youth employment is becoming increasingly more difficult and diversified. Today many young adults (18-34) live under precarious employment conditions (e.g. temporary / part-time), have problems in finding stable employment, are underemployed (e.g. not well-matched to their jobs in terms of skills and / or working hours), and many are stuck in low quality jobs with few opportunities to move up the employment ladder. These difficult working life experiences create a risk that the way young adults experience work in contemporary labour markets may undermine their basic psychological needs for control, security and autonomy. To date, the information surrounding issues of job quality and mental health among this particularly disadvantaged and vulnerable population has been scarce, and often limited to earnings and employment status as an indication of how well young individuals fare in paid work.

The overarching aim of this study is to examine job quality, its determinants and mental health outcomes among young workers in contemporary labour markets. To address this aim, this study uses a secondary research design. Three large-scale social surveys are used to examine research objectives and hypotheses: (1) the European Working Conditions Survey (2015); (2) the European Social Survey (2010); and (3) the UK Labour Force Survey (2017). The focus of this study is on the UK context, which has been shown to have high rates of youth underemployment and a large proportion of young people employed in precarious forms of employment. For hypotheses related to the role of institutional context in affecting job quality and mental health, three other European countries (Denmark, Germany and Spain) are included. Young workers aged 18-34 are considered due to increasingly longer transitions to employment and adulthood in contemporary labour markets which often extend into early 30s.

The findings point to the salience of job quality in the youth context and the importance of a holistic approach, which considers intrinsic aspects of work and contextual factors. Examining the outcomes of job quality in terms of mental health further emphasises the importance of job quality for young people and indicate that, in addition to the need for work to be good in terms of more universal aspects (such as high social support), the impact of job quality on mental health depends on the extent to which jobs are in line with young workers' abilities and needs. In relation to this, perceived employability is found to be an important personal resource in the youth context, which may help to alleviate the negative effects of being in undesirable

employment. This study has important policy implications and makes theoretical contributions in relation to our understanding of job quality in the youth context, its determinants and mental health outcomes.

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### Chapter 1: Introduction

#### 1.1 Introduction

It is a common perception that labour markets in the UK and other developed countries have changed in a profound way during the past decades. Key changes, among many other factors, include a shift to service-oriented work, expansion of Higher Education (HE), labour market deregulation and the rise of precarious or so-called 'non-standard' working arrangements (e.g. Eurofound, 2014; Gallie, Felstead, Green, & Inanc, 2017; Findlay, Warhurst, Keep, & Lloyd, 2017; Goos & Manning, 2007; Sweet & Meiksins, 2013). The evidence suggests that these changes, which were accompanied by major alterations to the nature of work and how careers are developed, influenced job quality and contributed to an increase in psychological job demands, as well as to more insecure and individualised working lives (e.g. Burgard & Lin, 2013; Butterworth, Leach, McManus, & Stansfeld, 2013; Cottini & Lucifora, 2013; Kalleberg, 2012; Niedhammer, Lesuffleur, Algava, & Chastang, 2015; Robone, Jones, & Rice, 2011).

Large-scale European surveys and recent academic literature suggest that young workers may be particularly disadvantaged in contemporary labour markets and today they experience greater uncertainty and instability in paid employment, when compared to other age groups and previous generations of young adults (e.g. Bell & Blanchflower, 2011; Deal, Altman, & Rogelberg, 2010; Fenton & Dermott, 2006; Okay-Somerville & Scholarios, 2013; O'Reilly et al., 2015; Scurry & Blenkinsopp, 2011; Sweet & Meiksins, 2013). Yet, little is known about their job quality, factors affecting their labour market experiences and how the current state of employment and working conditions may impact on their mental health. While there is no agreed definition of a 'young adult', due to increasingly long transitions to stable employment and financial independency in contemporary labour markets, this study considers the period of a young adulthood to span the ages of 18 to 34 (Arnett, 2014; Blatterer, 2010). The overarching aim of this study is to contribute to our understanding of job quality, its determinants and mental health outcomes among young workers (18-34) in contemporary labour markets. Job quality refers to a multidimensional construct and include pay, intrinsic quality of work, employment quality, health and safety and work-life balance (De Bustillo, Fernandez-Macias, Esteve, & Anton, 2011). This thesis makes three primary contributions to knowledge. First, it contributes to better conceptual understanding of job quality among young adults by bringing different strands of past literature together (e.g. studies on underemployment, marginal employment, generational research and the career literature) and highlighting the importance of the intrinsic aspects of work. By doing so, this study provides the first comprehensive account on how young workers fare in paid work in the context of contemporary labour markets. Another contribution of this thesis is simultaneous examination of individual and contextual factors (in terms of job-related characteristics and wider institutional context) to examine their relative effects on job quality and mental health among young people. Third, to date there is a lack of agreement among researchers in relation to outcomes of job quality in the youth context and this thesis contributes to an improved understanding of the relationship between job quality and mental health. In relation to this, it uncovers the key predictors of mental health in the youth context and some of the potential mechanisms which may help to explain the association between job quality and psychological well-being. In general, this study responds to the call for attention to be given to current generation of young people and their work experience (Deal et al., 2010; Scurry & Blenkinsopp, 2011).

The remainder of this opening chapter presents the rationale for examining job quality in the youth context, arguing that the evolution of the labour markets in the past decades may have put the job quality and mental health of young workers at greater risk. The chapter also highlights the advantages of going beyond pay and employment status when defining job quality in the youth context, as well as the importance of accounting for the role of individual and contextual factors in job quality and mental health studies. The chapter ends with the summary of research objectives and the overview of the structure of this thesis.

#### 1.2 Importance of job quality in the young adult context

During the last two decades, job quality has attracted a large amount of public policy attention. Job quality is a multidimensional construct and refers to job-level characteristics of work that have an impact on employee well-being and includes pay, intrinsic quality of work, employment quality, health and safety and work-life balance (De Bustillo et al., 2011). One of the main aims of the Lisbon Agreement 2000 was the creation of 'more and better jobs' in Europe. Improving the quality of working life is also one of the main aims of the Europe 2020 strategy, which is focused on promoting the quality of work and lifelong learning (Eurofound, 2012).

The importance of job quality has also been acknowledged in the academic literature. To date, researchers have identified many costs and benefits of job quality. In particular, it has been shown that low quality of working life is associated with decreased individual well-being (Virtanen, Kivimaki, Joensuu, Virtanen, & Elovainio, 2005), lower productivity in the workplace and sickness absence (Swider & Zimmerman, 2010; Maslach, Schaufeli, & Leiter, 2001) and increased public expenditure to treat work-related health problems (Burchell, Sehnbruch, Piasna, & Agloni, 2013; Cottini & Lucifora, 2013). These negative outcomes may occur due to low pay, poor intrinsic rewards, high work intensity and inadequate contractual conditions (Stansfeld & Candy, 2006). There is also a growing body of literature which suggests that job quality is a possible route to improved individual well-being (Diener & Seligman, 2004) and better organisational outcomes, such as increased productivity and lower absenteeism (Lowe & Schellenberg, 2001; Royuela & Surinach, 2013). Good quality jobs decrease the burden of psychological illness, encourage social inclusion and strengthen societies (Burchell et al., 2013; Cottini & Lucifora, 2013; Knox, Warhurst, & Pocock, 2011). This evidence shows that the importance of job quality extends beyond individual well-being and maximising high quality of working life is equally important for organisations and for society as a whole. Given the increasing academic and policy focus on job quality, it is a salient time to study this topic.

Studies suggest that, as a result of changes in labour markets and the nature of work in the past decades, young people may be particularly disadvantaged in terms of job quality (O'Reilly et al., 2015; Scarpetta, Sonnet, & Manfredi, 2010; Scurry & Blenkinsopp, 2011; Sutherland,

2013). In comparison to other age groups, they are over-represented among employees in nonstandard employment and often find themselves in the situation of underemployment (e.g. Chung et al., 2012; Lundahl, 2011; Pirani & Salvini, 2015; Sutherland, 2013), which is considered 'lower quality employment' (Feldman, 1996). An additional pressure is that today young workers are expected to find their own ways to skills development and career progression, with limited organisational guidance and support, and employers increasingly expect young people to be 'job ready' (O'Reilly et al., 2015). These difficult labour market experiences are accompanied by increasingly unstable career trajectories, shorter job tenures and greater job and organisational mobility, which can be observed among current generations of young people (e.g. Lewis & Heyes, 2017; Lyons, Schweitzer, Ng, Lyons, & Schweitzer, 2012; Sweet & Meiksins, 2013).

Despite this evidence, studies of job quality with a specific reference to young workers are relatively rare and the issue of job quality also seems to be overlooked in the policy context. To date the approach of researchers and policymakers to youth employment has mainly addressed youth unemployment and labour market integration of young people. In particular, previous research is often limited to earnings and employment status as an indication of how well young workers are doing (e.g. De Grip & Wolbers, 2006; European Youth Forum, 2014; Lundahl, 2011; O'Reilly et al., 2015). As a result, little is known about the working lives of young adults who are in paid work.

Similarly, skills policies in the UK have been driven by human capital theory (Becker, 1964), which proposes that investments in the learning capacities of individuals (such as education) will create subsequent productive outputs for individuals, organisations and wider economy. As a result, they are designed to either tackle youth unemployment or increase the supply of highly qualified individuals, with little government interest in job quality (Sutherland, 2013; Warhurst, Lloyd, & Dutton, 2008). While there are many negative consequences of youth unemployment (e.g. De Lange, Gesthuizen, & Wolbers, 2014; Gontkovicova, Mihalcova, & Pruzinsky, 2015; Madsen, Molina, Moller, & Lozano, 2013; Refrigeri & Aleandri, 2013; Wolbers, 2007), recent longitudinal study among working-age populations showed that transition from unemployment to a poor-quality work is worse for health and well-being than remaining unemployed (Chandola & Zhang, 2018). This evidence shows that beyond earnings and employment status it is important to examine and monitor job quality among young people who are in paid employment. This stage of life is crucial in establishing occupational and career

patterns that will extend throughout the working life (Sadava, O'Connor, & McCreary, 2000), but the population of young workers has not been given much attention in the job quality research. This thesis contributes to the previous literature on job quality by examining a population of the labour market that is characterised by growing underemployment, job insecurity and increasing engagement in precarious forms of employment (Chung et al., 2012; O'Reilly et al., 2015).

In addition to the lack of understanding of job quality among young people in contemporary labour markets, it is also not clear to what extent young workers have been affected by the current state of labour market conditions and the changing nature of work. The increased involvement in lower quality work is only important, if it creates important outcomes for individuals and organisations (De Bustillo et al., 2011b). However, to date these outcomes are not clear. Some researchers argue that lower quality employment (such as underemployment and non-standard employment) is a 'stepping stone' for young workers, an 'avenue' to a good quality work, and therefore does not impact young people negatively on the long-term (Ferrie, 2001; Virtanen et al., 2005). In contrast, recent literature claims that low quality employment is a career trap, with little or no possibilities for career progression and this may create negative consequences for individual workers and employers (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010; Scherer, 2004). This thesis argues that job quality is important from a psychological health perspective and investigates mental health as an important outcome of job quality in the youth context. The rationale for focusing on mental health is provided next.

#### 1.3 Importance of job quality for mental health outcomes

Given that individuals spend a large proportion of their time at work, the workplace may provide conditions which improve psychological well-being (Cottini & Lucifora, 2013). Mental health is defined in terms of affective well-being (positive and negative affect) and common psychological problems, and includes both positive and negative dimensions (Warr, 2013). Work is argued to be an important domain in an individual's life for creating positive psychological conditions (Friedman & Greenhaus, 2000). For instance, being in paid employment not only offers individuals financial stability, it also provides people with social status, a sense of identity, and a wide range of possibilities for personal development (Green, 2006).

However, work is not always good for mental health. Jobs which are of poor quality may be a source of negative experiences and risks (e.g. Butterworth et al., 2011; Marchand & Blanc, 2010; Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010). Recent evidence suggests that being in a poor quality job is more detrimental to mental health than unemployment (Butterworth, Leach, McManus, & Stansfeld, 2013) and earlier studies showed that shifts from adequate employment to inadequate employment characterised by a low match between one's abilities and needs contributes to lower mental health among young workers (Dooley, Prause, & Ham-Rowbottom, 2000). Studies among older workers reveal that job quality plays an important role in determining whether work contributes to positive well-being or is a cause of negative experiences and poor well-being (e.g. Burgard & Lin, 2013; Cottini & Lucifora, 2013; Stansfeld & Candy, 2006; Virtanen et al., 2005).

The evidence suggests that changes in the labour markets and the nature of work during the last few decades have not only affected job quality but could have also put the mental health of young workers at greater risk. In particular, the shift to service-oriented work in the past decades has changed the nature of job demands. Contemporary workplaces are characterised by fewer physical risks and greater psychosocial stressors, which are expected to affect young workers' mental health status (Cappelli et al., 1997; Cottini & Lucifora, 2013). What is more, the rise of non-standard working arrangements (such as temporary work and / or part-time work) and the decline of 'standard' full-time permanent jobs have recently been viewed as determinants of poor psychological well-being among prime-aged workers (Robone, Jones, & Rice, 2011). Non-standard jobs are often paid less, contribute to greater job insecurity and overall are associated with poorer job quality on multiple dimensions (Virtanen et al., 2005). Perceived job insecurity has been associated with a variety of negative outcomes, such as poorer mental and physical health (Selenko & Batinic, 2013).

This insecurity in employment is combined with increasing individual responsibility in securing jobs and developing careers (O'Reilly et al., 2015). The increasing trend toward the individualisation of risk in contemporary labour markets means that today each worker is expected to manage their working life on individual basis while taking responsibility for their choices, whereas for previous generations family and government institutions were important

in providing access to and mobility within the labour market (Beck, 1992; Furlong & Cartmel, 2006; Giddens, 1991). As a result, today it is more common for young people to feel that they are fully responsible for their own destinies, while any failures are often viewed as individual weaknesses (e.g. a lack of skills and / or qualifications), rather than a consequence of factors which are outside of one's control (e.g. general declines in demand for labour) (Sweet & Meiksins, 2013). This contributes to a heightened sense of risk and uncertainty among young people in contemporary labour markets (Chung et al., 2012; Lyons et al., 2012; Predelli & Cebulla, 2011). In general, the review of the literature on youth employment issues suggest that the way young adults experience work in today's labour markets may undermine their basic psychological needs for control, security and autonomy (Ryan & Deci, 2000; Sheldon, Elliot, Kim, & Kasser, 2001). However, to date little research has investigated the outcomes of job quality in the youth context. The lack of consensus in relation to the consequences of lower quality employment for young people provided a rationale for this thesis to investigate mental health as an important outcome of job quality in contemporary labour markets.

Young adults have an important role to play in both the current and future workforce. Due to an aging population, they can expect to have longer working lives than previous generations and therefore need good work ability over many years (Ilmarinen, 2009). While general health is not a major concern during the third decade of life, young adults are particularly vulnerable to mental health issues (Karmakar & Breslin, 2008). For instance, several epidemiological studies showed there are high rates of major depressive disorders among young people (Ohayon, 2007; Kessler et al., 2003) and the health trajectories of young people shape their health in later years (Hertzman & Power, 2006). This highlights the importance of mental health in the youth context.

Finally, from an organisational perspective, mental health is also essential to employee retention and high performance on the job (Mark & Smith, 2008; Wright & Bonnet, 2007). Jobs which are detrimental to psychological well-being are likely to have a negative impact on work performance and absence (Cooper & Deve, 2008) and may lead to occupational burnout (Eby et al., 2005). Workers who report better mental health are more productive and less subject to sickness leave, when compared to those with lower psychological well-being (Cottini & Lucifora, 2013; Wright, 2010). This evidence indicates the importance of maintaining good mental health, and the importance of this in the workplace.

1.4 Factors affecting job quality and mental health: the importance of individual and contextual factors

The review of the literature on job quality and mental health shows that there is a limited understanding of the factors affecting youth labour market trajectories and their mental health. Existing literature and policy have emphasised the role of individual factors (such as education and skills) and personal agency in developing careers and securing high quality jobs (O'Reilly et al., 2015; Tomlinson, 2012). Personal agency refers to "one's capability to originate and direct actions for given purposes" (Zimmerman & Cleary, 2006, p. 45). Past research showed that employability (which is mainly expressed in an individual's skills, experience and career self-management) is considered an important feature, which allows young people to stay attractive in contemporary labour markets and adjust to changing employer demands and labour market insecurities (Clarke, 2008; Tomlinson, 2012; Wilton, 2011). Some recent studies also suggest that one's employability perceptions are likely to be accompanied by a sense of control over one's career and this feeling, in turn, is related to better psychological well-being (Fugate, Kinicki, & Ashforth, 2004), suggesting that perceived employability is not only important in affecting the extent to which young individuals can secure high quality jobs but may also directly affect their mental health status.

The role of individual differences was also highlighted in studies on returns to education, which show that graduates are in a better labour market position in terms of earnings and the probability of being in employment, when compared to non-graduates (HESA, 2017; Lundahl et al., 2011). Studies among working-age populations point to the importance of including the well-known individual determinants of job quality and mental health, such as gender, education, age, marital status and having dependent children when examining these two concepts (e.g. Cottini & Lucifora, 2013; Eurofound, 2012; Marchand & Blanc, 2011; Marmot, 2005; Stier & Yaish, 2014).

Recent studies suggest that social background may also be an important individual-level factor affecting youth employment outcomes. In particular, those from more advantaged social backgrounds often have more resources (in terms of economic, social and human capital) to manage and develop careers in challenging contemporary labour markets (Bukodi & Goldthrope, 2011; Furlong & Cartel, 2005; Heath & Calvert, 2013). The evidence shows that

difficult transitions to independence and adulthood have contributed to an increase in parental support in past decades (e.g. Fingerman et al., 2012; Waithaka 2014; Wightman, Schoeni, & Robinson, 2012). However, parental support is constrained by available resources (Fine & Fincham, 2013) and young people from more advantaged social backgrounds are twice as likely to receive support from parents (Swartz, McLaughlin, & Mortimer, 2017). In addition, given the increasing shift to service-oriented work, those from more advantaged social backgrounds are considered as better equipped in 'soft skills', which may include communication and interpersonal skills, and today employers are particularly interested in employing young people with such skills in both low- and high-skilled occupations (Archer & Davison, 2008; Brown, Hesketh, & Williams, 2004). In general, scholars argue that parental assistance helps young adults navigate the many challenges and uncertainties of contemporary transitions to adulthood, enabling them to achieve independency and well-being (Aquilino, 2005; Eggebeen, 2005; Johnson & Benson, 2012; Settersten & Ray, 2010). This points to the importance of accounting for the role of social background when examining the determinants of job quality among young workers in contemporary labour markets.

What may also be important for job quality and mental health in the youth context is the extent to which individuals 'fit' the jobs they are in, which can apply to both skill levels and to workers' preferred working conditions, such as contract type or working hours. Recent studies pointed to an increasing prevalence of skills and working hours mismatches among young people in the UK (Bell & Blanchflower, 2012; Sutherland, 2013). Both forms of mismatch can act as 'hidden stressors' and be detrimental to psychological well-being according to person-job fit theory (Edwards, 1991). To date little research has considered the role of individual abilities and needs when conceptualising job quality and examining its mental health implications for young people, suggesting that this area would benefit from further research.

Beyond the impact of individual factors, this thesis argues that youth employment should not be studied in isolation from the wider context, and that job quality appears to be particularly problematic in certain industries and occupations. The review of youth employment issues shows that in contemporary labour markets young people may be constrained by a wide range of external factors which may limit the influence of individual factors and personal agency (Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2015). For example, studies which examined the cross-national differences in youth unemployment and access to the labour market found that the degree of labour market regulation and the vocational specificity of the education system are very important institutional factors which influence job quality and career patterns among young people (Breen, 2005; De Grip & Wolbers, 2006; Van der Velden & Wolbers, 2003). The evidence also showed that the lowest quality jobs tend to concentrate in low-skilled service industries, which in the past decade attracted a large proportion of young workers in the UK and wider European context (Eurofound, 2014). Several authors have highlighted the importance of including contextual factors together with individual factors in job quality and mental health studies (Burgard and Lin, 2013; Cottini & Lucifora, 2013). Yet, most studies to date have only included basic individual characteristics (such as gender, education or marital status) as the main predictors of both job quality and mental health in the youth context (e.g. Dooley, Prause, & Ham-Rowbottom, 2000; Elovainio et al., 2007; Sadava et al., 2000). This reflects the wider trend towards the 'individualisation' of risk in both job quality and mental health studies, which can be described as attributing risks to the characteristics of individuals, rather than to social and environmental influences affecting populations (Svensson & Hallberg, 2011).

The approach taken in this thesis acknowledges a holistic interpretation of young workers' job quality and mental health and examines the role of individual and contextual factors, and the way in which these factors may alleviate, or contribute to, higher or lower job quality and mental health in the youth context. This study responds to calls for more attention to be given to contextual factors in job quality and mental health studies (Burgard & Lin, 2013; Cottini & Lucifora, 2013).

In summary, with the central aim of contributing to our understanding of job quality and mental health in the youth context, four main objectives of this thesis are: (1) to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context; (2) to examine the role of social background in affecting young workers' evaluations of job quality; (3) to examine the relationship between job quality and mental health among young workers; and (4) to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability.

#### 1.5 What is job quality?

Multiple concepts related to job quality have been developed to date and the terminology used is not consistent across different studies. In particular, different expressions are employed to refer to job quality: the terms such as 'quality of working life', 'quality of work', 'quality of employment' or 'job quality' are used interchangeably and often with no clear definitions (Burchell, Sehnbruch, Piasna, & Agloni, 2013). McDonald, Bradley and Brown (2009) found that a total of 24 different dimensions of job quality were proposed in the literature over a 10year period, highlighting the difficulty of reaching an agreement on the meaning of this phenomenon.

The literature on job quality is vast and spread across academic and institutional publications. Within the academic literature, it is split across different academic disciplines. Economists usually focus on the significance of pay when describing the quality of an individual's job and argue that the monetary reward is the most important aspect of work (Dahl, Nesheim, & Olsen, 2009). In contrast to the economic perspective, other social scientists claim that job quality is comprised of more than economic rewards and point to the importance of different non-monetary job characteristics (Clark, 2005). In particular, sociologists emphasize the role of skills in the workplace, occupational status and the amount of control and autonomy that employees have over their work tasks. Psychologists complement the above approaches by examining the extent to which the job is challenging, interesting and meaningful to individuals and they often use job satisfaction as a proxy for job quality (Kalleberg & Vaisey, 2005).

This variety of approaches to job quality in the academic literature point not only to disciplinary variations but also to the division between literatures focused on extrinsic and intrinsic aspects of work. Extrinsic rewards are received for performing the job and include, for instance, pay, job security, or promotion. In contrast, intrinsic rewards are associated with the job itself and include features such as the opportunities for skill enhancement or greater autonomy (Herzberg, Mausner, & Snyderman, 1959). To date, most studies in the youth context have focused on the extrinsic aspects of work (such as pay) when examining young workers' job quality (e.g. De Grip & Wolbers, 2006; European Youth Forum, 2014; Gangl, 2002; Lundahl, 2011; O'Reilly et al., 2015) and little attention has been given to the intrinsic aspects of work, which suggests that job quality has not been fully explored in the youth context and would benefit from further research.

Beyond the academic literature, international institutions have also attempted to define job quality and proposed their own conceptualisations. For instance, the International Labour Organisation's (ILO) concept of 'decent work' was developed in 1999 (ILO, 1999) and focused on a large number of issues, often related to the quality of a wider labour market (such as the unemployment rates or the availability of social protection to workers). This concept received a lot of criticism due to its very broad meaning (Burchell et al., 2013). Similar attempts were made by the European Union (EU), particularly in the development of the Laeken Indicators of Job Quality in 2001, which focused on a wide range of employment and labour market issues. To date, the policy impact of these institutional initiatives remains very limited (Fernandez-Macias, De Bustillo, & Anton, 2014).

Although the literature on job quality is vast, it is not easily comparable due to contrasting definitions used by different researchers and organisations. While in the academic literature the definitions of job quality are often worker-centred and focus on specific qualities of the job itself, the institutional conceptualisations tend to be very broad in scope and are based on the priorities of governments and employers, rather than the individual workers (Burchell et al., 2013).

While the literature has not yet reached an agreement on the relevant aspects of job quality, today a growing number of researchers agree that the complexity of the concept is difficult to express with the use of a single work characteristic and understanding job quality requires a multidimensional approach, which includes both intrinsic and extrinsic aspects of work (e.g. Boccuzzo & Gianecchini, 2015; Dahl, Nesheim, & Olsen, 2009; Holman & McClelland 2011; Kalleberg & Vaisey, 2005; De Bustillo et al., 2011). This multidimensional approach to job quality is very useful both conceptually and from a policy perspective, because it informs what specific job characteristics shape this complex construct and should be considered when designing policies to enhance the quality of work (Kalleberg & Vaisey, 2005). All of these different disciplinary approaches offer potentially important starting points for the analysis of job quality in the youth context. Based on these considerations, this thesis takes a multidimensional approach to the interpretation of young adults' job quality in the context of contemporary labour markets.

#### 1.6 The structure of the thesis

The structure of this thesis is as follows. Chapters 2 to 4 present the review of the literature. Chapter 2 provides an overview of key youth employment issues and factors affecting their labour market trajectories in contemporary labour markets. The literature from a range of academic disciplines is reviewed (including studies on unemployment, marginal employment, underemployment, generational research and the career literature) to further a theoretical understanding of youth employment issues. The chapter points to the importance of examining youth employment from the job quality perspective, as well as the need to go beyond the role of individual factors (in terms of personal attributes and individual responsibility) when explaining the extent to which young workers are able to secure high quality jobs in contemporary labour markets.

Chapter 3 discusses the importance of job quality for mental health and argues that the way young individuals experience work may carry risks with regard to their psychological wellbeing. It outlines the rationale for focusing on mental health and why this outcome of job quality is important to study in the youth context. Key approaches to defining mental health are highlighted as part of this chapter, as well as the need to focus on both positive and negative aspects of psychological well-being. The chapter then points to the most important work-related predictors of mental health in the youth context and the need to go beyond psychosocial quality of work (in terms of job security, skills, autonomy, social support, work intensity and psychosocial risks) when examining the relationship between job quality (such as contractual conditions, working hours and development opportunities) have emerged in the last decade which may have more explanatory value for mental health among young people.

Chapter 4 explores factors affecting job quality and mental health in the youth context. It brings together the relative importance of individual and contextual factors and argues that job quality and mental health are affected by factors at multiple levels. This includes a range of individual factors (such as gender, education or marital status), as well as job-related (such as occupation or industry) and institutional factors (such as the level of labour market regulation or the nature of education systems). The chapter then highlights the importance of individual abilities and needs (in terms of person-job fit) for mental health outcomes, and shows that for some aspects

of job quality (such as skills, contract type and working hours), the match between an individual and a job should be considered in addition to the need for work to be good in terms of more universal aspects (such as high social support). Finally, the chapter outlines the role of perceived employability for mental health outcomes and proposes perceived employability as an important personal resource in the youth context which may alleviate the negative effects of poor quality jobs. In general, the chapter highlights the importance of a wide range of contextual factors, and therefore the need to consider the wider context in which work takes place when examining job quality and mental health in the youth context.

Based on the review of the literature, Chapter 4 develops hypotheses from research objectives concerning the role of individual differences, job-related characteristics and wider institutional context in affecting young workers' evaluations of job quality (Research Objective 1); the role of social background in relation to young workers' job quality (Research Objective 2); the relationship between job quality and mental health (Research Objective 3); and the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability (Research Objective 4).

Chapter 5 describes the methodological approach. It outlines the secondary data analysis method and explains why this method is appropriate to address the research objectives and hypotheses. The chapter also discusses the approach to measuring job quality and institutional context. It introduces the UK context as the main focus of this study and three other European countries (Denmark, Germany and Spain) which are used for hypotheses addressing the role of institutional context in affecting job quality and mental health. The process of secondary data analysis is developed as part of this chapter. This consists of five stages and ensures the quality criteria in relation to collecting, evaluating and analysing secondary data are considered at each stage of the process. The chapter includes a review of secondary data sources and a detailed discussion of the three social surveys (the European Working Conditions Survey (2015), the European Social Survey (2010) and the UK Labour Force Survey (2017)) which were selected for the purpose of this study. An overview of sample characteristics and survey measures is also provided for each of the chosen data sources. The chapter concludes by outlining the analytical strategy and the procedures used to prepare the secondary data for analysis.

Chapter 6 presents the results of data analysis, which is the last stage in the process of secondary data collection, evaluation and analysis. The findings are presented in relation to research objectives and specific hypothesis or a set of hypotheses. Based on European Working Conditions Survey (2015) and European Social Survey (2010) this chapter examines the relative effects of individual and contextual factors (Research Objectives 1 and 2) on young workers' job quality. It then examines the associations between different aspects of job quality and mental health (Research Objective 3), and finally the role of person-job fit and perceived employability for young workers' psychological well-being (Research Objective 4). The chapter finishes with the summary of the hypothesis testing.

Chapter 7 provides discussion of the findings in relation to the previous literature and this study's conceptual framework. It outlines the importance of job quality in the youth context and how this study contributes to improved theoretical understanding of youth employment and factors affecting their labour market trajectories. It then discusses the relationship between job quality and mental health, and points to key work-related predictors of psychological wellbeing in the youth context, as well as the need to go beyond the role of the psychosocial quality of work. This chapter argues that in the youth context, it is necessary to consider the role of individual abilities and needs (in terms of person-job fit) and perceived employability as these are important determinants of their mental health. Chapter 8 concludes the thesis and highlights the theoretical contributions of this study. It gives an outline of this study's limitations and provides directions for further research, as well as some practical recommendations for policy and practice.

## Chapter 2: Job quality in the youth labour market

#### 2.1 Introduction

The shape of the labour market and the ways in which people work have changed considerably in the past decades (Arnold & Randall, 2010; Cooper, 2009; Eurofound, 2014; Gallie, 2017; Green, 2006; Sweet & Meiksins, 2013). Studies in the European context pointed to the growth of non-standard forms of employment, such as temporary and part-time work (Eurofound, 2014b; Gallie, 2017; Taylor, Marsh, Nicol, & Broadbent, 2017). Underemployment has also increased rapidly in the last decade, with a large proportion of workers supplying fewer hours of work than they would like and / or being employed in jobs for which they are overskilled or overqualified (O'Reilly et al., 2015; Otterbach, 2010; Bell & Blanchflower, 2011). Many studies acknowledged that, as a result of recent developments, job quality has significantly deteriorated in the UK and other developed countries and nowadays individuals are subjected to greater psychological demands and insecurity in employment (e.g. Clark, 2005; Cottini & Lucifora, 2013; Gallie, Felstead, Green, & Inanc, 2017; Findlay, Warhurst, Keep, & Lloyd, 2017; Gallie, 2017; Goos & Manning, 2007; Sweet & Meiksins, 2013).

The evidence also suggests that young adults as a group may be particularly affected by the state of the contemporary labour markets and the changing nature of work (Fenton & Dermott, 2006; O'Reilly et al., 2015; Scarpetta et al., 2010). For example, large-scale social surveys show that, in comparison to the overall workforce, young workers are more often involved in non-standard forms of employment and are also more likely to be underemployed such as overskilled and / or overqualified (e.g. Bell & Blanchflower, 2011; Chevalier & Lindley, 2009; Eurofound, 2013; Sutherland, 2012). This is combined with increasing individualisation of risk in the youth labour market, where more emphasis is placed on individual responsibility in

developing careers and securing employment (Lain et al., 2014; Lyons, Ng, & Schweitzer, 2014). Since young people have entered paid work in the last two decades, their experiences may reflect the current state of the labour markets to a much greater extent, when compared to older workers (Sweet & Meiksins, 2013).

This chapter draws on the evidence from large-scale European and UK data and previous research on unemployment, marginal employment, underemployment, generational studies and the career literature to establish what is known to date about young people and the quality of their working life. The chapter is divided into five sections. Section 2.2 sets the context for studying youth employment. It starts with an overview of some of the major labour market trends in the past decades and how they affected the nature of young people's work and the way careers are developed in contemporary labour markets. Section 2.3 draws on generational literature to examine the extent to which youth labour market trajectories are affected by the changing values and preferences among young people, in addition to the changing nature of work. Section 2.4 focuses on key youth employment issues and shows how the position of young workers is particularly disadvantaged when compared to prime-aged workers and / or previous generations of young people. This section also points to groups of young people who may be at higher risk of facing labour market difficulties. Section 2.5 considers how, due to increasingly long and diversified transitions into stable employment and independency, the definition of young adulthood has been changing and currently tends to include broader age groups of young people, who also experience more difficulties in paid work when compared to the overall workforce, but have been given less attention in both research and policy contexts. Section 2.6 provides the summary of this chapter and argues that taking a holistic approach to the interpretation of young people's job quality is central to understanding youth employment in contemporary labour markets, as well as going beyond individual factors (in terms of worker personal attributes and individual responsibility), when discussing factors affecting youth labour market trajectories. More generally, this chapter highlights the importance of a multidimensional approach to defining job quality and the role of contextual factors in shaping the quality of youth employment.

2.2 The shape of the contemporary labour market and the changing nature of work and careers

Western labour markets and the way careers are developed have changed remarkably in the last two decades. Some of the major trends include changes in the structure of employment, the expansion of Higher Education (HE) driven by policy, labour market deregulation, the growth of non-standard employment and the changing nature of careers (Eurofound, 2014; Sweet & Meiksins, 2013). These trends have contributed to variable labour market experiences among young people (O'Reilly et al., 2015) and influenced the quality of work, especially the stability and security of employment, the number of working hours, skill levels of available jobs, health and safety and work-life balance (Clark, 2005; Cottini & Lucifora, 2013; Eurofound, 2012; Gallie, Felstead, Green, & Inanc, 2017; Green, 2006). This section discusses in detail these changes in the labour markets to set the context for studying youth employment and explore factors affecting their labour market trajectories.

#### Changes in the structure of employment

The structure of employment has changed considerably in the past decades. Many researchers have highlighted a shift toward a post-industrial society, in which the manufacturing-centred economy was being replaced by the economy focused on the provision of services (Eurofound, 2012; Sweet & Meiksins, 2013). While the shift to service work represents a long-term trend, between 1996 and 2017, within the EU, the proportion of jobs accounted for by the service sector increased from 63.7% to 73.9% (Eurostat, 2017b). The evidence suggests that the UK's economy is more reliant on the service sector than any other developed country - in 2018, 83.3% of employment in the UK was concentrated in this industry (ONS, 2019).

These changes in the industrial structure of employment have been paralleled by technological advancements, which affected the landscape of available job opportunities. The last decades have seen the increase of employment in low-skilled service occupations, combined with a decrease in routine middle-skilled occupations, which were mechanised or outsourced to developing countries to reduce production costs (Eurofound, 2014). At the same time, the labour markets in advanced countries also became increasingly reliant on knowledge-intensive services, and new jobs have been created in highly skilled and well-paid professional and managerial occupations. Many researchers pointed to job polarization, which refers to the

process of disappearing of middle-skilled jobs and a continued shift toward low- and highskilled employment (Goos et al., 2009; Goos & Manning, 2007).

Recent evidence suggests that job polarization may be more evident in the UK than in other European countries, and during the last decade the majority of jobs created in the UK were in the low-skilled occupations (Sweet & Meiksins, 2013). A breakdown by occupation and industry shows that, in comparison to the overall workforce, young workers in the UK (aged 18 to 34) are more likely to be employed in low-skilled occupations (54% vs. 42%), with the vast majority (34%) employed in the wholesale and retail trade and accommodation and food service industrial activities (ONS, 2018). According to Gallie there is "an increasing polarization of the workforce between those who benefit from economic change through an improvement in their work situation and career chances and those who are trapped in low-skilled and generally disadvantaged forms of employment" (Gallie, 1991, p. 320).

The process of increasing job polarization in the labour market created great barriers to labour mobility. In particular, the disappearance of middle-skilled jobs created missing rungs in career ladders and nowadays many workers find it difficult to 'work their way up', which has an effect on the quality of their working lives (O'Reilly et al., 2015). This situation is particularly challenging for young workers, as low-skilled work cannot act as an 'escalator' into jobs which offer higher wages and better career prospects, but is instead a dead-end (Sissons, 2011). The evidence suggests that today large proportions of young and low-skilled workers tend to become trapped in poorly paid jobs, with little or no opportunities for career progression (Chung et al., 2012; Furlong, 2015).

#### The expansion of Higher Education (HE) driven by policy

Changes in the structure of employment have gone alongside a large expansion of HE systems in wider international context (Piketty, 2014). Based on Organisation's for Economic Cooperation and Development (OECD) data (which included 23 European countries), between 2000 and 2017, the proportion of graduates in Europe nearly doubled, increasing from 24% to 42% (OECD, 2019). Therefore, in many European countries graduates now constitute the same proportion of the workforce as non-graduates (approximately 40% each) (Chevalier & Lindley, 2009; Sutherland, 2012). Some authors have questioned the ability of the labour market to absorb this large volume of graduates and there is a growing concern among researchers regarding the quality of employment into which graduates enter (e.g. Brown, Hesketh, & Williams, 2004; O'Reilly et al., 2015; Sutherland, 2012). At both European and national levels, policies that target young people are mostly supply-driven and focus on increasing participation in education and supporting school-to-work transitions, while not considering the issues associated with finding employment and entering low-quality jobs with little career prospects (Chung et al., 2012). For example, skills policies in the UK assume that greater participation rates in HE will translate into better labour market outcomes and do little to support high-quality jobs for young people (Bell & Blanchflower, 2011; Keep & Meyhew, 2012). Most policies target young people in their early 20s, disregarding the problems of young workers aged 25-34, who are also increasingly returning to education and struggle to stand on their own feet, with a job, home and family (Chung et al., 2012).

In addition, studies suggest that employers are seeking to separate the best talent among an increasing pool of applicants by rising skill requirements for entry-level jobs and using personal attributes over and above qualifications. Some argue that this approach to recruitment and selection takes for granted the subject knowledge indicated by the qualification and discriminates against disadvantaged young adults by employing young people from more advantaged social backgrounds (Lain et al., 2014; Mortimer, Kim, Staff, & Vuolo, 2016). This suggests that, in addition to skills and qualifications, social background might also affect an individual's ability to enter high-quality employment in contemporary labour markets. The role of social background in affecting youth labour market outcomes is further discussed in Section 2.4.5 of this chapter.

The evidence shows that as a result of increasing numbers of highly educated applicants, many employers are deciding to employ graduates in jobs that, in a different labour market, would have been filled with non-graduates (McGuinness & Sloane, 2011; Mavromaras, McGuinness, O'Leary, Sloane, & Fok, 2010). For example, within the UK, in 2017 nearly half of recent graduates (49%) were working in a non-graduate role. This evidence points to growing employer expectations in relation to young workers and illustrates how the expansion of HE has been poorly aligned to the changing skills requirements on the demand-side of the labour market (Bell & Blanchflower, 2011; Keep, 2012; Keep & Mayhew, 2012).

#### Labour market deregulation and the growth of non-standard employment

Other major changes in the labour markets include an increasing trend toward deregulation and flexibility across Europe (Gallie, 2017; Goos & Manning, 2007; Kalleberg, 2012; Peters, 2008). Increasing labour market deregulation is associated with the diffusion of so-called 'non-standard' or 'atypical' employment that has been seen in the majority of European countries. According to the International Labour Organization's (ILO) definition, the non-standard employment includes the following forms of employment: (1) temporary employment; (2) temporary agency work and other contractual arrangements involving multiple parties; (3) ambiguous employment relationships (where the respective rights or obligations of parties concerned are not clear); and (4) part-time employment (ILO, 2015b). One of the most affected populations by the occurrence of atypical jobs are young people, who are more likely to have a temporary contract when compared to prime-aged workers (Eichhorst et al., 2014; Eurofound, 2014b).

Many argue that non-standard employment has largely contributed to a deterioration of job quality. In particular, atypical jobs are known to be lower paid than standard jobs (permanent and / or full-time), and also result in incomplete contributions to pension schemes and unemployment benefits (Cottini & Lucifora, 2013; Eurofound, 2014b). They are characterised by an entire or partial absence of employment regulation and therefore many workers on atypical contracts are in a relatively worse situation, when compared to workers in standard jobs (Kalleberg, 2012). What is more, because of their temporary nature, these jobs are associated with lower job security and typically offer no access to training and limited opportunities for career progression (Dahl, Nesheim & Olsen, 2009).

Currently, the trend in most European countries has been to allow organisations a greater freedom in their use of atypical employment contracts and non-standard jobs are increasingly used by employers as a cheaper alternative to permanent jobs (Guell & Petrongolo, 2007; Taylor, Marsh, Nicol, & Broadbent, 2017).

#### Changing nature of careers

Due to the above transformations in contemporary labour markets, notions of career have also changed. Much of the organisational literature claims that careers, like employment arrangements, will take on a flexible quality (Arthur, 2014; Arthur & Rousseau, 1996; Baruch, 2004; Sullivan & Baruch, 2009).

The traditional view of career, which dominated throughout much of the last century, can be described as a career which follows a primarily linear and upward sequence of jobs within a single employer (Baruch, 2004; Baruch & Bozionelos, 2010). In particular, in the traditional career model the individual would normally be employed on a long-term basis within one or two employers, career changes would be incremental in scope, career progression would commence with age, experience and job tenure, and job moves would typically be linear and upward (Lyons, Schweitzer, Ng, & Kuron, 2012; Sullivan & Baruch, 2009). It was not unusual for workers with low education to progress in their careers and get an interesting job that pays well. Young people with low education could follow clearly defined career paths and biographies of their parents, which guaranteed a certain employment outcome. According to Sweet and Meiksins (2013, p. 15), "in the old economy, for example, it was common for children to follow their parents into the mill or factory and receive good wages for performing jobs that required little education."

The shift from stable, traditional careers to more fluid careers, characterised by less job security, changing skills requirements and greater job mobility contours a modern career reality that displaces the conventional career (Arthur, 2014). The concept of 'boundaryless career', introduced by Arthur and Rousseau (1996b) is often used to describe the nature of careers in contemporary labour markets, where workers pursue a sequence of employment opportunities that go beyond the boundaries of any single employer or work setting.

In short, today's work requires individuals to change employers and occupations frequently (Baruch & Bozionelos, 2010; Lyons et al., 2012), and to make downward and horizontal career moves in addition to upward moves (Baruch, 2004), which may have a significant impact on the quality of their work. While upward career moves are often associated with better-quality jobs, downward career moves can result in a deterioration of job quality in terms of pay, status and autonomy, or in the case of horizontal career moves – in no change or progression at all (McGuinness & Wooden, 2009; Ng, Sorensen, Eby, & Feldman, 2007). High job mobility in terms of frequent moves between jobs and organisations is also likely to involve many changes in required skills and abilities, which may not match those held in the previous job or by an individual worker in general, consequently resulting in lower occupational status and sometimes in the necessity to retrain to match the skill requirements of the new job (Deal et al., 2010; Sweet & Meiksins, 2013).

#### 2.3 Changing values and preferences among young people

It is not only the shape of today's labour market that has changed. Generational studies suggest that current generation of young workers have different values, preferences and expectations in relation to their working lives (e.g. Cennamo & Gardner, 2008; Cogin, 2012; Smola & Sutton, 2002; Sturges & Guest, 2004), highlighting the role of individual factors in explaining job quality among young people. This issue is important to examine, since shifts in values and individual preferences may have implications on how young people experience their working lives. The aim of this section is to examine to what extent youth labour market trajectories can be attributed to shifts in values and preferences among young people today.

The generational literature often distinguishes between four generational cohorts that are present in today's workplaces and their most commonly used names and birth years are as follows: Matures (born before 1945), Baby Boomers (born between 1945 and 1964), Generation X (born between 1965 and 1979) and Millennials or Generation Y (born in 1980 or later) (Lyons et al., 2012; Lyons & Schweitzer, 2014). Much of the generational literature suggests that each generation is different from one another (e.g. Cennamo & Gardner, 2008; Cogin, 2012; Loughlin & Barling, 2001; Smola & Sutton, 2002; Sturges & Guest, 2004). Supporters of the multigenerational theory claim that individuals who grow up in different time periods have different sets of beliefs, values, attitudes and expectations, which in turn affect their behaviour generally and in the work setting (Glass, 2007; Inglehart, 1997).

In line with this argument, studies found that current generation of young people have a different work ethic and express less interest in 'hard work', doing overtime or taking pride in their work (e.g. Cogin, 2012; Loughlin & Barling, 2001; Smola & Sutton, 2002). Many studies to date have highlighted the importance of work-life balance and leisure time to younger generations (e.g. Cennamo & Gardner, 2008; Smola & Sutton, 2002; Twenge, 2010; Twenge, Campbell, Hoffman, & Lange, 2010). For example, Cogin (2012) showed that the value placed on 'hard work' showed a significant decrease with younger generations. While the most significant work value was 'hard work' for Traditionalists and Baby Boomers, for Millennials was 'leisure'. This finding was also supported by Cennamo and Gardner (2008) who found that Millennials place higher value on work-life balance and freedom from supervision, when compared to the Generation X and Baby Boomers. Some studies suggested that today young

people willingly choose jobs that are of lower quality but compensate by offering a better worklife balance (Ng, Schweitzer, & Lyons, 2010).

Other studies also found that Millennials demonstrate a higher need for security in their jobs, when compared to Generation X and Baby Boomers (Dries, Pepermans, & De Kerpel, 2008). At the same time, younger generations also score higher on intention to leave - they are significantly more likely to say they had thoughts of leaving their employer (Cennamo & Gardner, 2008), which may suggest lower job satisfaction among younger generational cohorts. Higher need for job security is understandable, given changing nature of work and increasing involvement of young people in non-standard forms of employment, as highlighted in the previous section (Section 2.2).

Finally, the importance of intrinsic aspects of work to younger generations has also been highlighted. This is surprising, given little attention to the intrinsic quality of work in previous studies on job quality in the youth context. For example, Rawlins, Indvik and Johnson (2008) showed that Millennials place less importance on financial rewards and instead prefer meaningful and challenging jobs over well-paid work, which was also confirmed in the study by Dries et al. (2008). Some authors also found that young workers are more ambitious and have high expectations regarding their career progression (Wong, Gardiner, Lang, & Coulon, 2008). Therefore, the opportunity for career advancement was highlighted as important motivational driver for Millennials (De Hauw & De Vos, 2010). Finally, studies suggested that Millennials highly value training and development within organisations, because it allows them to continuously develop their skills and remain attractive in the labour market (Loughlin & Barling, 2001).

Some of the above findings have been confirmed in a large empirical review carried out by Twenge (2010). In particular, based on the review of all studies on generational differences in work values to date, the author showed that Generation X and especially Millennials place less value on work in their lives, have a weaker work ethic, and value leisure time and work-life balance more than Baby Boomers. At the same time, there were no differences across generations in desire for intrinsic aspects of work (e.g. meaningfulness, social support), job stability, or altruistic values (e.g. work which is useful to society), which suggests that intrinsic quality of work is as important to young people today as it was for previous generations. Twenge (2010) also noted that most studies to date have been based on cross-sectional design,

with data on people of different ages gathered at one point in time. Therefore, any differences found in these studies could be due to age, career stage, or time period, in addition to generation. According to Twenge (2010, p. 202), "the best design for determining generational differences is a time-lag study, which examines people of the same age at different points in time".

In contrast to the above arguments, some researchers suggest that people are more similar than different across generations (e.g. Deal et al., 2010; De Huw & De Vos, 2010; Lester, Standifer, Schultz, & Windsor, 2012; Pyoria, Ojala, Saari, & Jarvinen, 2017; Westerman & Yammamura, 2007). For example, a recent study by Pyoria et al. (2017) found that the value given to work domain has stayed consistently high for the past three decades across all generational cohorts. At the same time, leisure time and family life have gained more importance, not only among the Millennials but also among older generations. In another study, Lester et al. (2012) suggested that the similarities in what different generations value greatly outnumber the differences. Based on fifteen aspects of work, the authors showed that, with the exception of technology, e-mail communication and social media, Millennials declared valuing as much the core aspects of work as older generations (Generation X and Baby Boomers). In addition, Millennials were found to place higher value on continuous learning and development than previous generations, which the authors attributed to the changing demands of the contemporary labour markets, specifically the fact that currently much more emphasis is placed on higher education and skills, with both society and parents stressing these as key concerns for young people. As will be highlighted in the next section (Section 2.4.3), today young workers are increasingly more responsible for managing and developing careers on their own terms (Sutherland, 2012). These studies suggest that beyond the generational cohort, other factors (such as the importance of skills and education in contemporary labour markets) may also contribute to generational differences and changing preferences among younger generations.

Indeed, some studies suggested that individual values, preferences and expectations depend on the context, and that factors other than generation should be considered when discussing differences and similarities across generations. According to Deal et al. (2010, p. 196) the fact that "a few differences exist among cohorts should not be surprising given the changing contexts in which different generations grow up and live". Yet, the role of the context is the subject that is often missing in generational literature. One of the few studies which accounted for the role of contextual variables is the study by De Huw and De Vos (2010), which examined the impact of generation, individual differences and contextual factors on Millennials' job expectations. The authors found that Millennial's expectations regarding work-life balance and social atmosphere at work largely depended on the current socio-economic context. In particular, the findings showed that during times of recession, young people lowered their expectations in relation to work-life balance and social atmosphere at work. These findings are in line with Deal et al. (2010), who suggested that people expect more in good economic times and less in a depressed economy. According to the authors, the high youth unemployment rate resulting from poor economic climate is likely to affect attitudes and expectations among young people today, that may in turn result in generational differences. Based on these arguments, lower attitudes toward work, and changing preferences and expectations among current generation of young people may represent a changing reality and increasingly demanding labour market (as has been highlighted in the previous section), rather than the impact of the generation on its own.

In summary, the generational literature adds important insights into the interpretation of job quality among young people. Specifically, it points to the importance of intrinsic aspects of work (such as meaningfulness and job autonomy), work-life balance and training and development opportunities when conceptualising job quality among young workers.

At the same time, the evidence reviewed in this section provides mixed findings in relation to shifts in values and preferences among current generation of young individuals and suggests that the impact of generational differences on job quality should not be studied in isolation from the wider socio-economic context.

#### 2.4 Youth employment issues

Due to the changing demands of the contemporary labour market, young people face many challenges in paid work and today it takes much longer for them to find a good-quality job and achieve a stable living situation (Furlong, 2015; Iacovou, 2011; Keep, 2012; Sutherland, 2012). This section argues that, from a historical perspective, the labour market position of young people seems to be deteriorating. Compared to previous youth generations, for whom schoolwork and youth-adulthood transitions were usually more linear and predictable, in contemporary labour markets young people experience much more uncertainty and instability in paid employment (O'Reilly et al., 2015; Scarpetta et al., 2010; Sutherland, 2012), combined
with increased individual responsibility in securing jobs and developing careers (Lain et al., 2014; Laughland-Booy & Mayall, 2015).

This section draws on different disciplinary literatures and large-scale European surveys to establish how young workers fare in paid work in contemporary labour markets and what factors affect their labour market experiences. It questions the extent to which youth labour market trajectories can be attributed to individual factors and personal agency (e.g. in terms of their skills, qualifications, attitudes and behaviours), and points to other important contextual factors which may affect young adults' ability to develop careers and secure high-quality jobs.

Several issues driven by the changes in labour markets and the nature of work in past decades are particularly important when discussing the difficult and challenging position of today's young adults. These include youth unemployment, marginal employment, changing career trajectories and career management and youth underemployment. In addition, the literature has also highlighted the groups of young adults which face particular hardships in contemporary labour markets, and this section finishes by identifying the high-risk groups of young people.

# 2.4.1 Youth unemployment

While the overall unemployment in Europe seems to be decreasing, its level is unevenly distributed across different age groups. Youth unemployment, which affects individuals up to 25 years of age, is currently at the heart of policy debates in the majority of European countries (Scarpetta et al., 2010). According to the OECD definition of unemployment, "unemployed people are those who report that they are without work, that they are available for work and that they have taken active steps to find work in the last four weeks." (OECD, 2016). In the EU (which currently includes 28 European countries), the youth unemployment rate in 2019 was significantly higher (at 23%) than the overall unemployment (at 6.2%) for the same time period (Eurostat, 2019; 2019b).

As a result of the high incidence of youth unemployment, today intensive efforts are being made in many European countries to make young people more employable through apprenticeships, internships, career guidance for school-leavers, and most importantly through education (Lundahl, 2011). For instance, in the UK, skills policy focuses almost entirely upon

increasing the supply of highly qualified individuals (Sutherland, 2012), which Brown (2013) called an 'opportunity bargain'. This is where the role of the state is limited to creating supplyside opportunities for individuals through access to education and training, and consequently the responsibility is then placed on the person to develop their employability in order to progress in the labour market. This focus on skills supply is influenced by human capital theory (Becker, 1964), which suggests that investments in learning capacities of individuals (such as education) will bring subsequent productive outputs for people, employers and economy. But these supply-side approaches to employment have attracted criticisms (e.g. Dobbins, Plows, & Lloyd-Williams, 2014; Bryson, 2010; Keep & Mayhew, 2010). For example, Keep and Mayhew (2010) argue that the supply of skills does not automatically generate its own demand. While up-skilling individuals is a crucial supply-side policy for enhancing employability, ensuring that there is demand for utilising these skills is equally essential. Some researchers suggest that policymakers need to consider a more holistic approach to youth employment and address deficiencies on the demand side of the labour market (e.g. Brown, 2013; Bryson, 2010; Sutherland, 2012).

This focus on youth unemployment and access to the labour market has largely been paralleled in the academic research. The literature on youth unemployment is vast (e.g. De Lange, Gesthuizen, & Wolbers, 2014; Gontkovicova, Mihalcova & Pruzinsky, 2015; Madsen, Molina, Moller, & Lozano, 2013; Refrigeri & Aleandri, 2013; Wolbers, 2007). Studies in the area suggest that the negative impact of unemployment is not restricted to the actual period of being out of work. It is estimated that 30-40% of youth risk getting 'scarred' in the long-term perspective, as unemployment continues to have a negative impact on job quality in future life (Scarpetta et al., 2010). In particular, past unemployment leads to significant losses in earnings lasting for many years after the actual unemployment spell (e.g. Arulampalam, 2001; Gangl, 2006). While not many studies to date have focused on the impact of unemployment on nonmonetary dimensions of job quality, Dieckhoff's (2011) study of workers in four European countries found that past unemployment affects non-pecuniary job characteristics of reemployed prime-aged workers. The author found that two years after re-entering the labour market, being unemployed is associated with a significant reduction in future job quality in terms of increased probability of holding a non-standard employment contract, occupational status losses and lower levels of perceived job security. Based on the British data, Bell and Blanchflower (2009) found that unemployment continues to have a negative impact two

decades later in terms of several outcomes – future unemployment, health, earnings and job satisfaction.

# 2.4.2 Marginal employment

# Young people tend to be employed in non-standard jobs

Unemployment, however, is not the only indicator of youth labour market disadvantage. Some researchers argue that the focus on unemployment and access to the labour market disregards other aspects of marginalisation and inequality (Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2012). When in employment, young workers are often employed in non-standard jobs and find it increasingly hard to find a permanent employment. Youth are over-represented among employees on temporary contracts (O'Reilly et al., 2015). According to the European Youth Forum (2013), 42% of young workers in Europe are on a temporary contract (which includes all employment contracts that are fixed-term), which can be compared with only 13% of the overall workforce. While many of the young workers combine part-time employment with formal education, the evidence suggests that non-standard working arrangements are becoming an obligation rather than an option for young adults, highlighting the limited role of individual choice in affecting job quality. In 2011, almost nine million people in Europe were employed in non-standard jobs, mainly because they wanted to work more hours or be on a full-time contract but there was no possibility to make that transition (European Youth Forum, 2013). In 2014, in the European Union countries, on average 36.7% of young workers were in temporary employment involuntarily (Eurofound, 2014b). Regarding temporary employment, the worse situation seemed to be in Spain, where over 80% of young workers on a temporary contract said that the reason they were temporarily employed was caused by not being able to find permanent employment (European Youth Forum, 2013). Young workers' job insecurity not only affects access to credit, financial and residential independence, but also inhibits longterm commitments such as having a family. What is more, insecurity in employment may also lead to subjective insecurities. Past research found strong association between subjective insecurity and one's employment contract (Erlinghagen, 2008). Security is considered as one of the basic psychological needs that "all people require to thrive" and therefore is important to individual well-being (Sheldon, Elliot, Kim, & Tassen, 2001, p. 325). These findings suggest that young workers' insecurity in paid work may undermine their psychological well-being.

Nevertheless, the consequences of non-standard employment for young people's labour market outcomes are not clear. Some studies suggest that non-standard employment may benefit young workers, because it gives them opportunity to control their work time, sample different work experiences and use their temporary employment as a stepping stone into standard, permanent work (e.g. Ferrie, 2001; Scarpetta et al., 2010; Virtanen et al., 2005). This can be explained by the stepping stone hypothesis, which is based on the career mobility theory and assumes that a non-optimal entry job is an investment in work experience, which eases the labour market entry and enhances promotion opportunities to higher-level positions (Contini, Pacelli, & Villosio, 1999). This argument suggests that lower- quality jobs will bring advantages for the subsequent career, as they allow workers to gain valuable experience and as a result progress faster to permanent jobs. Based on this argument, Sherer (2004) found that fixed-term jobs at the start of the career may act as an entry point into the labour market for young school-leavers.

The positive effects of non-standard employment in terms of unemployment avoidance is also emphasised (Gobel & Verhofstadt, 2008; Korpi & Levin, 2001). For example, Gobel and Verhofstadt (2008) found that temporary employment could ease the transition from unemployment to work for a group of unemployed school-leavers in Belgium. In particular, the authors found that, while in the short-term these jobs delay the entry into permanent employment, in the long-term temporary jobs serve as a stepping stone and decrease the time required before getting permanent employment. At the European level, Scarpetta et al. (2010) also found the support for the stepping stone argument. Based on data from nine European countries, the authors showed that the probability for young workers (aged 15-24) of getting a permanent job one year after being in a temporary job is higher than after being unemployed (20% vs 15%, respectively). These studies suggest that, in comparison to unemployment, temporary jobs may be more beneficial.

In contrast, some evidence shows that non-standard employment can be a 'trap', where the chances for a young person of moving out are poor (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005). The entrapment hypothesis suggests that sub-optimal positions have long lasting negative consequences (Scherer, 2004). This hypothesis has been deduced from dual labour market and signalling theories. Dual labour market theory (Doeringer & Poire, 1971) states that the labour market is divided into a primary segment (which constitutes 'good' jobs) and a secondary segment (which constitutes 'bad' jobs). Low-quality jobs (such as non-standard jobs) are found to a larger extent in the secondary segment, and limited mobility flows

between the two segments mean that workers in the secondary segment are more likely to be 'entrapped' in disadvantaged positions. In addition, based on the signalling theory (Spence, 1973), being in non-standard employment may send a negative signal to a potential employer regarding applicants' skills and abilities. In particular, beyond the applicant's education, their previous job may also act as a strong signal of their potential productivity.

In line with this argument, Scherer (2004) found a confirmation for the entrapment hypothesis. While jobs of temporary duration seem to fulfil their role as an entry portal into the labour market for young unemployed school-leavers in Germany, Italy, and the UK, they are also associated with greater instability in subsequent employment and higher unemployment risk later in the career. Similarly, in a longitudinal study of Dutch university graduates, Verbruggen, Van Emmerik, Van Gils, Meng and De Grip (2015) found that temporary employment has long-lasting negative effects on objective career success (measured in terms of pay) five years later.

Non-standard jobs are also linked to a greater risk of future unemployment. Studies which focused on temporary employment alone emphasised the tendency of temporary jobs to reproduce themselves and to contribute more often to unemployment than permanent jobs (Chung et al., 2012). Finally, as mentioned earlier, non-standard employment is often associated with poorer job quality on other dimensions. For instance, research suggested that people in temporary jobs receive less on-the-job training and fewer development opportunities (Aronsson & Goransson, 1999; Giesecke & Gross, 2003; Gash & McGinnity, 2006), which further questions the 'stepping stone' argument. Since human capital development is associated with pay increases (Becker, 1993) and a greater likelihood of getting a better job (e.g. more interesting or satisfying) (Pergamit & Veum, 1999), this suggests potential long-term disadvantages of non-standard employment. In general, reduced probability of holding a standard employment contract is a central factor in the process of cumulative disadvantage that the individuals on non-standard contracts experience.

Recently, Chung et al. (2012) have noticed that there are low and declining transition rates from temporary employment to permanent work among young people, which suggests that younger generations may, in comparison to previous generations of young people, be facing long-term employment risks and scarring processes. In general, since 2004 there has been a steady increase in the precariousness of youth jobs (O'Reilly et al., 2015; Scarpetta et al., 2010; Sutherland, 2012).

2.4.3 Youth career trajectories and career management

# Young people have increasingly diversified career trajectories and job mobility has increased

Transitions to employment are accompanied by increasingly unstable career trajectories, which can be observed among current generation of young workers. Research from a number of European countries revealed that young adults' employment has become increasingly diversified and non-linear. Diversification involves the occurrence of new labour market experiences and trajectories among young people (O'Reilly et al., 2015). For instance, so-called 'yo-yo transitions', which describe numerous, repeated movements back and forth between education, work, and periods of unemployment are very common in the contemporary labour market (Lundahl, 2011; Walther, 2006; Kovacheva & Pohl, 2007). While some young people finally manage to settle into long-term employment, a substantial number of young workers are stuck in a series of temporary and dead-end jobs or become 'locked' in poor-quality employment (European Youth Forum, 2013; Stengard et al., 2016). According to Furlong and Cartmel (2006), for many young individuals, these difficult transitions to stable employment are best regarded as disadvantaged routes and a result of increasingly challenging labour markets rather than a consequence of individual choice.

The literature argues that, as a result of the changing nature of careers, contemporary labour markets offer fewer opportunities for young workers to make upward career progression within a single organisation (Baruch & Bozionelos, 2010). Instead, young workers are more likely to experience job and organisational mobility, and to make downward and lateral career moves in addition to upward moves (Baruch, 2004; Sullivan, 1999).

As mentioned in the previous section, downward and lateral career moves are often associated with a deterioration of job quality in terms of pay, status or autonomy (Lyons, Ng, & Schweizer, 2014; Sweet & Meiksins, 2013). What is more, some researchers suggested that increased job mobility may place additional demands on workers in terms of skills. For instance, some individuals may not possess the necessary skills and knowledge to be hired by

different organisations, or when hired they may experience skills mismatch and may be unable to quickly grasp the skill requirements of their new work setting in order to successfully perform (Blenkinsopp & Zdunczyk, 2005). Beyond job quality, crossing career boundaries may have a negative impact on psychological well-being. Some studies suggest that it may produce uncertainty and generate stress (Rodrigues & Guest, 2010) as a result of high job insecurity that individuals experience when they face threats to the continuity of their employment and to the uncertainty regarding the quality of the subsequent employment (Colakoglu, 2011). This points to the importance of examining individual-level outcomes of job quality in the youth context, particularly in relation to psychological well-being.

Generational studies are useful when examining the changing nature of careers, because it offers a unique historical perspective on how labour market experiences have changed from generation to generation. A study by Dries et al. (2008), which included four generations of Belgian workers, found that Generations X and Millennials are less likely to have a traditional career and more likely to have, as authors called 'homeless' and 'staying' careers, with the former being characterised by high job mobility with a desire for stability but perceived inability to do so, and the latter described as careers involving multiple jobs and employer changes, despite the individual wanting security and stability with their current employer. Increased job and organizational mobility in successive generational cohorts was also found in research from Canada (Lyons, Schweitzer, Ng, & Kuron 2012) and Austria (Chudzikowski, 2012). The literature examining career outcomes suggest that successive generations seem to have lower levels of job satisfaction (Benson & Brown, 2011; Solnet & Kralj, 2011), which may be an indication of deterioration in perceived job quality among young people today.

This evidence suggests that, from a historical perspective, there has been a gradual shift toward much more dynamic, flexible, and so-called 'multi-directional' career patterns (Baruch, 2004), and this changing nature of careers has an impact on the quality of young adults' work and may also affect their psychological well-being. In particular, in contrast to the past generations, today it may be much more difficult for young workers to pursue stable career progression in a chosen occupation, consequently delaying their ability to find a high-quality job. While traditional careers still exist in the modern labour market, the research to date suggests that each subsequent generational cohort is expected to have a career which is more likely to reflect the characteristics of the contemporary career (Fenton & Dermot, 2006).

# There is a high pressure for young workers to take responsibility for enhancing their employability

With the changing nature of careers, today much of the responsibility for developing skills is shifting from employers to employees. In particular, there is high pressure for younger generations to be proactive, self-directed and take care of managing their careers and building their own skills set. Obtaining a great variety of work experiences across jobs and organisations is often a condition to finding a job in contemporary labour markets (Chung et al., 2012; Lyons et al., 2012; O'Reilly et al., 2015).

The increasing trend toward the individualisation of labour and risk in contemporary labour markets (Beck, 1992; Giddens, 1991), means that today each worker is defined individually and is expected to manage their working life on individual basis. Beck (1992) describes individualisation as a process in which "each person's biography is [being] removed from given determinations and placed in his or her own hands, open and dependent on decisions" (Beck, 1992, p. 135). The idea that the individual is solely responsible for his or her own life chances and decision-making implies a heightened subjective sense of risk (Predelli & Cebulla, 2011).

Consequently, today it is more common for young people to feel that they are entirely responsible for their own destinies, while any failures are often viewed as individual shortcomings (e.g. a lack of skills and / or qualifications), rather than a consequence of processes that are outside of one's control (e.g. general declines in demand for labour) (Sweet & Meiksins, 2013). While some researchers suggested that individual responsibility may act in a liberating way by giving an individual the opportunity to make decisions and realise personal aspirations (Tulloch & Lupton, 2003), Beck (1992) argued that individualisation does not imply full individual autonomy - the individual is constrained by external societal factors, which may limit the opportunities and choice, and contribute to marginalisation and exclusion. The combined forces of individual responsibility, on the one hand, and a limited sense of control over their future destinations on the other hand, contribute to a heightened sense of risk, insecurity and uncertainty among young people in contemporary labour markets (O'Reilly et al., 2015). Overall, the literature examined in this section suggests that the way young individuals experience their working lives in today's labour market may undermine their basic psychological needs for control, security and autonomy, and consequently compromise their mental health (Ryan & Deci, 2000; Sheldon et al., 2001).

Career instability and increased job mobility require workers to have a high degree of personal initiative, seek additional training or even change occupations and retrain, either by going back to education or taking advantage of publicly-funded training programs (Sweet & Meiksins, 2013). This is reflected in increasingly longer transitions to employment and adulthood, which often extend into early 30s (Furlong & Cartmel, 2006). According to Sweet and Meiksins (2013, p. 95), "workers are told that they should retool, acquire new skills, and adapt to changing patterns of opportunity." In short, young workers need to continually maintain their employability (Tomlinson, 2012). The employability discourse mirrors the growing onus on young employees to continually develop their skills and knowledge in an era when their career advancement is less attached to single employers and specific job types (Clarke, 2008). This notion of employability, which reflects the increasing individualisation of risk in the youth context, is most typically the focus of policy approaches to enhancing young people's employment outcomes (Section 2.4.1), despite the recognition of the multi-dimensional nature of the concept in much academic literature (Wilton, 2014). In particular, researchers stressed the importance of broader definitions of employability, which would incorporate external factors, such as labour market context and recruitment and selection factors, for instance (McQuaid & Lindsay, 2005; Purcell et al., 2013). This broader approach to employability is clearly a critical consideration and highlights the importance of going beyond worker attributes (i.e. skills and experience) and individual responsibility, when discussing factors affecting youth labour market trajectories. In addition, some authors suggested that one's employability perceptions are likely to be accompanied by a sense of control over one's career, and this feeling, in turn, may be associated with higher psychological well-being (Fugate, Kinicki, & Ashforth, 2004), suggesting that employability is not only important in affecting the extent to which young workers can secure high-quality jobs but may also directly affect their mental health. The importance of perceived employability for mental health is further discussed in Chapter 4 (Section 4.4.2).

In the past, it was common for workers to learn the required skills on the job within organisations. Training was provided by employers and opportunities for career progression were available through well-established internal labour markets, which can be defined as a set of organisational practices that insulate workers' jobs and earnings from the external labour market (Berg & Kalleberg, 2012). Jobs were arranged in well-defined job ladders and organisations would provide workers with developmental opportunities and resources to achieve career progression. It was not unusual for large organisations to have extensive training

departments. As a result, in internal labour markets paths to career progression were clearly defined and predictable, guided by employers (O'Mahony & Bechky, 2006). During the last three decades, this trend has been changing and as organisations evolve to adapt to flexible post-industrial labour markets, there is evidence of the erosion of traditional internal labour markets and employer commitment to on-the-job training. For example, based on the analysis of multiple UK surveys, Green, Felstead, Gallie, Inanc and Jewson (2016) found that the provision of on-the-job training (measured in terms of the volume of training) has significantly decreased in the UK by just under a half (48%) between 1997 and 2012, and this finding is largely consistent across different surveys. In addition, the declines in training volumes were remarkably higher among young individuals - they declined by 49% for workers under 25, but only by 22% for those between 35 and 65. Moreover, in a separate study, Lain et al. (2014) noticed changing employers' expectations regarding young workers' skills, with many employers expecting young workers to be 'job ready' in terms of skills and experience, when entering employment. These findings suggest that organisations do not see on-the-job training as current priority for young workers. This is worrying, given earlier studies among novice workers which showed that training provided by employers plays a key role in developing young adults' employability (Smith & Comyn, 2004).

As a result of decreasing employer commitment to training and reduced willingness to hire young people who have less or no experience, many young workers report encountering a so-called 'career progression paradox' (O'Reilly et al., 2015). In particular, the evidence suggests that workers face the career progression paradox when they try to find a job to develop their skills, but employers increasingly prefer those with prior work experience, and they are not willing to offer work to individuals without such experience (O'Mahony & Bechky, 2006). While this paradox applies to all workers making job transitions in contemporary labour markets, it is exacerbated for workers in non-standard employment. Overall, when compared to internal labour markets, career progression in external labour markets is less structured and more unpredictable, where workers need to take control of their own training and skills development and focus on enhancing their employability (Furlong & Cartmel, 2006; Lain et al., 2014). In summary, the careers literature points to the role of employability and personal agency as key determinants of job quality among young people.

# 2.4.4 Youth underemployment

The literature on underemployment has been driven by the dramatic shift in HE participation rates, which in turn contributed to increased interest in the potential discrepancy between labour supply and demand (O'Reilly et al., 2015). Underemployment can be defined as a 'lower quality employment' (Feldman, 1996). According to the most comprehensive definition of underemployment proposed by Feldman (1996), it involves dissatisfaction with one's working hours (which is often called 'time-related underemployment'), type of contract, earnings, field of study, and skills use (which is often called 'over-education' and / or 'over-skilling'), so it points to several aspects of job quality in the youth labour market and uncovers a general problem of low-quality jobs (Scurry & Blenkinsopp, 2011).

Most studies to date have focused on the incidence of underemployment (e.g. Bell & Blanchflower, 2011; Sutherland, 2012; 2013). For example, based on the analysis of the Labour Force Survey (2009/2010), Bell & Blanchflower (2011) pointed to significantly higher levels of underemployment in terms of working hours among younger age groups in the UK. In the last decade, most research in the area have focused on graduates, due to the growing rates of underemployment among this group (Scurry & Blenkinsopp, 2011). As mentioned earlier, within the UK, in 2017 nearly half of recent graduates (49%) were working in a non-graduate role (ONS, 2018b). Over-education and over-skilling are the two dimensions of underemployment which have been most commonly examined among graduates and refer to the situation where individuals have too many qualifications or too many skills for their current job (O'Reilly et al., 2015). However, the consequences of underemployment for labour market outcomes among young people are mixed. Similar to non-standard employment, some research suggests that being in this type of employment may bring advantages for the subsequent career, as it allows workers to progress faster to 'adequate' jobs, which are jobs which match one's level of skills or education, for instance. The theory of career mobility (Sicherman, 1991; Sicherman & Galor, 1990) suggests that individuals accept non-adequate jobs (such as lowerskilled jobs) because they offer better opportunities for more rapid career advancement, and therefore these jobs, as suggested by Scherer (2004), may act as 'stepping stones' into better jobs in future.

In contrast, many studies also point to the negative outcomes of underemployment. For example, over-education and over-skilling have been associated with significant wage penalties and decreased job satisfaction among young adults with a university qualification (McGuinness & Sloane, 2011). In addition, studies across all age groups, which compare the employment outcomes of both over-education and over-skilling, suggest that there are significantly greater wage penalties when over-education is accompanied by the underutilization of workers' skills (Green & Zhu, 2009).

Moreover, recent evidence showed that the negative impact of underemployment is not limited to the period of being in this type of employment but may be associated with long-term consequences for young people. Several mechanisms can help to explain the link between underemployment and later career outcomes. For example, underemployment may limit an individual's opportunity to develop human capital and may therefore limit the subsequent career success (Becker, 1993). Not only is an underemployed job often associated with less complex and less challenging tasks (Allen & Van der Velden, 2001) but individuals who are underemployed may also be offered less training and development opportunities. For instance, research found training to be less frequent for employees who are overskilled or overqualified in their jobs (Buchel & Mertens, 2004). In addition, underemployment may also negatively affect individuals' initial competencies. For example, De Grip, Bosma, Willems and Van Boxtel (2008) found that being in employment which is below one's educational level (i.e. over-qualification) for at least six years resulted in cognitive decline in terms of memory, cognitive flexibility and verbal fluency. Finally, based on labelling theory (Paternoster & Iovanni, 1989), by accepting underemployment, individuals risk to get labelled as less knowledgeable and / or less competent than individuals who are adequately employed. Earlier study argued that over-qualification and / or over-skilling sends a stronger negative signal to employers than unemployment (McCormick, 1990).

Some literature suggests that underemployment confines many graduates to low-level occupations (e.g., Baert, Cockx, & Verhaest, 2013; Dolton & Vignoles, 2000; McGuinness & Sloane, 2011). For example, Baert et al. (2013) found a strong entrapment effect of overqualification based on a study of young graduates in Belgium. The confirmation of entrapment hypothesis was also found in a study by Sherer (2004) which investigated the impact of overqualification on young people's future career chances. This study included both graduates and non-graduates and found that entering the labour market as an overqualified worker does not act as a stepping stone into a better-quality job. Instead, underemployment in one's first job is associated with worse career prospects and higher unemployment risks later in the career. However, a recent study by Verbruggen et al. (2015) suggested that the timing of underemployment matters. In particular, the impact of over-qualification on graduates' subsequent pay was higher when underemployment took place later in their careers. In particular, according to the authors, "when people do not succeed to escape their initial underemployment in terms of skills or, for some reason, end up in level underemployment later in their career, employers could interpret this as a strong signal of lower competence or lower motivation" (Verbruggen et al., 2015, p. 108).

Indeed, recent studies suggested that for many graduates, over-qualification and over-skilling are difficult employment states from which to exit. Several studies which analysed transitions in and out of mismatched jobs found that a substantial number of graduates who are overqualified or over-skilled in their initial employment, are still mismatched some years later (Bohlmark, 2003; Dolton & Vignoles, 2000; McGuiness & Sloane, 2011). For instance, Bohlmark (2003) found that 61% of 18- to 29-year-old workers in Sweden who were overqualified in 1981 were still so ten years later. These findings are of great concern, given the earlier evidence, which suggested that the negative impact of underemployment may be greater the longer an individual is in this type of employment.

The literature on graduate underemployment points to another important issue. In particular, it questions whether HE has such a profound impact on the labour market outcomes of young workers, given the fact that so many graduates today find themselves in the situation of underemployment. Studies on returns to education have attempted to answer this question. However, the evidence on whether HE is a straightforward route to high-quality employment is mixed. Studies conclude that graduates typically have higher earnings than non-graduates (Lundahl et al., 2011; Scurry & Blenkinsopp, 2011). Moreover, graduates are generally in a better labour market position in terms of the probability of being in employment, when compared to non-graduates (89% vs 75%) (HESA, 2017), but in terms of job quality they are not always found in high-quality jobs. Today graduates are increasingly found in non-graduate jobs, where they are low-paid, and they are also increasingly engaged in non-standard forms of employment (Okay-Somerville & Scholarios, 2013; O'Reilly et al., 2015). Also, graduates increasingly participate in internships, many of which are unpaid or low-paid (Lain et al.,

2014). Therefore, the position of graduates in contemporary labour markets is variable and having a graduate qualification may not be a straightforward route to a high-quality job.

Overall, the literature on underemployment points to a number of potential job quality issues among young people, particularly in relation to skills, working hours, type of contract and earnings. It also points to the importance of a match between an individual and a job in terms of several key aspects of job quality (e.g. skills, working hours and contract type). The evidence reviewed in this section also suggest that being underemployed may have similar consequences for young workers as non-standard employment (e.g. in terms of lower opportunities for training and career progression, or lower pay), and these consequences may not be limited to the time of being in this type of employment. However, to date the literature on underemployment has largely focused on graduates, with most attention given to overqualification and over-skilling, and therefore further research is needed to improve our understanding of this phenomenon among other groups of young adults and to clarify its impacts on young people's employment outcomes and individual well-being.

# 2.4.5 High-risk groups of young people

# Young people fall within high-risk groups

A young person today is not only facing much more complex choices than previous generations, but also more risky ones (Furlong, 2015; Lundahl, 2011; Predelli & Cebulla, 2011; Tulloch & Lupton, 2003). The big issue today is that a considerable number of young individuals falls within high-risk groups.

The OECD pointed to two groups of young workers which face particular hardships in finding a stable job in contemporary labour markets: the so-called group of 'youth left behind' and the group of 'poorly–integrated new entrants'. The group of youth left behind is present across all of the OECD countries and is characterised by cumulating multiple disadvantages. Young people in this group are not in employment, education or training (NEET) and tend to come from disadvantaged backgrounds and / or neighbourhoods and often lack educational qualification. The second group of 'poorly-integrated new entrants' represents on average around 20–30% of young people in the OECD area and includes young workers who often have diplomas, but find it problematic to secure a stable job, even during times of strong

economic growth. This group of young workers frequently go back and forth between nonstandard jobs, unemployment, and / or economic inactivity. The OECD review highlighted that around 30-40% of school leavers in the OECD area are estimated as being at high risk of facing persistent problems when trying to access stable employment (OECD, 2014).

According to Quintini and Manfredi (2009), the job crisis following the recession of 2008, has put more youth into the 'poorly-integrated new entrants' group or into a new group which researchers called 'at risk of becoming a lost generation'. Based on the analysis of the European Community Household Panel Survey (ECHP), the authors found that 30% of young people in Europe experience problems when trying to find a stable job and 15% are trapped in unemployment or inactivity. Poverty is also considerably more widespread among youth than it is in other age groups (Fahmy, 2007).

Finally, there is a large concentration of young workers in the so-called 'occupations with multiple disadvantages', such as personal service workers, for instance. In particular, most employees in these professions are disadvantaged in terms of multiple job characteristics such as high job demands, insecurity, poorer career prospects, a lack of training and a greater exposure to health risks (Eurofound, 2014c). This evidence points to possibly large workforce divisions based on occupation and industry in the youth context and highlights the importance of accounting for job-related characteristics in job quality studies.

# Non-graduates are in a particularly difficult position

The expansion of HE and the broader up-skilling of the UK's workforce in combination with major shifts in the structure of employment's skill requirements all mean that the options facing young non-graduates today are very different, when compared to three decades ago. The polarization of the labour market has resulted in fewer jobs for the low- and mid-qualified. In particular, the decline of intermediate-level jobs results in fewer opportunities for employment and career progression beyond entry-level jobs (O'Reilly et al., 2015). As a result, for those with some qualifications but without the university degree, the pathways (in terms of qualifications and skills) that offer best career progression and provide positive long-term employment outcomes are not clear (D'Arcy & Finch, 2016).

A recent added pressure for non-graduates has been an increasing number of graduates working in non-graduate job roles. According to D'Arcy and Finch (2016), in some occupations nongraduates find their routes to career progression blocked, with people with tertiary education preferred to non-graduates for management positions. In 2013, 50.5% of recent graduates were working in non-graduate roles, which further limits the job opportunities available for young people without a higher education degree (Sutherland, 2013). While gaining a degree-level qualification is an important factor contributing to securing a job in the contemporary labour market, non-graduate qualifications seem to have a low impact on employment outcomes for young people. The recent evidence suggests that in most sectors, there are no well-developed non-graduate career pathways (D'Arcy & Finch, 2016).

Consequently, possessing low or obsolete skills indicates a significant new social risk. Until the 1980s having low or no qualifications was not an issue in European countries, since the labour markets absorbed all young unqualified people into many of the unskilled jobs that existed then (Sweet & Meiksins, 2013). Currently, there is a large body of international research which confirms that low levels of skills are associated with poorer employment outcomes; with low skill levels reflected in lower salaries, as well as in increasing an individual's risk of being out of work (Sissons, 2011). In particular, low-skilled individuals are either out of work or are employed in the low-value-added service sector, which includes retail, hospitality, cleaning, and so on, and is known for providing low wages and little opportunity for career progression. According to Bynner (2005), low-skilled or unqualified workers face the prospect of so-called 'patchwork careers', characterised by temporary and part-time jobs interspersed with periods of unemployment.

# The role of social background

Even though it has been argued that labour market transitions have become more individualised (Chung et al., 2012), they still occur in the context of social inequality (Kauppinen et al., 2014). Studies show that disadvantaged young people often lack resources to navigate labour market transitions or to exercise choice in managing their working lives in contemporary labour markets (Furlong & Cartmel, 2005). The amount of available resources depends partially on their social background. These resources may include economic capital (e.g. financial support, purchasing housing or inheritance) (Ayllon & Gabos, 2017; Mills, Blossfeld, & Klijzing, 2005) but also human, social and cultural capital, which can be gained or improved by factors such as having well-educated parents (Bynner & Parsons, 2002; Hyggen, 2006; Kauppinen et al., 2014).

Studies show that parents provide support to grown children in response to specific needs (Eggebeen & Davey, 1998) and parental assistance tends to be stronger when young adults face problems or negative life events (Fingerman, Miller, Birditt, & Zarit, 2009). However, at the same time parental support is constrained by available resources (Fine & Fincham, 2013), and young people from higher income families are twice as likely to receive assistance from parents (Swartz, McLaughlin, & Mortimer, 2017). Studies suggest that prolonged and more variable transitions to independence and adulthood have contributed to an increase of parental support in contemporary labour markets (e.g. Fingerman, Cheng, Wesselmann, Zarit, Furstenberg, & Birditt, 2012; Waithaka, 2014; Wightman, Schoeni, & Robinson, 2012), which points to the importance of social background for youth employment outcomes. In a recent longitudinal study of young adults in the UK, ONS (2019d) showed that between 1997 and 2017 young people's living arrangements have changed considerably. While in 1997, living independently as a couple and having a family used to be the most common living arrangement for 29% of young adults (aged 18-34), today (based on data from 2017) the same is true for 22% of young people. Today the most common living arrangement is living with parents (for 32% of young people). Changes in young people's living arrangements suggest greater reliance on parental support and suggest that young people may take longer to reach full independency and some of the key markers of adulthood (such as owning a house or starting a family).

Some scholars argue that parental assistance helps young adults navigate the many challenges and uncertainties of contemporary transitions to adulthood, enabling them to achieve independency and well-being (Aquilino, 2005; Eggebeen, 2005; Johnson & Benson, 2012; Settersten & Ray, 2010). To date, studies have examined the likelihood and determinants of parental support, but little research has investigated the impact of such support in relation to job quality.

Particularly, studies showed that economic capital plays an important role in contemporary labour markets. Today young adults often receive financial support from parents (Fingerman et al., 2009; Wightman, Schoeni, & Robinson, 2012), and this support was found to be a very important resource that can protect young people against deprivation (Bjornberg & Latta, 2007) and support their education and career planning (Furlong & Cartmel, 2005). As mentioned earlier in this chapter (Section 2.3.3), the careers literature emphasises the role of individual responsibility in securing employment and ensuring career progression in contemporary labour markets (Briscoe & Hall, 2006). In other words, the employment outcomes are argued to be

related to individual responsibility and actively engaging in different employability enhancing activities, such as off-the-job training, education and overall career self-management. In the UK and other North-western European countries, young people often leave their family home very early, before they are fully established in the labour market (Cote & Bynner, 2008), and therefore they may be lacking sufficient income to navigate their labour market transitions. The literature suggests that parents can provide direct financial support and practical help to their adult children during these difficult times (Heath & Calvert, 2013).

The importance of financial support can be explained in many ways. In their study of young graduates, Furlong and Cartmel (2005) found that disadvantaged young people tend to take loans to pay for their education and with a lack of financial support from parents, they owe a high proportion of their debts to banks and / or credit card companies. The need to pay off their debts and find a job immediately after graduation to cover basic living costs hinders their career planning and the extent to which they can engage in employability enhancing activities. As a result, young people who lack financial resources are often forced to accept any job that is available. Temporary, relatively unskilled and insecure jobs are high among both college and university graduates from less advantaged social backgrounds (Furlong & Cartmel, 2005). These findings were also supported in a recent study by Bukodi and Goldthrope (2011) who found that there is a distinction between young people who can afford to wait for better work opportunities and those who have to take what is on offer, and this is shaped by both family situation and the country-level institutions.

Secondly, human capital in terms of individual skills and experience have traditionally been considered to have a substantial influence on participation and progress within the labour market (Sweet & Meiksins, 2013). Social capital has also been recognized as having an important role to play. Social capital refers to the extensiveness of social contacts and networks that a person possesses and is often regarded as an important resource, which an individual can utilise to their advantage in many social situations, such as in securing employment (Lin, Cook, & Burt, 2008). Therefore, social capital may be particularly important in contemporary labour markets, given that contemporary careers require young workers to change employers frequently (Chung et al., 2012) and career progression often occurs in the external labour market (O'Mahony & Bechky, 2006) – in this context having large social networks may be particularly beneficial. Overall, the literature suggests that both human and social capital can assist individuals in finding a job, changing a job, and progressing within the workplace.

The impact of social background has been illustrated in a recent study by Boccuzzo, Fabbris and Paccagnella (2016), which found that graduates' job quality outcomes (in terms of job satisfaction and education-job match) are affected by the choice of high school and the university degree, which in turn is strongly influenced by one's social capital, such as living in highly educated and economically better-off contexts. In other words, any education decision is highly affected by the social and economic context, in which the individual lives. For example, highly educated parents tend to pay more attention to their children's education, can help their children to make more informed educational choices, and following the completion of their education, activate their own social networks to assist their children to get good-quality jobs. In addition, young people from more advantaged social backgrounds are also more likely to attend elite institutions and organisations are particularly keen to employ workers from such institutions (Brown et al., 2004).

Moreover, today employers require workers to have so-called 'soft skills' alongside education and work experience, which may include communication, teamwork and interpersonal skills, for instance (O'Reilly et al., 2015; Sweet & Meiksins, 2013). While being a student and participating in university life contributes to the enhancement of various soft skills through the opportunity to engage in different social interactions, social background also significantly helps in formation of such skills, from early stages of one's life through to adulthood. Individuals from more advantaged social backgrounds are therefore considered as 'better equipped' in softskills - they are often viewed as more presentable, more confident, and better communicators (Archer & Davison, 2008). In general, employers are particularly keen in employing young workers from more advantaged social backgrounds in both low- and high-skilled jobs (Brown et al., 2004). According to Archer and Davison (2008, p. 8) "it appears that while many graduates hold satisfactory qualifications, they are lacking in the key "soft skills" and qualities that employers increasingly need in a more customer focused world". Given the large participation of young workers in the service industry (as discussed in Section 2.2), having higher social background may be particularly valuable to young workers today.

The literature reviewed in this section suggests that, due to increasingly challenging and prolonged transitions to employment and independence in the today's labour market, parents have stepped in to support their adult children. Based on this evidence, it can be assumed that social background may play an important role in determining young workers' employment outcomes in contemporary labour markets (i.e. the extent to which young workers are able to

secure good-quality jobs). However, at the same time, the role of the family should be more salient in countries which provide limited government resources and social support for young people (Moreno, 2012; Walther, 2006). The impact of institutional context is further discussed in Chapter 4 (Section 4.2). Recent studies among working age populations demonstrated that there is a link between social background and job quality. For instance, Eurofound (2009) found that less advantaged social background is associated with lower job security, less training and development opportunities, lower autonomy and less meaning on the job.

# 2.5 Changing definition of young adulthood

Previous sections showed that today many young people face challenging labour market experiences and other vulnerabilities that may steer them off course, stall them, or push them backward on their way towards adulthood. When compared to previous generations, nowadays young people spend more time in education, take longer to find jobs and launch careers, and as a result often delay moving out of parental home, forming relationships and starting a family which are some of the basic markers of adulthood (Arnett, 2014; Blatterer, 2010; Settersten & Ray, 2010).

Stable employment, which was once the foundation of adulthood, is becoming more elusive with average job tenure being shorter and employment transitions occurring more frequently. While in the past, workers aged 25–early 30s often entered adulthood and stable jobs, today the situation of these workers seems variable and uncertain (Sweet & Meiksins, 2013). This chapter suggests that the employment disparity exists not only for younger workers (16-24) but also for slightly older young individuals (25-34), who are more likely to be underemployed or having a temporary job than older workers (35-65) (Scarpetta et al., 2010). In short, the literature suggests that due to increasingly long and difficult transitions to stable employment in contemporary labour markets, many young people are also taking longer to make a transition to independency and adulthood (Settersten & Ray, 2010).

As a result, the definition of a 'young adult' has been changing and recent studies consider the contemporary transition into adulthood to span the ages of 18–34 (Arnett, 2014; Blatterer, 2010). Researchers frequently use a term 'emerging adulthood' as a label for young people aged 18 to early 30s (Arnett, 2014). This highlights the importance of examining broader age

groups of young people, in addition to focusing on young school-leavers (18-24) as those aged 25-34 also face many difficulties in paid work but have not been given enough attention in both research and policy contexts.

# 2.6 Chapter summary

Youth employment is becoming increasingly more difficult and diversified. The evidence reviewed in this chapter suggests that, as a result of the changing demands of the labour markets in the past decades, today young adults face more challenges in paid work, when compared to the overall workforce and the previous generations of young people (e.g. Sweet & Meiksins, 2013; De Lange, 2013; Lundahl, 2011; O'Reilly et al., 2015; Scarpetta et al., 2010; Scurry & Blenkinsopp, 2011; Sutherland, 2013). One of the most widely discussed issues is youth unemployment, which affects a large proportion of young workers in the UK and other European countries. In the UK the importance of youth unemployment is reflected in the vast research in the area and, at policy level, in interventions which focus predominantly on either increasing the skills and qualifications of young people or bringing more youth into paid employment (e.g. De Lange, Gesthuizen, & Wolbers, 2014; Gontkovicova et al., 2015; Madsen et al., 2013; Refrigeri & Aleandri, 2013; Wolbers, 2007). However, these policy initiatives do not take into consideration the nature of work into which young people enter.

Studies reviewed in this chapter showed that the focus on youth unemployment and access to the labour market disregards other aspects of marginalisation and inequality. Today many young people live under precarious employment conditions (such as insecure, involuntary temporary and / or part-time employment), have problems in finding stable employment, are not well matched to their jobs in terms of skills and / or education, and generally some groups of young people are stuck in poor-quality jobs with little opportunities of moving up the employment ladder (e.g. Bell & Blanchflower, 2012; Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2012; Sutherland, 2013). In addition, the review of the careers' literature suggests that, in comparison to previous generations, the current generation of young people is more likely to have a career characterised by less stability and greater job and / or organisational mobility (e.g. Clarke, 2008; Lyons et al., 2012; O'Reilly et al., 2015; Sweet & Meiksins, 2013). This insecurity and uncertainty in paid work is accompanied by increasing levels of individualisation of risk in contemporary labour markets, where greater emphasis is

placed on individual responsibility in securing jobs and developing careers (Predelli & Cebulla, 2011).

However, previous literature on youth employment has weaknesses. The literature in the area is fragmented, with different disciplines tackling different array of youth employment issues. While the research on marginal employment, underemployment, generational studies and the career literature have made a significant contribution to our understanding of youth employment in contemporary labour markets, neither contribution alone is considered comprehensive. In particular, to date there is a limited number of studies looking at youth employment from a more holistic and multidisciplinary perspective. The generational literature suggested changing preferences and attitudes among young people, and that today they are increasingly attracted to meaningful work which provides greater autonomy, better work-life balance, and more training and advancement opportunities (De Hauw & De Vos, 2010; Dries et al., 2008; Wong et al., 2008). Yet, to date little attention has been given to these aspects of job quality, and intrinsic aspects of work have often been disregarded in both research and policy contexts. The fact that young people's work experiences have changed in a profound way in the past decades indicates that a more up-to-date assessment of the youth employment is required.

Furthermore, there is also a limited understanding of the factors affecting youth labour market trajectories. Existing literature and policy have emphasised the role of individual factors and personal agency in developing careers and securing high-quality jobs. In particular, this chapter pointed to the importance of employability, which is mainly expressed in an individual's skills, experience and career self-management (Clarke, 2008; Tomlinson, 2012; Wilton, 2014). Past research showed that employability is considered an important feature, which allows young people to stay attractive in the context of contemporary labour market and adjust to changing employer demands and labour market insecurities (Tomlinson, 2012). In addition, some authors have also suggested that employability is likely to be accompanied by a sense of control over one's career, and this feeling, in turn, may be associated with workers' well-being (Fugate et al., 2004). Thus, given high uncertainty and insecurity of youth employment in contemporary labour markets (O'Reilly et al., 2015; Sweet & Meiksins, 2013), employability may be particularly important in relation to young workers' mental health. The role of employability is further discussed in Chapter 4, which provides an overview of factors affecting job quality and mental health.

The role of individual differences was also highlighted in studies on returns to education, which showed that graduates seem to be in a better labour market position in terms of earnings and the probability of being in employment, when compared to non-graduates. However, regarding other aspects of job quality, the impact of educational status was mixed and holding a university qualification did not necessarily guarantee better employment prospects (Lain et al., 2014; Okay-Somerville & Scholarios, 2013; O'Reilly et al., 2015; Scurry & Blenkinsopp, 2011).

In addition, some studies suggested that social background may be an important resource for young workers as those from more advantaged social backgrounds may have more resources (in terms of economic, social and human capital) to manage and develop careers in the context of contemporary labour markets (Bukodi & Goldthrope, 2011; Furlong & Cartmel, 2005; Heath & Calvert, 2013). Given the increasing shift to service-oriented work, employers are particularly interested in employing young people from more advantaged social backgrounds in both low- and high-skilled occupations (Archer & Davison, 2008; Brown et al., 2004). This evidence suggests that there is a need for systematic evaluation of job quality across different groups of young workers to gain a more complete understanding of the individual-level predictors of job quality (Clarke, 2008; Tomlinson, 2012).

Beyond the impact of individual factors, this chapter showed that youth employment should not be studied in isolation from the wider socio-economic context, and that job quality appears to be particularly problematic in certain industries and occupations. The review of youth employment issues suggests that in contemporary labour markets young people may be affected by a wide range of external factors (such as changing employer expectations, or lower access to training and career advancement) which are often beyond their personal control (Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2012). The evidence also shows that the lowest quality jobs tend to concentrate in low-skilled service industries, which in the past decade attracted a large proportion of young workers in the UK and wider European context (Eurofound, 2014b). Likewise, the generational literature suggests that contextual factors (e.g. changing demands of contemporary labour markets) may affect young workers' attitudes and preferences to work, which further strengthens the argument that the role of individual factors and personal agency in developing careers and securing high-quality jobs might have been overestimated in previous research and policy contexts (Predelli & Cebulla, 2011). In certain jobs and institutional contexts young workers may be constrained in their decision-making by external factors which may limit the role of individual factors and worker agency. Chapter 4

examines the role of individual differences, job-related characteristics and wider institutional context, and the way in which these factors may alleviate, or contribute to, better or worse job quality in the youth context.

Further to this, studies in the area have tended to focus on young workers aged 24 and below, who are in transition from school-to-work. This focus is also noticeable in the policy context, with policies designed almost exclusively to tackle employment issues of young school-leavers (Chung et al., 2012; Scarpetta et al., 2010). However, this chapter showed that those who are over 24 also face significant labour market difficulties and are more often exposed to lower quality of working life, when compared to prime-aged workers. With the transitions to stable employment and adulthood becoming longer and more diversified (Arnett 2014; Settersten & Ray 2010), and with increasingly more young people going into HE in the UK and other developed countries (Sutherland, 2012), it is important to extend the focus beyond the young school-leavers.

A second area of research which emerged as a result of this review concerns the outcomes of job quality for young people. In particular, there is a lack of consensus among researchers in relation to the extent to which young individuals have been affected by the current state of employment and involvement in lower-quality jobs. On one hand, some researchers argue that lower-quality employment (e.g., non-standard employment and/or underemployment) is a 'stepping stone' for young workers, or an 'avenue' to a good-quality work (Ferrie, 2001; Virtanen et al., 2005). On the other hand, the evidence also shows that poor quality employment can be a 'trap', where the chances for a young person of moving out are poor (Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010). Further to this, the generational literature claims that current generation of young people prefer different qualities in their work, when compared to previous generations (e.g. Ng et al., 2010; Sturges & Guest, 2004; Twenge, 2010), and that young people may be willingly choosing lower-quality jobs (e.g. lower job security or lower-skilled jobs) because these jobs compensate for poor job attributes by offering better quality on other dimensions (e.g. work-life balance). This approach suggests that the involvement in lower-quality work should not be a concern for researchers and policymakers, because it is in line with young people's preferences.

The literature presented in this chapter shows that, for a large proportion of young people, nonstandard employment and underemployment are difficult states to exit and are often associated with poorer job quality on other dimensions (e.g. Baert et al., 2012; McGuiness & Sloane, 2011; Scarpetta et al., 2010; Sutherland, 2013). The fact that these jobs often provide less training and development opportunities (Buchel & Mertens, 2004) casts doubts on the stepping stone argument. In addition, the uncertainty and insecurity of employment, combined with increasing individual responsibility in securing jobs and developing careers may have a negative impact on psychological well-being. In particular, the literature reviewed in this section showed that the way young adults experience work in the today's labour market may undermine their basic psychological needs for control, security and autonomy (Ryan & Deci, 2000; Sheldon et al., 2001). However, to date little research has investigated the individual outcomes of job quality in the youth context. The lack of consensus in relation to the consequences of lower-quality employment provided a rationale for this thesis to investigate mental health as an important outcome of job quality in contemporary labour markets which is the focus of the next chapter.

# Chapter 3: Job quality and mental health among young workers

# 3.1 Introduction

Chapter 2 highlighted the difficult position of young workers in contemporary labour markets and pointed to the need of taking a holistic approach to the interpretation of young workers' job quality. As a result of this review, the outcomes of job quality in the youth context emerged as a second important area which would benefit from further research. In particular, to date there is a lack of consensus among researchers in relation to the implications of job quality for young people and discussions in this area often remain hesitant and inconclusive.

As highlighted at the beginning of this thesis (Chapter 1), the concept of job quality is only important if some benefits occur from jobs being of higher quality – if there are outcomes for individuals doing the jobs, the employers who offer the jobs, or the wider society in which each job is performed (De Bustillo et al., 2011). Chapter 2 showed that the way young individuals experience work in today's labour markets may carry risks with regard to their mental health (e.g. Colakoglu, 2011; Rodrigues & Guest, 2010; Ryan & Deci, 2000; Sheldon et al., 2001). This thesis argues that job quality is important from a psychological health perspective and focuses on mental health as an important outcome of job quality in the youth labour market which requires further investigation.

Chapter 3 is organised as follows. Section 3.2 explains the significance of job quality for mental health in the workplace, and why this outcome of job quality is important to study in the context of young adults and contemporary labour markets. This section argues that, in addition to increasingly more difficult labour market trajectories (Chapter 2), young people are more prone to experiencing mental health problems and more likely to be employed in jobs characterised by high psychological demands, when compared to the overall workforce. Section 3.3 reviews

the approaches to defining mental health, while highlighting the complexity of the construct and the importance of examining both positive and negative dimensions of mental health. Section 3.4 examines the relationship between job quality and mental health and reveals key work-related predictors of mental health in the youth context. It highlights the importance of a match between an individual and a job for mental health outcomes and concludes that it is necessary to go beyond the role of psychosocial quality of work when examining the impact of job quality on mental health in the youth context. Finally, section 3.5 provides the summary of this chapter and argues that research in the area is fragmented, with little attention given to contemporary workplace issues and individual abilities and needs in job quality and mental health studies.

# 3.2 Importance of job quality for mental health in contemporary workplaces

Changes in the labour markets during the last decades have not only influenced the quality of available jobs but could have also affected the psychological well-being of young workers. Recent studies among working-age populations suggested that the diffusion of non-standard working arrangements has put the mental health of workers at greater risk, because it is associated with decreased job security, restricted employment protection, and limited access to health insurance coverage (Cottini & Lucifora, 2013). This insecurity and uncertainty in paid work is accompanied by increasing levels of individualisation of risk in the youth labour market, where greater emphasis is placed on individual responsibility in securing jobs and developing careers, which may lead to subjective insecurities (Erlinghagen, 2008) and as a result poorer psychological health. What is more, the growth of youth underemployment in the past decade (Bell & Blanchflower, 2011; Sutherland, 2012) is considered as a potential social stressor which places high emotional demands on workers that may also compromise their mental health (Friedland & Price, 2003). The review of youth employment issues in Chapter 2 established that the way young individuals experience work in contemporary labour markets may undermine their basic psychological needs for control, security and autonomy (Ryan & Deci, 2000; Sheldon et al., 2001).

Further to this, while traditionally the impact of work on health has been examined in terms of physical risks, the decline of manufacturing jobs, greater computerization of job tasks and shift to service-oriented work (Chapter 2, Section 2.2) have significantly changed the nature of job

demands and increased the occurrence of psychological job hazards in the workplace (Cappelli et al., 1997; Robone, Jones, & Rice, 2011). Many argue that, as a result of the changing nature of work, today individuals are expected to work under greater time constraint and with intensified effort (Gallie, 2017; Green, 2006). Contemporary workplaces are characterised by constant connectivity, long and irregular working hours, with no clear separation between work and leisure time, where many workers in both service and knowledge industries are required to be available to clients and customers twenty-four hours a day, seven days a week (Sweet & Meiksins, 2013). Consequently, work today is seen as much more psychologically demanding (Cottini & Lucifora, 2013).

At the same time, there is a high prevalence of common mental health problems (such as depression or anxiety) in the working population. According to the Mental Health Foundation (2016), around 25% of the working population (aged 16-64) in the EU suffers from some type of psychological health problem at some point in their lives. In the EU, depression is the most common mental health problem and is reported by 8-12% of the working population (Mental Health Foundation, 2016).

Although depression can appear at any time in one's life, the average age of onset is in the midtwenties (Dooley, Prause, & Ham-Rowbottom, 2000). Therefore, in contrast to other long-term health conditions, the probability of experiencing a common mental health problem does not increase with age. In addition, the evidence also shows that mental health problems are on the rise and current generation of young people is more likely to experience common mental health problems, when compared to previous generations of young adults. For example, the analysis of the Health Survey for England shows that, between 2004 and 2014, there was an increase in the proportion of people aged 16-32 with common mental health problems (NHS, 2016). A recent report by the Trade Union Congress (TUC) also pointed to the increasing prevalence of mental health problems among young workers in the UK as a whole (TUC, 2015).

Finally, there is a growing recognition of the importance of mental health across the EU. Recently, the World Health Organisation (WHO) has developed the European Union Mental Health Action Plan 2013-2020 in close collaboration with leading actors in mental health in the EU region (WHO, 2015). The objectives of this plan have been adopted by the EU Member States. Also, Health 2020 is the new European policy framework for health and well-being, which aims to support actions of individual European countries to significantly improve the

health of nations (WHO, 2013). In work context, many European countries have expressed a strong interest in promoting the mental health agenda. In the UK, the new online portal 'Mental Health at Work' has been launched in September 2018 to provide a free resource for both employees and employers on how to support and improve mental health in the workplace (Mind, 2018).

It has also been acknowledged that one route to improving the mental health of the European population is the promotion of job quality in the workplace. However, despite the European-wide efforts to address the mental health of nations, to date mental health issues in the workplace have remained an under-recognized problem (Arnold & Randall, 2010; Cottini & Lucifora, 2013). Recently, the European Agency for Health and Safety at Work (EU-OSHA) called for the need to address mental health in the workplace and workplace factors influencing it as a priority to both researchers and policymakers for the years 2013-2020 (EU-OSHA, 2014).

Moreover, recent studies among working-age populations reveal that those in lowest- quality jobs (in terms of its psychosocial aspects) have similar or larger risk of poor mental health than those who are unemployed. For instance, in a longitudinal study, Butterworth et al. (2013) found that moving from unemployment to a job of poor psychosocial quality was more damaging to mental health than remaining unemployed. These results are of great concern given that to date researchers and policymakers have primarily focused on how to bring more young people into paid employment, with little interest in job quality (O'Reilly et al., 2015; Scarpetta et al., 2012). Given the increasing occurrence of psychological job hazards in the workplace, the high prevalence of mental health disorders in society today and especially among youth, and finally the difficult position of young workers in the contemporary labour market (Chapter 2), this subject is of great importance to both researchers and policymakers.

# 3.3 Defining mental health

Mental health takes many forms and has no single definition. The terms 'mental health' and 'psychological well-being' are often used interchangeably (Warr, 2013) and can refer to the mental, psychological, or emotional elements of individuals as indicated by emotional states and rates of mental illnesses and diseases (Danna & Griffin, 1999). Mental health is considered

as one of the key components in the World Health Organisation's (WHO) definition of general health, which is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2006). This definition suggests that there is no health without mental health, and health is not simply the absence of disease (Sivris & Leka, 2015).

Indeed, the last two decades have witnessed a shift in the academic literature from an emphasis on disease to a focus on well-being and positive mental health. This shift has been particularly noticeable in psychological research and influenced by the emergence of positive psychology in the late 1990s, which highlighted the importance of focusing not only on curing mental illness, but also on making lives of people more productive and fulfilling and nurturing human talent (e.g. Peterson & Seligman, 2004; Seligman, 2012; Seligman & Csikszentmihalyi, 2000). In recent years, positive mental health has also captured the attention of social scientists, economists and policymakers (e.g. Layard, 2006; Marmot, Ryff, Bumpass, Shipley, & Marks, 1997). More recently, the WHO has described mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2014).

While research still tends to emphasise the negative aspects of mental health (e.g. depression or anxiety), today researchers agree that mental health is also about the presence of positive psychological states and resources (e.g. Huppert, 2009; Seligman, 2012; Warr, 2013). Recently, Huppert (2009, p. 1) described psychological well-being as "the combination of feeling good and functioning effectively". According to Warr (2013), an adequate conceptualisation of mental health must include a wide range of components, and it is desirable to incorporate both positive and negative themes. The previous literature suggested a wide array of positive and negative aspects of mental health. Based on this, Warr (2013) distinguished two key dimensions of mental health: affective well-being and cognitive-affective syndromes. In addition, the author also distinguished between: (1) 'context-free' mental health which refers to life in general (e.g. life satisfaction); and (2) 'domain-specific' mental health which is directed at one aspect of life (e.g. satisfaction with one's job). While these measures are conceptually interrelated, domain-specific measures are more responsive to domain-related conditions and activities (Warr, 2007). For example, the measure of job satisfaction is more responsive to conditions in the domain of work while context-free mental

health is also influenced by factors in other domains (e.g. health, family, or community). Jobrelated well-being is often of main interest to occupational health psychologists, but some researchers examine instead the context-free well-being to have a broader overview of the impact of work-related factors on individual well-being (Warr, 2013).

Affective well-being is often defined in terms of individuals' feelings, which are also called 'affects' (Kaplan, Dalal, & Luchman, 2013). Affects are experiences that are "primitive, universal, and simple, irreducible on the mental plane" (Russel, 2003, p. 148) and can be both positive or negative. Affects can be considered as states which can change over time (Lazarus, 1991). Psychologists suggested that affective well-being should be studied not only in terms of 'displeasure-to-pleasure' but also in terms of 'low-to-high mental activation or arousal' (e.g. Remington, Fabrigar, & Visser, 2000; Russel, 1980, 2003). For example, enthusiasm is considered high-activation positive affect, whereas comfort can be described as a low-activation positive affect. Research into positive and negative emotions is expected to cover mental states of both high and low activation (Kaplan, Dalal, & Luchman, 2013).

The second dimension of mental health includes cognitive-affective syndromes, which are more complex and comprise thoughts and memories, in addition to feelings. They are organised around specific themes and may include satisfaction, engagement, interest, confidence, affection and disorders (Huppert, 2009; Warr, 2013). According to Warr (1987), a psychologically healthy person should also be competent (i.e. have adequate psychological resources to deal with difficulties) and have high levels of aspiration (i.e. show interest and engagement with the environment). Competence and aspiration constitute important aspects of mental health (Warr, 1987). In contrast to affects, these cognitive-affective syndromes call for more mental processing and reflection. For example, when responding to a life satisfaction scale, one is required to remember certain episodes, interpret, evaluate and integrate what is recalled (Staw & Cohen-Charash, 2005). Other syndrome measures include negative thoughts or common psychological problems (e.g. anxiety or depression). The General Health Questionnaire (GHQ; Goldberg & Williams, 1988) is a well-established screening questionnaire for minor psychiatric disorders in non-clinical populations.

Previous research shows that all forms of mental health can be examined at state and trait levels. In particular, mental health is sometimes examined in dispositional terms: an individual may be described as 'cheerful' or 'anxious' in general. What is more, the same feelings can be examined at state level: an individual may feel anxious or cheerful at a specific point in time (e.g. during the past few days) rather than in general terms (Warr, 2013).

# 3.4 The relationship between job quality and mental health

The evidence suggests that mental health benefits of employment depend on psychosocial quality of work. Studies show that high job intensity, low autonomy at work, poor social support from colleagues and managers and low job security contribute to poorer individual well-being and common mental health problems such as anxiety or depression (e.g. Bonde, 2008; Butterworth et al., 2013; Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010; Rugulies, Bultmann, Aust, & Burr, 2006; Rydsted, Head, Stansfeld, & Woodley-Jones, 2012; Stansfeld & Candy, 2006; Virtanen et al., 2005).

Beyond the psychosocial quality of work, other aspects of job quality have also been associated with mental health. These include pay, contract type, working hours and, to a lesser extent, physical risks and development opportunities in the workplace (e.g. Bardasi & Francesconi, 2004; Bell, Otterbach, & Souza Poza, 2012; Cottini, 2012; Cottini & Lucifora, 2013; Eurofound, 2012; Field, 2009; Hammarstrom, Virtanen, & Janlert, 2011). The aim of this section is to examine the relationship between job quality and mental health, and to identify key work-related predictors of mental health in the youth context.

The literature is organised in a thematic order. In particular, due to the fact that certain components of job quality tend to be studied together in relation to mental health, to reflect this tendency in the literature, different aspects of job quality were grouped together and examined under six different themes: (1) job security, contract type and working hours; (2) development opportunities in the workplace; (3) intrinsic quality of work; (4) work intensity; (5) pay; and (6) health and safety. In doing so, a multidimensional approach to job quality is followed, based on the job quality framework proposed by De Bustillo et al. (2011), which was adopted for the purpose of this thesis.

#### Job security

Studies show that job security, contract type and working hours are the key elements of job quality which significantly influence the psychological health of workers in contemporary labour markets (Quinlan & Bohle, 2015). The term job security is defined as the perceived probability of losing one's job and therefore is a subjective experience (De Bustillo et al., 2011). Insecurity resulting from the threat to a specific job may be translated into employment insecurity, if an individual perceives it difficult to find another job, or chronic job insecurity if the perceived job insecurity continues for a long time (Ferrie, 2001). The importance of job security is driven by the dramatic growth of non-standard employment in recent decades which, according to many researchers, has contributed to an overall increase of job insecurity, particularly in Britain (Bardasi & Francesconi, 2004) and other European workplaces (Naswall & De Witte, 2003). According to Ferrie (2001), contemporary workplaces are characterised by insecurity and a sense of loss of control, which can have serious consequences for the health of workers. Given the fact that young people are overrepresented among employees on non-standard employment in the UK, job security is particularly important to examine in the youth context (Scarpetta et al., 2012).

Overall, most studies to date have confirmed that perceived job insecurity is associated with poor psychological health among working-age populations (e.g. Burchell, Ladipo, & Wilkinson, 2001; D'Souza, Strazdins, Lim, Broom, & Rodgers, 2003; Eurofound, 2012; Ferrie, Shipley, Newman, Stansfeld, & Marmot, 2005; Rugulies et al., 2006; Quinlan & Bohle, 2015). For instance, in a study across all age groups comprising twenty UK firms, researchers found a strong link between job insecurity and stress, and such connection became even stronger as the exposure of workers to the feeling of job insecurity increased (Burchell, Ladipo, & Wilkinson, 2001). In the youth context, the evidence is limited. There seem to be a lack of studies examining the health effects of job insecurity, even though much of the burden of job insecurity is today falling on young people, and therefore they are expected to be at greater risk of suffering from its negative consequences (OECD, 2018). What is more, the examination of young people's work orientations (in terms of the importance they put on different aspects of work) reveals that job security stands out, with 95% of young workers in the UK considering it 'essential' or 'very important' aspect of their working life (Skills & Employment Survey,

2012). Based on this evidence, it is expected that job security is positively associated with mental health of young adults.

# Type of contract and the duration of working time

When it comes to the impact of contract type on mental health, the results are mixed. It can involve permanent or temporary working arrangements. Since permanent contract does not have an expiration date, it is often associated with higher job security and therefore is considered to be the most desirable and beneficial to workers' well-being (De Bustillo et al., 2011).

A related issue involves the duration of working time. Long work hours (which are defined as work hours exceeding 38 hours per week) have been consistently associated with adverse health outcomes (e.g. Caruso, 2006; van der Hulst, 2003; Sparks et al., 1997). Temporary employment is often accompanied by part-time work (Virtanen et al., 2005). As mentioned in Chapter 2 (Section 2.4), temporary and part-time working arrangements are often labelled as 'non-standard' or 'marginal' employment and are high among young workers in contemporary labour markets (O'Reilly et al., 2015). There is a considerable concern about non-standard employment offering poorer pay, lower job security, lack of development opportunities (such as training and promotion prospects), as well as lower employment protection when compared to standard full-time employment (Eurofound, 2012; Scarpetta et al., 2012).

Temporary employment can include fixed-term jobs, casual work or jobs without a contract (Virtanen et al., 2005). Non-permanent employment has traditionally been considered as disadvantageous to mental health and several studies of adult workers confirmed this traditional assumption (e.g. Martens, Nijhuis, Van Boxtel, & Knottnerus, 1999; Silla, Gracia, & Peiro, 2005; Virtanen et al., 2005). Workers employed on temporary contracts report to experience worse physical health, such as backaches (Benavides & Benach, 1999) and poorer mental health (De Cuyper et al., 2008).

Regarding young workers, a recent study by Ek, Sirvio, Koiranen and Taanila (2014) focused on a group of Finnish workers at the age of 31 and found that precarious work (defined as a combination of temporary, part-time employment and unstable work history) is associated with all psychological well-being outcomes among men (in terms of anxiety, depressive symptoms and low psychological resources) and with depressive symptoms among women. However, it is not clear which aspects of precarious work (contractual conditions, working hours or unstable work history) contributed to the above findings. It is also important to note that although this is a recent study, it was based on a very old data set (collected in 1997) and therefore it does not inform about the impact of precarious employment on young people's mental health today.

Moreover, recent literature suggests that non-standard employment (as represented by temporary and part-time employment) is not associated with negative psychological health outcomes (Bardasi & Francesconi, 2004; Rodriguez, 2002) and holding a permanent job does not appear to have any beneficial effects on general health in comparison to fixed-term employment (Cottini, 2012). In particular, using ten waves of the British Household Panel Survey (BHPS), Bardasi and Francesconi (2004) found that atypical employment (temporary and part-time work arrangements) did not have any long-lasting negative effects on mental health (measured by the General Health Questionnaire; Goldberg, 1988) and work-related wellbeing (in terms of job satisfaction and life satisfaction) for either men or women, and on average across all age groups. Only seasonal / casual employees reported lower job satisfaction, but not poorer mental health. Also, very few employment transitions (such as moving from full-time to part-time employment) had a detrimental impact on mental health status. Interestingly, some forms of atypical work were associated with better (rather than lower) wellbeing, indicating that the willingness to accept such jobs is likely to have an impact on the relationship between non-standard employment and health (Bardasi & Francesconi, 2004). This study is an important contribution to the previous research, because it used a large longitudinal survey which allowed examining the effects of non-standard employment over time. Similarly, Rodriguez (2002) examined self-reported general health of workers and found that there were no significant differences between the health status of permanent part-time and full-time British workers, and that only part-time casual jobs without a contract had a negative impact on health. Therefore, the question of whether part-time work has beneficial or harmful mental health effects remains unanswered.

Overall, these results suggest that the type of contract on its own and the number of working hours (as represented by permanent full-time, part-time or temporary employment) may not be a direct predictor of psychological well-being and other factors may play a role in explaining the relationship between temporary employment (or non-standard employment) and mental well-being.

Some researchers suggest that those with non-standard working arrangements should not be considered as a homogenous group in relation to permanent full-time workers. The non-standard working arrangements are detrimental to psychological health only under certain circumstances, specifically when non-standard employment is involuntary (Artazcoz, Benach, Borrell, & Cortez, 2005; Price & Bulgard, 2006; Silla et al., 2005). In particular, one of the concerns regarding the increase in non-standard jobs is the extent to which people who are employed in this type of work are doing so voluntarily. Being in a non-preferred workplace or occupation is associated with headaches, fatigue and slight depression (Aronsson & Goransson, 1999; Stengard, Bernhard-Oettel, Berntson, Leineweber, & Aronsson, 2016), lower life satisfaction (Muhonen, 2010), as well as decreased job engagement and greater intention to leave a job (Bernhard-Oettel, De Cuyper, Berntson, & Isaksson, 2008). Most studies examining non-standard employment do not distinguish its involuntary dimension (Green & Livanos, 2015).

Regarding working hours, recent evidence that comes from older workers suggests that it is not the number of working hours that matters most to worker well-being, but whether the hours worked are consistent with their preferences (e.g. Bell, Otterbach, & Sousa-Poza, 2012; Wooden, Warren, & Drago, 2009). For example, Wooden et al. (2009) showed that workers' subjective well-being, job satisfaction and life satisfaction are only affected by the number of working hours if these are not in line with their preferences. Similarly, Bell et al. (2012) examined the relationship between working hours' mismatches and health (measured in terms of satisfaction with health and self-assessed general health) in the UK and Germany and found that underemployed men also report lower self-assessed health. For underemployed women, this is only the case when they work fewer than 20 hours per week. Likewise, overemployment (long work hours) negatively affects workers' self-assessed health but for male workers the effects are only significant when their working hours exceed 35 hours per week.

While there have not been any recent studies in the context of youth employment, some earlier studies (which were carried out in the 1990s), found that there are high costs associated with the involuntary nature of part-time employment (Booth, Francesconi, & Frank, 2002; Dooley et al., 2000; Praise & Dooley, 1997; Sadava et al., 2000). For instance, based on a sample of US graduates, Dooley et al. (2000) found that employment characterised by involuntary part-time contract is associated with higher depressive symptoms, when compared to full-time jobs, and is as detrimental to mental health as unemployment. This finding is important, since the
outcomes of unemployment have been widely studied in the young adult population. Youth unemployment has been linked to psychological symptoms, such as depression and a loss of confidence (Morrell, Taylor & Kerr, 1998), as well as to long-term negative outcomes in terms of unemployment, poorer health, lower earnings and decreased job satisfaction (Bell & Blanchflower, 2011c). Similarly, involuntary part-time employment was associated with lower self-esteem in a study of recent school-leavers in the US (Prause & Dooley, 1997). Further to this, Sadawa et al. (2000) confirmed that young Canadian workers (aged 21-28), who are engaged in involuntary part-time employment also report lower general health, when compared to young individuals in full-time jobs. This evidence suggests that being in employment which is characterised by lower than desired working hours may have a detrimental impact on mental health. However, regarding young workers there has been little or no research on this area in the recent past and the studies presented above are based on data sets collected in the 1980s and early 1990s. What is more, there seem to be a lack of studies which would examine the extent to which the involuntary nature of the type of contract (such as permanent versus non-permanent contract) is associated with mental health outcomes among young workers.

This discrepancy between job characteristics and worker needs is explained in the theory of person-job fit (Edwards, 1991), which says that a mismatch between workers' preferences for certain working conditions and the actual working conditions on that job (the so-called 'worker needs-job supplies fit') causes stress and the occurrence of mental health problems.

The impact of involuntary engagement in non-standard employment is an important issue to examine in the context of youth employment. Recent evidence shows that today many young workers are increasingly choosing non-standard work because they have no other choice (Anderson & Winefield, 2011; Nunez & Livanos, 2015), and that non-standard working arrangements are becoming an obligation rather than an option for young adults (Scarpetta et al., 2010). Nunez and Livanos (2015) examined the causes of different types of temporary employment in Europe and found that women and young people were more likely to be in temporary employment because they could not find a permanent contract rather than being 'temps by choice'. Recently, Scurry and Blenkinsopp (2011) highlighted the importance of assessing graduates' preferences when investigating underemployment, since some graduates may choose certain types of work due to their individual needs.

What is more, the literature also suggests that young people express a strong preference for full-time work and permanent type of contract. For instance, regarding working hours Bell and Blanchflower (2011) found that "there is a very distinctive pattern of preference for full-time jobs by age (..) and those aged 18-29 are significantly more likely to express a preference for full-time work" (p. 6). What is more, while those in the 18-29 age group are more likely to be in temporary jobs than older workers, they are also more likely to express a preference for a permanent job, when compared to other age groups (Bell & Blanchflower, 2011).

An earlier study of young adults' attitudes to work found that, while young people acknowledge the existence of non-standard employment, young workers included in the study did not want to work in part-time or temporary jobs. Instead, they rated a traditional idea of a permanent full-time job as something very valuable to them (Worth, 2002). These findings are of great concern, given that today so many young people are employed in non-standard jobs (Anderson & Winefield, 2011). Being 'locked-in' at the workplace (described as being in a non-preferred workplace) has been associated with lower subjective health and greater depressive symptoms in a study of adult workers (Stengard et al., 2016). These findings suggest that being in permanent employment is likely to be more beneficial to young people's mental health, when compared to temporary employment. Regarding working time, long work hours are likely to contribute to poorer well-being but the findings in relation to part-time work are inconclusive. This review suggests that closer attention should be given to the role of young workers' needs when examining the relationship between contract type, working hours and mental health.

#### 3.4.2 Development opportunities in the workplace

The availability of development opportunities is closely related to skill utilisation in the workplace. The development opportunities include training provided by the employer and the extent to which a job offers good prospects for career advancement (De Bustillo et al., 2011). The opportunity to develop new skills in the workplace through training appears to be particularly important for young workers in contemporary labour markets. Today, due to the changing nature of work and careers, there is an ever-increasing demand for skills and qualifications across all industries and occupations (Sweet & Meiksins, 2013). In the UK, the dramatic policy-driven increases in HE participation rates in the last two decades (Purcel &

Elias, 2004) suggest that human capital (such as skills, qualifications and knowledge) is currently one of the most important assets for young people. However, the educational status alone does not lead to development through the job and training plays an important role in the workplace skill formation (Korpi & Tahlin, 2009). What is more, with increased job and organisational mobility driven by the changing nature of careers, enhancing one's own skills set is crucial, as it enables workers to move more easily between different jobs and employers (Ng, Sorensen, Eby, & Feldman, 2007).

Despite the growing importance of skills and knowledge in contemporary labour markets, Chapter 2 suggested that today young workers have often limited access to training and the provision of on-the-job training (in terms of the volume of training) has significantly decreased in the UK by 48% between 1997 and 2012 (Green et al., 2016). Other studies also suggest that individuals in non-standard forms of employment typically receive significantly less training and career development opportunities, when compared to workers in permanent and full-time jobs (Zijl & Van Leeuwen, 2005). In contrast, workers in high-skilled jobs (professional and managerial occupations) are more likely to receive development opportunities, such as jobrelated training (Eurofound, 2007). The above findings are of great concern given the high prevalence of non-standard employment among young people, as lack of development opportunities in the workplace may further delay their progression into permanent employment and overall better quality jobs.

While the direct link between training in the workplace and psychological well-being has not been established, when looking at closely related research areas, it can be argued that training is likely to be associated with mental health. In particular, a wide range of costs and benefits of workplace learning have been identified. From a perspective of an employee, the outcomes of organisational training can be job-related, career-related or personal (Bulut & Culha, 2010). For instance, regarding job-related benefits, training enables workers to carry out their jobs more efficiently and may lead to promotions and improvements in their current job roles (Anderson & Winefield, 2011). Moreover, in terms of career-related benefits, it also enables workers to acquire new skills and knowledge, which can assist in their career development (Karthikeyan, Karthi, & Graf, 2010). On the negative site, reduced access to training and professional development in the workplace can have a negative impact on career advancement and future earnings of workers (Anderson & Winefield, 2011).

Personal benefits are likely to include outcomes that may or may not be directly related to mental health. For instance, there is good evidence to show that employer-provided training has a positive impact on earnings and employability (Ananiadou, Jenkins, & Wolf, 2004; Field, 2009; Vignoles, Galindo-Rueda, & Feinstein, 2004). What is more, participation in training appears to have an impact on people's feelings about themselves, and certain attitudes and behaviours that directly affect workers' mental health (Field, 2009).

In particular, job-related training is likely to increase intrinsic motivation (Nordhaug, 1989), leads to greater confidence (Field, 2009) and personal growth (Aguinis & Kraiger, 2009). The evidence also suggests that employees who receive training are more satisfied with their jobs and are less likely to quit their jobs (Jones, Jones, Latreille, & Sloane, 2009). Training is also associated with higher organisational commitment (Bulut & Culha, 2010).

Outside workplace, adult learning in general is associated with positive mental health outcomes. For instance, few studies found that adult learning increases psychological wellbeing and protects against depression (Feinstein, Hammond, Woods, Preston, & Bynner, 2003; Schuller, Preston, Hammond, Brassett-Grundy, & Bynner, 2004). Participation in learning has also been linked to higher optimism and greater self-rated well-being among working-age populations (Hammond & Feinstein, 2006).

Beyond training, career or advancement opportunities are also important aspect of development opportunities in the workplace (De Bustillo et al., 2011). For instance, based on the International Social Survey Programme, De Bustillo, Fernandez-Macias, Anton and Esteve (2009) found that 'opportunities for advancement' were very important to almost 25% of the European workers. However, when employees in Britain were asked what features of job quality were most important to them, only 3% of respondents selected 'promotion prospects' in the British Household Panel Survey (Clark, 2005). This finding suggests that although promotion is important to some workers, it seems to be much less important than other aspects of job quality. What is more, there is little published evidence regarding the relationship of career prospects to mental health. An exception is study by Loretto, Platt and Popham (2010) which found that improved promotion opportunities among NHS staff in the UK predicted better mental health, which the author attributed to an improved perception of control among workers.

Overall, the above evidence suggests that development opportunities in the workplace should be beneficial to young workers' jobs, their careers, themselves or any combination of these (Anderson & Winefield, 2011), however there is much less evidence to confirm this for the aspect of career prospects. While little research on the area has focused on young adults, this group of workers has been mostly affected by dramatic decreases in training provisions in the last decade, which suggests that development opportunities are important to young people and their psychological well-being.

#### 3.4.3 Intrinsic quality of work

Previous section showed that extrinsic aspects of work (such as contractual conditions and working hours) are important to young workers and their psychological well-being in the context of contemporary labour markets. However, the examination of young people's work orientations (in terms of the importance they put on different aspects of work) suggests that intrinsic aspects of work (such as 'the opportunity to use skills in the workplace' or 'have a work you like doing') are also very important to young people (Skills and Employment Survey, 2012). Generational studies point to the importance of skills, meaningfulness and social support in the youth context, and show that there are no differences across generations in desire for intrinsic aspects of work (e.g. Dries et al., 2008; Rawlins et al., 2008; Twenge, 2010). Based on Herzberg, Mausner and Snyderman's (1959) motivation theory, extrinsic aspects of work only allow workers for satisfaction of basic needs, and intrinsic job characteristics are crucial for personal growth and well-being. Surprisingly, little literature to date has examined intrinsic job characteristics in relation to the quality of youth employment and their mental health. As found in Chapter 2, young workers' experiences of work are mainly examined in terms of pay and their employment status, transitions between education and employment, or between paid work and unemployment. This tendency in the literature is also reflected in studies of youth mental health, with most studies in the area focusing on the negatives impacts of youth unemployment. Based on the job quality framework proposed by De Bustillo et al. (2011), the aim of this section is to review the literature on the relationship between intrinsic job characteristics and psychological well-being.

# Skills

Previous research suggests that skills are important for young people and psychological benefits appear when jobs provide opportunities for skills use and for learning new things (Anderson & Winefield, 2011; Loughlin & Barling, 2001). The concept of skills refers to several job characteristics and includes skill level of a job, the extent to which a job is monotonous, complex and allows for learning new things (De Bustillo et al., 2011).

The evidence suggests that today many young people find themselves in the situation where their skills, education or qualifications are not adequately matched to those required by the job (O'Reilly et al., 2016). For instance, Sutherland (2013) found that, in comparison to workers over 35, young people (18-34) in the UK are more likely to be over-qualified or over-skilled in their jobs. As discussed in Chapter 2, in the UK on average 50 % of graduates are employed in non-graduate jobs, where they do not have the opportunity to use their skills and knowledge. Non-graduates are also in a particularly difficult position and today they often end up in lowskilled jobs, which does not match their skills and abilities (Sweet & Meiksins, 2013). Young people also experience mismatch in terms of education. For instance, using the UK Skills Surveys, Green and Zhu (2009) showed that over-qualification among graduates in the UK rose from 21.2% in 1992 to 33.2% in 2006. This magnitude of young worker mismatch in terms of skills and qualifications suggests that it is an important issue in the context of youth employment, that may have serious consequences for all involved. According to the personjob fit theory (Edwards, 1991), a mismatch between the requirements of the job and the skills, knowledge and abilities of the worker causes psychological stress and the occurrence of mental health problems.

However, at this point it is important to distinguish between worker mismatch in terms of skills (also called skills mismatch or over-skilling) from worker mismatch in terms of education (also called over-education). Over-education relies on comparing a proxy measure of worker's skills (such as educational attainment) with a proxy measure of the skill content of the job (such as job entry requirements) (O'Reilly et al., 2015). In contrast, measuring over-skilling requires workers to directly compare all their skills and knowledge acquired to date (such as formal education, personal abilities or on-the-job training) with the actual skill requirements of the job in question, rather than job requirements. Therefore, over-skilling is considered to be a better measure of worker mismatch in terms of skills than over-education (Mavromaras et al., 2010; McGuinness & Wooden, 2009).

Studies suggest that young workers in poor quality employment, with no opportunities for skill use or learning new things, earn less and are less satisfied in their jobs (McGuinness & Sloane, 2011). Regarding mental health, the evidence is mixed and limited number of studies have investigated this issue. In particular, for both over-education and over-skilling, the majority of studies to date have tended to focus on the incidence of mismatch and its impact on earnings and job satisfaction (e.g. McGuinness & Sloane, 2011; Mavromaras et al., 2010; Verhaest, Schatteman, Trier, & Van, 2015), but little is known about other important consequences for an individual worker (Sutherland, 2013). For young people, some evidence exists, but it comes from studies carried out in the 1990s. For instance, O'Brien and Feather (1990) showed that young workers (aged 17-20) who experience over-skilling approximately two years after the completion of high school report more depressive symptoms, lower perceived competence and lower personal control, when compared to young individuals who are adequately matched to their jobs in terms of skills. Interestingly, young school-leavers who are in jobs that do not utilise their skills are not better off in terms of their mental health than unemployed schoolleavers. In contrast, in another study of young business graduates (below 24 years of age), worker mismatch (in terms of education, degree, field of study, training and experience), was not associated with lower psychological well-being (Feldman & Turnley, 1995). Other studies in the area focused on over-education as a measure of worker mismatch (e.g. Burke, 1997; Nabi, 2003), which, as mentioned before, is not an accurate indicator of skills utilization in the workplace (McGuinness & Wooden, 2009). This limited evidence, which is focused on narrow age ranges (young workers below 24 years of age) and on the data collected in the last century, suggests that the outcomes of skills mismatch for young workers and their well-being would benefit from further investigation (O'Reilly et al., 2015).

Beyond skills utilisation in the workplace, other aspects of skills have also been related to mental health. For instance, in the UK study of young workers (aged 21 to 28 years), Wiesner, Windle and Freeman (2005) found that low skill variety and high job boredom were associated with high levels of depressive symptoms and depressive symptomatology (measured by the Centre for Epidemiological Studies Depression Scale, CES-D; Radloff, 1977). Across all age groups, Roh, Chang, Kim and Nam (2014) found that low job challenge and no opportunities for learning new things in the workplace are related to low self-esteem. In contrast, Cottini and Lucifora (2013) found that high task complexity is associated with stress, anxiety, irritability and sleeping problems, which suggests that when workers are in jobs that are difficult and place

too high demands on them in terms of skills, this situation can also lead to stress and negative mental health. In the same study, repetitiveness was also associated with poorer mental health.

Therefore, regarding job complexity, the evidence on its impact on workers' mental health is mixed. Stress theories (such as Job Demands-Control model; JD-R, Karasek, 1979) suggest that other job characteristics are important in explaining the impact of job characteristics on health. In particular, job complexity has a negative impact on health when workers do not have enough resources to deal with the challenging work (e.g. in terms of autonomy). Other literature suggested that the desirability of job demands varies between workers. For instance, 'challenging job' was found to be more desired by those with higher educational status, who also had greater expectations in terms of their job content than lower-educated workers (Schokkaert, Van Ootegem, & Verhofstad, 2010). In another study, it was found that bluecollar workers (e.g. those in manual jobs) had a less multidimensional view of their job quality, when compared to white-collar workers (Hu & Schaufeli, 2011), which the researchers attributed to the fact that their jobs are in general less complex. However, there is a potential for more workers to become dissatisfied with a lack of complexity in their work, as a result of rising over-education in contemporary workplaces (Kalleberg, 2008; Loukidou et al., 2009). Given that over-education and over-skilling are significant issues among young people today, this group of workers may be particularly dissatisfied with a lack of challenge in their work.

#### Autonomy

Autonomy compromises the autonomy over methods (such as the order of tasks, also called task discretion), scheduling (such as speed of work and working time arrangements) and criteria (such as assessing the quality of one's own work) (De Bustillo et al., 2011). In other words, autonomy is the extent to which workers are given the freedom or discretion to carry out their work duties.

According to Eurofound (2012), on average, autonomy significantly declined in most European countries between 1995 and 2010. The exception are the Netherlands, Denmark, Finland and Sweden, where the levels of job autonomy are above the EU average for all groups of workers (Lopes, Lagoa, & Calapez, 2014). Using the evidence from large national surveys, Gallie, Felstead and Green (2004) found that task discretion has also significantly declined in Britain since the early 1990s. Elovainio et al. (2007) found that today young workers are often found in jobs characterised by low autonomy.

Scholars argue that control is an important human need and if this need is not fulfilled, negative psychological effects arise (Gagne & Deci, 2005). In the context of working life, research shows that workers who are given more autonomy over their work tasks are more creative, report better well-being, higher self-esteem and greater work motivation (Lopes et al., 2014), which suggests that higher job autonomy also benefits organisations. Indeed, earlier studies showed that higher employee autonomy over work process contributes to lower employee turnover and lower absenteeism (Spector, 1986).

What is more, workers experience lower stress and are less affected by negative events when they have control over factors in their work environments (Karasek & Theorell, 1990). In particular, employees can manage work-related stress more effectively when they are given autonomy (Shirom, Nirel & Vinokur, 2006). Studies among working-age populations reported that high job autonomy can act as a positive resource, which improves mental health (e.g. Bond & Flaxman, 2006; Daniels, Beesley, Wimalasiri, & Cheyne, 2013; Park & Searcy, 2012; Schreurs, Emmerik, Notelaers, & Witte, 2010). For instance, Daniels et al. (2013) showed that increasing job autonomy decreased workers' negative affect and fatigue.

Employee control over work process has been viewed in quite diverse theories as a central component of job quality, influencing most other aspects of intrinsic work characteristics (such as skills or meaningful work). In particular, it is considered as an important determinant of workers' capacity for self-development at work. According to Gallie (2009b, p. 388), "it is through trying out ideas of their own that people most effectively enhance their understanding and their level of skill". Studies also linked employee control in the workplace to the aspect of work intensity. Where workers have higher control over the rhythms of their work, they are more protected from work intensification, through their ability to decide the pace of work (Karasek, 1979). Therefore, this evidence suggests that job autonomy is associated with the ability to develop skills in the workplace and can potentially alleviate the negative impacts of high job intensity.

Autonomy has also been directly associated with common mental disorders. For instance, a lack of perceived job autonomy was shown to be related to depression and anxiety (Parker, 2014). However, some studies found conflicting results. Marchand, Demers and Durand (2005) showed that higher decision authority increases the probability of psychological distress (measured by several symptoms: 'sad', 'nervous', 'restless', 'hopeless', 'worthless' and

'everything is an effort'). Parker (2003) found that job autonomy was not significantly associated with work-related depression and anxiety in a study of a UK manufacturing company. Recent study by Boxall and Macky (2014) found that although experiencing high job autonomy is predictive of greater job satisfaction and better work-life balance, autonomy has no relationship to stress and fatigue of workers employed in various occupational contexts. Finally, in their meta-analysis of job characteristics associated with psychological well-being, De Lange, Kompier, Houtman and Bongers (2003) found that only approximately one-half of studies showed a main effect of job autonomy may depend on individual differences and contextual variables. Therefore, the impact of job autonomy on mental health may not hold for all employees, occupations, industries, and so on. For instance, the level of job autonomy has been seen as related to the skill level of a job. Gallie et al. (2004) found that workers in high-skilled jobs tend to be given more autonomy over their work tasks. This highlights the importance of accounting for individual and contextual variables, when assessing the impact of job autonomy on mental health.

These conflicting results may also be attributable to other job characteristics, which in combination with job autonomy can create different outcomes in terms of workers' mental health. According to the well-known stress theory, the Demand-Control model (Karasek, 1979; Karasek & Theorell, 1990) work is most detrimental to mental health when low job autonomy is accompanied by high job demands (such as high job intensity or the occurrence of complex tasks). This assumption has been confirmed in many studies among working-age populations. In particular, high strain jobs (characterized by high job demands and low job autonomy) have been associated with depressive symptoms, psychological distress and overall poor mental health (e.g. De Lange et al., 2003; Landsbergis et al., 1998; Mausner-Dorsch & Eaton, 2000).

For young workers, passive work (characterized by low job demands and low job autonomy) was found to be detrimental to psychological well-being (Ek, Sirvio, Koiranen, & Taanila, 2014; Elovainio et al., 2007). What is more, some studies suggested that in general young workers are more likely to be found in passive jobs (Elovainio et al., 2007; Quinlan & Bohle, 2015). According to Karasek and Theorell (1990, p. 38), a prolonged employment in passive jobs is a major psychosocial problem and is associated with "lost skills, lack of job challenges, and environmentally rigid restrictions preventing workers from testing their own ideas for improving the work process, which can only mean an extremely demotivating job setting and

result in long term loss of work motivation and productivity." According to this argument, passive work does not only have a direct impact on the mental health of workers but can also affect workers' skills (in terms of skill utilization in the workplace and learning new things), which may reinforce its negative impact on psychological well-being.

For high strain jobs (characterized by low job autonomy and high job demands), the evidence is mixed. For instance, Ek et al. (2014) found high strain jobs to be associated with lower mental health among young Finnish men at the age of 31 who are in atypical jobs, but not among young women. High strain jobs were also associated with job dissatisfaction among young workers at the age of 23, who have just entered the labour market (Witte, Verhofstadt, & Omey, 2007). Job dissatisfaction in turn can lead to lower self-esteem, depression and anxiety (Faragher, Cass, & Cooper, 2005).

In summary, research shows that job autonomy can have positive and negative impacts on mental health. Studies found that job autonomy is an important resource which can contribute to lower stress and be particularly detrimental to health when accompanied by high job demands (Lopes et al., 2014). However, in the context of youth employment, it has been suggested that passive jobs (characterised by low autonomy and low demands) are more prevalent and are associated with poor mental health, low skill utilization in the workplace and little opportunities for learning new things. Finally, some studies among working age populations found mixed results and overall it appears that it is necessarily to take into account individual and contextual variations when examining the relationship between job autonomy and mental health, as high-skilled workers tend to be given more autonomy.

# Social support

The importance of various types of social support for mental health has been firmly established (Ostberg & Lennartsson, 2007). Social support is considered a valuable individual resource, which can fulfil a basic human need for belongingness (Baumeister & Leary, 1995). In the context of working life, a substantial number of studies found that poor work-related social support is associated with mental health disorders, psychological distress and prolonged sickness absence (e.g. De Lange et al., 2003; Marchand & Blanc, 2010; Rydstedt, Head, Stansfeld, & Woodley-Jones, 2012; Virtanen et al., 2008). Recent reviews of longitudinal studies also confirm that high social support decreases the risk of depression and stress-related disorders (Netterstrom et al., 2008; Nieuwenhuijsen et al., 2010).

On average and across all age groups, studies examining different sources of social support at work found that "low co-workers support was associated with a higher prevalence of depression amongst both men and women", while "low supervisor support was significantly associated with a high rate of depression for women" (Shields, 2006, p. 19). Even after controlling for other important work-related factors, such as job demands and autonomy, work-related social support was found to play an important and independent role in the psychological well-being of workers (measured by General Health Questionnaire, GHQ, Goldberg & Williams, 1988), as well as their self-rated general health (Rydstedt et al., 2012). What is more, Rydstedt et al. (2012) found that the health influence of social support at work is not limited to its instrumental aspect. The overall quality of social relationships in the workplace, such as 'having good friends at work', was shown to be related to mental health status.

Indeed, some earlier studies among young workers pointed to the importance of distinguishing between different sources of social support, when examining its impact on psychological health. For instance, Frone (2000) found that for young workers (aged 16-19), co-worker support was most important predictor of mental health outcomes (such as depression, self-esteem and somatic symptoms), while supervisor's support was more predictive of organisational outcomes (such as organisational commitment and turnover intentions). Based on the theory of social relations (Fiske, 1992), in the relationship with co-workers young individuals have a feeling of being united by a common identity and treat each other as socially equivalent. They want to like and be liked by others similar to them. Therefore, the interpersonal conflict with co-workers is likely to impact negatively one's self-evaluation and mental well-being, because it undermines one's sense of self and similarity with other people (Frone, 2000).

Studies among older workers found that co-worker support can have a strong impact on the well-being of workers. Supportive relationships with co-workers can help create meaningful experiences in the workplace, whereas negative social relationships at work can make working life miserable (Chamberlain & Hodson, 2010). Because similar others can provide the most effective social support in stressful situations, co-worker support can be very beneficial (Thoits, 1986). McGuire (2007) suggested that co-workers can give each other various sources of support, such as work-related information sharing or emotional support in response to a specific problem, which in turn helps to promote the mental health of workers.

Indeed, social support at work is considered to have a stress buffering effect and be an important protective factor. High levels of social support from colleagues and supervisors were found to reduce the experience of stress in the workplace and promote mental health of workers (e.g. Shields, 2006; Rydstedt et al., 2012). According to stress buffering theory, social support can act as a buffer to protect individuals from negative impact of stress (Cohen & Wills, 1985). In other words, social support should moderate the negative impact of stress on psychological well-being. Therefore, individuals who feel socially supported are expected to experience lower stress and better mental health. Some research also found that as the number of different stressors increases, the positive effect of social support on psychological health also becomes stronger (Shields, 2004).

Other studies also suggested that workers in certain industries may particularly benefit from the buffering effect of social support. For instance, there is evidence which shows that the role of social support from co-workers is important in customer service industries, where workers must navigate through complex social interactions with co-workers, managers and clients, and therefore are at higher risk of experiencing negative interactions with others (Spencer & Rupp, 2009). For instance, Sloan (2012) found that in the context of service work, co-workers can be an important source of support when managing stress resulting from unfair treatment by supervisors and clients. With many young people employed in service industries in the UK, examining the impact of social support on mental health is of great importance. Overall, this evidence suggests that the impact of social support is wide-ranging, and for young workers social support from co-workers may be particularly beneficial.

### Meaningful work

Meaningful work can be defined as the extent to which an individual has a feeling of doing useful work (De Bustillo et al., 2011). Bolman and Deal (2001) noted that in the 21st century workplace a feeling of emptiness is widely prevalent and affects a significant proportion of individuals. Yet, this aspect of job quality appears to be the least investigated in the previous literature on mental health. Nevertheless, the evidence suggests that many individuals desire work that is meaningful and today young people are interested more than ever in finding purpose and meaning in what they are doing (Steger, Dik, & Duffy, 2012).

Studies found that individuals with a strong sense of purpose and meaning in life report higher well-being and are less likely to suffer from mental health problems (Frankl, 1984; Ryff &

Singer, 1998). For instance, Frankl (1984) argued that individuals who lack a sense of meaning in their own lives are unsatisfied, unfulfilled and prone to psychological disorders (particularly depression) and even suicide. While people may experience meaningfulness in different life domains, they often report work to be one of the most important sources of meaning in their lives (Baum & Stewart, 1990).

Research to date has identified both individual and organisational benefits of meaningful work. Individuals who say their work is meaningful, report better psychological adjustment and display qualities which are beneficial to organisations. In particular, studies find that individuals who have a feeling of doing meaningful work, enjoy greater well-being (Arnold & Randall, 2010), report better life satisfaction (Kamdron, 2005), view their work as more important, and place a higher value on their work (Harpaz & Fu, 2002). In a recent study, meaningful work was negatively associated with psychological distress (in terms of depression and hostility) (Steger et al., 2012). What is more, the evidence suggests that meaningful work may help individuals to increase their understanding of themselves and the world surrounding them, facilitating personal growth (Steger & Dik, 2010). For young people, the evidence is limited. In a recent study it was found that meaningful work is important for experiencing work ability (defined as physical, psychological and social ability) among young people. In particular, in a qualitative study of young workers, it was found that when young individuals did something good for someone and perceived work as meaningful, their work ability was better (Bostrom, Holmgren, Sluiter, Hagberg, & Grimby-Ekman, 2016).

Meaningful work is closely related to the construct of 'calling' (Dik & Duffy, 2009). Perceiving one's work to be meaningful and to serve a higher purpose are the main characteristics of work that is a calling. In a recent study, Steger et al. (2012) found the dimensions of meaningful work to be significantly correlated with the dimensions of calling. People who feel their work is a calling show higher job satisfaction (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997), report greater occupational self-clarity and higher choice comfort (Duffy & Sedlacek, 2007), and perceive their life as a whole to be more meaningful, when compared to individuals who do not perceive their job to be a calling (Steger & Dik, 2010). Wrzesniewski et al. (1997) also found that individuals who view their job as a calling (defined as useful to society) report higher well-being when compared to respondents who view their job as a career or a job that is done primarily to make money. This study suggests that individual well-being may be more dependent on the extent to which a job has a meaning rather than on income or having a career in general.

The concept of calling was also found to be associated with stress and well-being among adult workers. In particular, one study showed that being in a job which one regards as a calling is associated with lower levels of stress and lower depression, better coping skills and greater clarity of self-concept (Treadgold, 1999). In a separate study, it was suggested that lacking a sense of purpose and meaning regarding one's work may have very negative individual consequences and end in individual alienation and depression (Levoy, 1997).

According to Elangovan, Pinder and Mclean (2010, p. 341), meaningfulness may also have a stress buffering effect. In particular, the author suggested that perceiving one's work to be meaningful and serving a purpose may decrease the impact of work-related stressors (such as job demands) by "prompting the individual to view them as positive challenges as well as distracting attention from the possibility of failure to the joy of doing the task itself".

Some other studies suggest that certain aspects of job quality may affect to extent to which job is perceived as meaningful. For instance, in their influential job characteristics model, Hackman and Oldham (1976) highlighted the importance of other job characteristics in promoting individuals' experience of meaningfulness at work. In particular, the authors suggested that jobs which allow workers to have high levels of autonomy and skill variety contribute to the experience of greater meaningfulness at work.

This evidence suggests that meaningful work matters for mental health, and is an important job resource, that may have a stress buffering effect. While little attention to date has been given to this aspect of job quality in the youth context, based on the above evidence it is expected that every individual, regardless of age, is expected to benefit from the experience of meaningfulness in the workplace (Frankl, 1984).

What is more, in the context of increasingly difficult labour market trajectories, which can be observed among current generations of young people (O'Reilly et al., 2015), perceiving one's job to be meaningful may be an important source of security for young workers, who often find it difficult to build a stable career in contemporary labour markets (Meiksins & Sweet, 2013). As Wrzesniewski et al. (1997) noted, individual well-being may be even more dependent on

the extent to which a job is useful to society than on income or having a career. Also, since young workers report higher work ability when engaged in meaningful work, it is expected that meaningful work can have an overall positive impact on young people and their psychological well-being.

#### 3.4.4 Work intensity

Work intensity is one of the most important job demands in the workplace, which can significantly influence employee well-being (Cottini & Lucifora, 2013). Work intensity is a multidimensional concept which involves 'working at very high speed', 'working to tight deadlines' and 'not having enough time to get the job done' (De Bustillo et al., 2011b). Therefore, in contrast to the difficulty of work (job complexity) which is a measure of skills, work intensity refers to the amount of work individuals need to do and involves a situation where workers have too much work to do, in too little time, and at high pace (Burchell, Ladipo, & Wilkinson, 2002).

The evidence suggests that during the past three decades many EU countries (and particularly Britain) have witnessed a sharp increase in perceived work intensity (Burchell et al., 2002; Gallie, Felstead, Green, & Inanc, 2014; Green, 2006; Olsen, Kalleberg, & Nesheim, 2010). For instance, recent study based on the analysis of Skills and Employment Surveys (1992 – 2012) confirmed an increase in work intensification in Britain between 2006 and 2012 in terms of working hard, at very high speed, and to tight deadlines (Gallie et al., 2014). Green (2006) found work intensification to be one of the two most important causes, along with declining job autonomy, of a recent decline in job satisfaction in Britain.

Work intensity is a strong predictor of mental health across working-age populations, irrespective of the type of measure used to assess mental health status. For instance, Burchell et al. (2002) found a strong association between work intensification and three outcome measures, which included the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988), positive affect at work and negative affect at work. According to a meta-analytic review of psychosocial work stressors and mental health disorders, high job demands (such as high pace work and conflicting demands) are predictive of common psychological problems, such as anxiety and depression (Stansfeld & Candy, 2006).

What is more, studies which considered specific components of work intensity found that working at very high speed or under intensified pace increased the probability of mental health issues in terms of anxiety, depression, sleeping problems (Cottini & Lucifora, 2013) and work-related stress (e.g. Landsbergis et al., 1998). In a recent study, role overload (defined as 'having too much work to do in the time available') was associated with greater stress, higher fatigue and greater work-life imbalance (Boxall & Macky, 2014).

According to the Job Demands-Resources model (Bakker & Demerouti, 2007), intensified work puts higher demands on a worker's resources. Beyond psychological well-being it has been linked with physical health deterioration (e.g. Sparks, Cooper, Fried, & Shirom, 1997), work-family conflict (e.g. Eby et al., 2005), and lower job satisfaction (e.g. Yousef, 2002). Studies also suggest that work intensity appears to be an issue across a wide range of occupational contexts. Extreme time pressure and tight deadlines are often mentioned by workers in managerial and professional occupations (Burchell et al., 2002) as well as by individuals in low-skilled occupations (Stansfeld & Candy, 2006). However, much heterogeneity was found between men and women and some studies suggest that men are more often exposed to high work intensity in the workplace than women, and therefore work intensity has a particularly negative impact on the mental health of men (Boxall & Macky, 2014).

According to well-known stress theories, work intensity is particularly harmful to mental health when accompanied by low levels of employee control (such as the opportunity to use skills) (Karasek, 1979; Karasek & Theorell, 1990), low rewards (such as pay and development opportunities) (Siegrist, 1996) or low job resources in general (Bakker & Demerouti, 2007). In addition, job stress which results from higher work intensity can also be reduced / buffered by adequate resources (such as high job autonomy or work-related social support) (Karasel & Theorell, 1990; Bakker & Demerouti, 2007). Therefore, the effect of work intensity on mental health also depends on how it intersects with other aspects of job quality.

Most studies to date have focused on testing the impact of work intensity in combination with job control (based on the Job Demands-Control model; Karasek, 1979) or the presence of rewards in the workplace (based on the Job Effort-Reward Imbalance model; Siegrist, 1996). The vast majority of studies confirmed that high job strain (a combination of high work intensity and low job autonomy) and the imbalance between efforts and rewards in the

workplace is associated with common mental health disorders, psychological distress and overall poor general health (De Lange et al., 2003; Stansfeld & Candy, 2006). Regarding young workers, the evidence on the impact of work intensity on mental health is limited and was reviewed in previous section describing the dimension of job autonomy (Section 3.4.3). In short, it has been suggested that passive jobs (characterised by low autonomy and low demands) are more prevalent among young workers and are often associated with poor mental health, low skill utilization in the workplace and little opportunities for learning new things (Ek et al., 2014).

# 3.4.5 Pay

Pay is a financial compensation for work and is important primarily because it gives access to various resources in people's lives (Eurofound, 2012). For instance, income gives access to improved housing, nutrition and material wealth, all of which can lead to better mental and physical health (Lynch et al., 2004). The evidence suggests that the changing nature of work contributed to not only the diffusion of non-standard forms of employment but also to the increased incidence of low-paid work (Cottini, 2012).

Low pay and in-work poverty are important issues in the UK. In particular, the UK has (together with Ireland, Canada and the US) the highest proportion of low pay workers in the world, when compared to other OECD member states (OECD, 2013). What is more, pay inequality is greater in the UK than in any other country in Europe (Green, 2013). Studies suggest that individuals who are low paid suffer from a double penalty, because their jobs also tend to be of lower quality (Cottini, 2012).

Research pointed to several possible pathways between economic status and mental health. For instance, a lack of financial resources may affect mental health by contributing to higher levels of stress due to financial difficulties, economic uncertainty and material or perceived deprivation (Ahnquist, Wamala, & Lindstrom, 2012). What is more, low pay may also affect mental health indirectly by contributing to subjective economic strain. In the context of youth employment, consequent problems of subjective economic strain may include difficulties in pursuing a desired life pattern (e.g. in terms of individual independency and family formation) (Artazcoz, Benach, Borrell, & Cortez, 2005). This situation may cause life dissatisfaction

(Scherer, 2009) and a state of psychological distress (Quesnel-Vallee, De Haney, & Ciampi, 2010).

Lack of economic resources may also restrain an individual's participation in social and cultural activities, which can cause stress and poorer psychological well-being due to social alienation and / or the inability to maintain social networks, which are important sources of social support (Ahnquist et al., 2012). Therefore, a lack of financial resources can be considered as a lack of capabilities in several domains, which may severely constrain life (Sen, 1999) and contribute to lower general health status (Ahnquist et al., 2012).

Further to this, according to the Effort-Reward model (Siegrist, 1996), pay is classified as a reward, which in combination with certain job characteristics (such as high work effort) is detrimental to mental health status. In particular, the imbalance in terms of efforts and rewards may put individuals into situations that could influence their mental health.

Research from different countries suggest that income and other measures of economic status are associated with a great variety of health outcomes (Laaksonen et al., 2007; Lorant et al., 2007; Zimmerman & Katon, 2005). In particular, a lower socio-economic position measured by indicators such as income, occupational class or education was associated with poorer physical and general health (Cottini, 2012; Mackenbach & Bakker, 2003; Wilkinson & Marmot, 2003). Regarding the psychological well-being, the evidence on the impact of socio-economic status is less consistent across different studies. Nevertheless, there have been tendencies for pay and material standard of living to show stronger associations with mental health outcomes than other measures of socio-economic status, such as occupational class or education (Fryers, Melzer, & Jenkins, 2003; Laaksonen et al., 2007).

For instance, Kaplan, Shema and Leite (2008) found a powerful impact of income, and changes in financial circumstances over the course of twenty-nine years on mental health of US workers (aged 16-88). In particular, higher average levels of income, increases in income over time, and receiving profit income were associated with several indicators of positive mental health (such as higher purpose in life, self-acceptance, personal growth and environmental mastery). In the same study mental health was lower for those with lower average incomes, lower income increases over time, and for those in receipt of need-based benefits. Studies also found associations between self-reported financial difficulties and common mental health problems (e.g. Laaksonen et al., 2007; Wildman, 2003). For instance, Laaksonen et al. (2007) found a strong association between current economic difficulties (described as difficulties in terms of meeting the payment of bills and buying the kind of clothing or food that one needs) and mental health problems (measured by Goldberg's GHQ-12) of middle-aged (aged 35-60 years) white-collar public sector employees in Britain and Finland. In both national contexts, men and women reporting current economic difficulties reported poorer psychological well-being, when compared to those without such difficulties. This study suggests that self-reported financial difficulties can also affect workers in high-skilled jobs.

What is more, some studies investigated the role of low income alongside other symptoms of financial difficulties. For instance, the study by Ahnquist et al. (2012) is one of the few which used three different measures of economic hardships (low household income, inability to meet expenses and lacking cash reserves) and found that a combined measure of economic difficulties is associated with psychological distress (measured by the GHQ; Goldberg & Williams, 1998) among both men and women (aged 18-64 years).

Some recent studies, however, showed mixed results. For instance, Cottini (2012) found that working conditions are more important determinants of mental health problems than low pay (defined as earnings which fall below two-thirds of the median of the earnings distribution) and income does not show significant associations with psychological well-being, when measured across 15 European countries. Low pay is harmful to the physical health of men (but not women) and plays a role in combination with poor working conditions. In particular, the relationship between adverse working conditions and health is accentuated by the low pay status. This study also showed different patterns of findings by gender, where female workers tended to derive their mental health problems from poor working conditions, while for male workers being in a low paid job was more strongly related to poor mental health status. The study by Cottini (2012) contributes to the previous literature by investigating working conditions and income in the same study, which allowed an examination of the interrelationships between low pay and other aspects of job quality.

In the youth context, the evidence is limited. One study, which was carried out in the US context found that young workers who were underemployed in terms of income (defined as income below the two-thirds of the median of the earnings distribution) after leaving high

school reported lower self-esteem, when compared to young workers who were adequately employed in terms of pay (Prause & Dooley, 1997). What is more, in a separate study but the same national context low pay was associated with depression among recent graduates, when compared to young individuals who were receiving adequate income (Dooley et al., 2000). However, it is important to note that both studies were based on old datasets (collected in early 1990s) and therefore do not provide an up-to-date picture of the impact of income on young adults' mental health in contemporary labour markets.

Some researchers suggested that the mixed findings on the relationship between economic status and mental health may be caused by different indicators used in different studies to measure economic hardships, and factors such as the population of the study, age, gender, as well as the national context (Ahnquist et al., 2012).

#### 3.4.6 Health and safety

Physical and psychosocial demands compromise the health and safety dimension, based on the job quality framework by De Bustillo et al. (2011b). Psychosocial risks are defined in terms of verbal abuse, threats, violence, bullying, and being in situations emotionally disturbing, while physical risks are defined in terms of the exposure to different substances or materials harmful to health (such as smoke or chemical products) and work which involves carrying heavy loads or harmful positions (De Bustillo et al., 2011b).

Recent studies pointed to an increase in the amount of anti-social behaviours at work, especially in terms of bullying, violence and aggression (Eurofound, 2007; O'Driscoll & Brough, 2010). Bullying can have a negative impact on organisational commitment and contributes to increased intention to leave a job (MacKay, Cousins, Kelly, Lee, & McCaig, 2004). Exposure to bullying relationships at work was also found to be an important source of stress at work (Eurofound, 2007; Vartia, 2001) and was associated with mental health problems (Hansen et al., 2006). Emotional work or 'emotional labour', which can be defined as the process of managing one's feelings and expressions in the workplace according to employer's rules and procedures (Hochschild, 1983), was associated with greater stress and poorer mental health status among adult workers (Mann & Cowburn, 2005). In another study among working-

age population, the frequency of interactions with difficult clients related positively to emotional exhaustion and negatively to job satisfaction (Chou, Hecker, & Martin, 2012).

In terms of physical risks, there is relatively little evidence on whether workers like or dislike physically demanding jobs. One exception is a study by Schokkaert, Van Ootegem and Verhofstad (2009), which found that employees who did physically demanding work reported lower job satisfaction. There is a lot of evidence which suggests that physical demands can be hazardous to workers' physical health. For instance, manual handling was found to cause injury and musculoskeletal disorders, while longer daily sitting was associated with higher mortality rates (Patel et al., 2010). However, the evidence on the impact of physical risks on mental health is limited. Some studies suggested that poor mental health increases the probability of poor physical health, for instance in terms of musculoskeletal disorders (Parkes, 2005).

### 3.5 Chapter summary

This chapter provided a detailed analysis of the previous research on job quality and mental health in the youth context, pointing to several research gaps. First, while a substantial number of studies have linked job quality to mental health, research in the youth context is rare and the results are not consistent across different studies. In particular, there are few quantitative studies that examine the situation of young adults entering the labour market (e.g. Feldman & Turnley, 1995; O'Brien & Feather, 1990), but not many studies to date have focused on young adults beyond adolescence and / or over 25, who are at later career stages. This group, as established in Chapter 2 (Section 2.4), are particularly disadvantaged in terms of job quality (e.g. Scarpetta et al., 2012; O'Reilly et al., 2015), and according to recent evidence they often do not benefit from labour market policies designed for young people (Chung et al., 2012; Sweet & Meiksins, 2013). Moreover, most studies in the area have used old datasets, which may underestimate the effect of job quality on mental health (e.g. Ek et al., 2014) in contemporary labour markets. There seem to be few studies, which would focus on datasets collected in the last decade (2008-2018). In fact, recent analyses use datasets collected during the 1980s or 1990s (e.g. Ek et al., 2014; Elovainio et al., 2006). In other words, researchers are using old datasets to examine the impact of job quality on young adults' mental health today. Finally, most studies in the area were carried out in the US, Canada or Nordic countries (such as Finland). Little research has focused on the UK and wider range of European countries.

Nevertheless, based on this limited evidence, some aspects of job quality were consistently associated with the mental health of young workers. In line with previous studies which showed that psychosocial quality of work is important for the mental health of adult workers, this chapter found that the same may be true for young people - the impact of job security, skills, autonomy, social support, work intensity and psychosocial risks have been associated with the mental health status among youth. These studies have predominantly examined associations between 'classical' dimensions (e.g. job demands, job control, effort-reward imbalance) and mental health outcomes. However, most research to date has focused exclusively on the psychosocial aspects of job quality and certain aspects of job quality may have more explanatory value in contemporary labour markets and in the youth context (Lloyd & Payne, 2013). In particular, new important dimensions of job quality, such as contractual conditions, working hours or development opportunities have emerged in the last decade. As established in Chapter 2, in the context of contemporary labour markets, young workers face specific job quality issues, which are unique to this population group. The studies on marginal employment, underemployment, generational research and the careers literature point to issues in relation to employment quality (job security, contract type, training and career prospects), skills, working hours and meaningfulness which may be particularly important when discussing the impact of job quality on mental health among young people.

Further to this, studies on job quality and mental health have tended to remain within their own disciplinary boundaries and often focused on a specific aspect (or a set of aspects) of job quality (such as contract type or skills) and studied its impact on mental health in isolation. However, there is a distinct lack of research which takes a comprehensive approach to job quality, when examining its impact on young workers' mental health. This has resulted in the development of relatively separate fields of study in the literature on job quality and mental health among young people (such as underemployment or marginal employment), and no opportunity for these fields to build on each other. The already fragmented nature of the job quality literature in the youth context (as established in Chapter 2), means that many important aspects of job quality are omitted (such as the intrinsic aspects of work) and it is difficult to interpret this research as a whole. In fact, previous literature tends to underestimate the impact of intrinsic job characteristics (such as meaningful work, skills and social support) on the mental health of young workers. This may be explained by the fact that young workers face important issues in terms of the extrinsic aspects of job quality, such as pay and contractual conditions (as

established in Chapter 2). However, the examination of the generational literature shows that intrinsic aspects of work are also very important to young people.

What is more, less is known about mental health enhancing aspects of job quality. Most literature to date has focused on work exposures which are detrimental to mental health, while there has been less focus on positive aspects of work, which could be linked to better mental health (Burgard & Lin, 2013). Only few studies to date, mainly examining dimensions from Karasek's Job Strain model (Karasek, 1979), have included both negative and positive mental health outcomes (e.g. De Jonge et al., 2000; Elovainio et al., 2000). According to Burgard and Lin (2013, p. 1119) "a better understanding of aspects of work that can enhance health or buffer the negative effects of more toxic exposures could add to future research using more comprehensive data and models to assess the links between work, working conditions, and health inequalities". As a result, to date there is insufficient evidence to determine which workplace interventions are successful in managing depression in the workplace (Furlan et al., 2012). This points to the importance of including measures of positive mental health in studies on mental health, as highlighted by Warr (2013). Uncovering how specific dimensions of job quality are related to both positive and negative mental health outcomes is important from policy perspective and should provide a useful basis for improving mental health in the workplace.

Last but not least, the review of the literature suggests that for some aspects of job quality (such as skills, contract type and working hours), their relationship with mental health was mixed and highlighted the importance of a match between an individual and a job. However, most proposals to measure job quality (which are reviewed in Chapter 5, Section 5.3) did not consider the importance of matching a person to a job. The review of youth employment issues in Chapter 2 showed that mismatches in terms of skills, contract type and working hours are key barriers to high-quality jobs among young people. Therefore, the importance of matching a person to a job should not be disregarded and is addressed further in the next chapter which focuses on factors affecting job quality and mental health (Chapter 4, Section 4.4).

Finally, several authors have highlighted the importance of including contextual factors together with individual-level factors in job quality and mental health studies (Burgard & Lin, 2013; Cottini & Lucifora, 2013). However, a large proportion of research has not considered wider contextual influences, while examining the impact of work on mental health of young

individuals. Most studies to date have included basic individual characteristics (such as gender, education or marital status) as the main predictors of both job quality and mental health among young workers. At the same time, the role of national regulation and institutions is often a neglected issue, but few studies among prime-aged workers found that the institutional environment plays an important role when explaining differences in the impact of job quality on mental health across countries (Cottini & Lucifora, 2013). This reflects the wider trend towards the 'individualisation' of risk in both job quality and mental health studies, which can be described as attributing risks to the characteristics of individuals, rather than to social and environmental influences affecting populations (Svensson & Hallberg, 2011). As a result, in contemporary labour markets an individual is viewed as being primarily responsible for his or her own job quality and mental health, and this is particularly visible in the youth context. To address the importance of contextual factors, the overview of factors influencing job quality and mental health in the youth context is provided in the next chapter.

Chapter 4: Explaining job quality and mental health for young workers: conceptual framework, research objectives and hypotheses

# 4.1 Introduction

Chapters 2 and 3 argued for the importance of going beyond the role of individual factors when examining job quality and mental health in the youth context. Chapter 4 brings together the relative importance of individual and contextual factors to propose that job quality and mental health may be affected by variables on multiple levels. In particular, at a micro level, job quality and mental health may be affected by individual differences (e.g. gender, age, education, marital status, or the presence of dependent children). At a higher level of conceptual analysis, these two constructs may be affected by contextual factors, which include job-related characteristics (e.g. occupation, sector, industry, or firm size) (Eurofound, 2012; Lewchuk, Clarke, & De Wolff, 2011; Wilkinson & Marmot, 2003; De Bustillo et al., 2011b) and wider institutional context (e.g. national regulations and labour market institutions) (e.g. Cottini & Lucifora, 2013; Gallie, 2009; Holman, 2013b; Olsen, Kalleberg, & Nesheim, 2010; Smith, Burchell, Fagan, & Brien, 2008).

The examination of the relationship between job quality and mental health (Chapter 3) has also pointed to the importance of a match between an individual and a job in the youth context (e.g. Bell et al., 2012; Green & Livanos, 2011; Verbruggen et al., 2015). It has been established that for some aspects of job quality (such as skills, contract type and working hours), it is necessary to address the role of individual abilities and needs, when examining the impact of job quality on mental health. In relation to this, Chapter 2 showed that employability (which is often expressed in terms of one's skills, experience and career self-management) is a key factor

affecting the extent to which young workers are able to secure high quality jobs (e.g. Clarke, 2008; Tomlinson, 2012; Wilton, 2014). Perceiving oneself as having high employability is likely to be accompanied by a sense of control over one's career (Fugate et al. 2004), which suggests that employability may be particularly important in relation to young workers' mental health. This chapter examines the role of employability from a subjective perspective and argues that perceived employability (which in this study is defined as one's belief in their ability to secure employment) (Berntson & Marklund, 2007) may be an important resource for young workers in the context of contemporary labour markets, characterised by high level of risk, uncertainty and unpredictability (O'Reilly et al., 2015; Sweet & Meiksins, 2013).

As shown in the previous chapters, to date very limited evidence exists on which groups of young workers experience better or worse job quality (O'Reilly et al., 2015; Scarpetta et al., 2012). What is more, studies among working-age populations suggest that different national settings may matter for both job quality and mental health (Cottini & Lucifora, 2013; De Bustillo et al., 2011b), but the role of the wider context in which every job is embedded is often a neglected issue in studies examining job quality and mental health among young people. A recent workplace well-being framework pointed to the importance of accounting for the wider context when examining the link between job characteristics and mental health (Lewchuk et al., 2011). Similarly, Burgard and Lin (2013) called for a need to develop a multi-level approach to the study of work and health. Yet, as noted in the previous chapter, to date there is a lack of well-controlled studies that would address the role of contextual variables. Therefore, the lack of consensus on the mental health effects of certain dimensions of job quality (e.g. job autonomy) could also result from a variety of other factors, aside from the impact of job quality itself. To avoid overestimation of the relationship between job quality and mental health, it is important to take the well-known determinants of job quality and mental health, such as gender and education (Eurofound, 2012; Marmot, 2005) into account. What is more, from both research and policy perspectives, it is important to know whether certain individual or contextual factors (such as education or institutional context) may reinforce the negative impact of job quality on mental health, making some young workers more vulnerable to suffering from negative mental health effects of poor job quality and / or some national contexts particularly disadvantageous for job quality and mental health status.

This chapter discusses factors affecting job quality and mental health in the youth context. It brings together the role of individual differences and contextual factors (in terms of job-related

characteristics and wider institutional context) as well as the importance of a match between an individual and a job and the role of perceived employability.

# 4.2 Institutional influences

The work environment and the distribution of mental health-threatening aspects of job quality is embedded in a wider social and economic context (Cottini & Lucifora, 2013). The institutional and policy context at the country level is argued to shape people's exposure to social determinants of health through the influence of regulation (e.g. in terms of employment protection or occupational health and safety laws), education and training systems, and the provision of social welfare programmes or the broader 'safety net' (e.g. the healthcare benefits or the unemployment insurance) (e.g. Bambra & Eikemo, 2009; Bambra, 2011; Butterworth et al., 2013; Cottini & Lucifora, 2013; Dragano, Siegrist, & Wahrendorf, 2011; Gallie, 2007; De Bustillo et al., 2011b). Therefore, maintaining mental health and job quality is a primary aim of national institutions, social and employment policies (Lunau et al., 2014).

Studies which examined cross-national differences in youth unemployment and access to the labour market found that the degree of labour market regulation and the vocational specificity of the education system are very important institutional factors which influence job quality and the career patterns among young people (Breen, 2005; De Grip & Wolbers, 2006; Van der Velden & Wolbers, 2003). In the last decades, decisions to deregulate labour markets across Europe and make policy changes at the expense of workers' protections have increased organisations' ability to offer non-standard contracts and avoid health and safety regulations, diminishing employees' relative power and potentially their mental health (Kalleberg, 2012). Therefore, regulation can be a barrier to good working conditions and mental health in the workplace. Some countries in Europe have highly regulated work environments (e.g. the Nordic countries), as a result of extensive work environment legislation, while other nations are known from weak labour market regulation systems (e.g. the US or the UK) (Bambra, 2011). It is expected that the presence of these additional workplace regulations improves job quality and protects young workers' mental health, especially those who are exposed to potentially detrimental working conditions. According to the OECD index measuring the strictness of the employment protection, which is a legislation on hiring and firing workers (Wolbers, 2007), there are great variations between Continental European countries such as

Germany, Italy, France, Spain and also Nordic countries such Sweden, Norway and Finland, in all of which the employment protection is at high level, and so-called 'liberal' countries – the UK, Ireland, Australia, New Zealand, Canada and the US, where the employment protection is low (OECD, 2016).

As mentioned in Chapter 2, young workers as a group have been particularly affected by the diffusion of non-standard working arrangements in the past decades, and in some countries (such as the UK) these jobs are often characterised by an entire or partial absence of the employment protection (Eurofound, 2014b). Studies showed that flexible contracts (such as fixed-term contracts) and / or low provision of employment protection are strategies prominently used in the UK and Ireland as a means to achieve youth labour market integration (Eurofound, 2014c). Similarly, an extensive provision of fixed-term contracts is a common strategy used to bring more young people into paid work in Spain and France (Gangl, 2002).

Studies suggest that the employment protection legislation has a differential effect on young jobseekers when compared to young people who have already entered the employment. According to the insider-outsider theory, jobseekers are 'outsiders' and they have more difficulties in finding their first employment in countries with strict employment protection, where they have to compete with the established workforce, who is highly protected against dismissal (Lindbeck & Snower, 1989). However, while in de-regulated labour markets young people have higher chances of entering the employment, at the same time they also are also at higher risk of entering non-standard and less secure jobs (Wolbers, 2007) which, as previously mentioned, are often regarded to be of poorer quality, when compared to standard jobs (Kalleberg et al., 2000). In contrast, with respect to the job quality of young people who are in employment ('insiders'), the assumption is that in countries with stricter employment protection it is more difficult for employers to fire workers whilst they have entered employment, making jobs more secure.

Regulation can also directly impact on pay levels and pay structure. Some countries, such as the UK, have statutory National Minimum Wage (NMW) which is set at country level and helps to control the minimum earnings for all workers. In other countries (such as Denmark and Germany), there is no statutory NMW and the minimum wage is set by collective agreements at sectoral level (Eurofound, 2018). Minimum wages have a strong influence on the country-level wage structure and the national wage dispersion, especially in countries with

weak collective bargaining systems (such as the UK), where they set a trend for the overall wage developments (Schulten & Watt, 2007). In the past decade, especially in the years following the economic crisis, minimum wage developments slowed down considerably and have been following an increasingly restrictive course. It has been argued that pay inequalities have arisen as a consequence of the application of minimum wage rates (Eurofound, 2018). While the National Living Wage (NLW) was introduced in the UK in 2016 as a more robust response to the low-pay problem, it only applies to those aged 25 and over, and therefore does not include all young workers, which may explain the high incidence of low-paid work among young people in the UK. In 2017, the Trade Union Congress (TUC) argued that the NMW needs a serious boost for young workers and called for the NLW to be lowered to cover more younger workers (TUC, 2017). This suggests that the NMW may potentially contribute to lower earnings among young people.

Similar to this, the law that protects workers against long working hours is weak in the UK. Long working hours in the UK are often claimed to be a consequence of the 'opt-out' from the European Working Time Directive (Green, 2013), especially in relation to young people who tend to be under higher pressure to sign the 'opt-out', when compared to older workers (Eurofound, 2014c). Chung and Tijdens (2013) found that, in comparison to Germany and Nordic countries (such as Denmark), working time arrangements in the UK are more employer-centred and designed to facilitate employers' rather than workers' needs.

Beyond regulation, many studies have shown that the structure of education and training systems plays an important role in the process of labour market entry (De Grip & Wolbers, 2006; Van der Velden & Wolbers, 2003). In particular, the institutional linkage between the education system and employment is strongest in countries which provide vocational training (e.g. Germany, France or Nordic countries), because it gives young people an opportunity to learn the occupation-specific skills. In contrast, in countries which offer mainly general education (e.g. the UK and Spain), the link between the education system and the labour market is weak and the occupation-specific training is usually obtained on the job. Therefore, for employers, young people who have vocational training are very attractive, because they already have skills required to do the job, which reduces the training costs (Mills, Blossfeld, & Klijzing, 2005; Wolbers, 2007). The literature suggests that a greater focus on specific skills and a closer link between education systems and employers leads to an easier transition from school to the labour market (Breen, 2005). Studies also show that the structure of the education system

affects the labour market mobility and career patterns among young people who have already entered paid employment (De Grip & Wolbers, 2006; Gangl, 2002). In countries that provide vocation-specific education, there is an immediate close match between the educational background acquired by labour market entrants and the occupation they are employed in. In contrast, in countries that provide general education, worker-job matches are weaker and mainly achieved at later stages of employment, by means of firm-specific training provided by the employer. In these countries the labour market entry can be described as "much less tightly structured by education, less orderly, more amendable to career contingencies and discretionary employer behaviour" (Gangl, 2002, p. 474). These arguments suggest that young people in countries which offer vocation-specific education benefit from a better match between their qualifications and a job and higher job security than young adults in countries that rely on the general education system (Scherer, 2004). Studies showed that in general young people tend to have higher-quality jobs in countries which offer vocation-specific education (Shavit & Muller, 1998; Van der Velden & Wolbers, 2003).

At the same time, some studies suggested that the vocational specificity of the education system may be more beneficial for intermediate- and high-skilled workers, because they already have acquired diplomas and knowledge from vocational education which employers reward with higher-skilled job roles (De Grip & Wolbers, 2006). For low-skilled young people it may be more difficult to enter employment in countries that favour vocation-specific education, however whilst in employment, they should be rewarded with better and more secure jobs than workers in countries that rely on general education - in these countries young job seekers may find it easier to enter their first employment but are also more likely to be in poor-quality and non-standard jobs (Bambra et al., 2014). While many European countries offer vocational education, only a small subset of these countries provides young people with specific occupational skills. Germany is regarded as the best example of a vocational education system that provides specific occupational skills (Scherer, 2004).

Further to this, the provision of social protection (e.g. healthcare services / benefits, maternity / paternity benefits, unemployment benefits, or social assistance) can reduce health inequalities and improve public health (Diderichsen, 2002). A crucial aspect of social protection is income maintenance, particularly during adverse life events, such as unemployment, sickness absence or old age (Bambra & Eikemo, 2009). Unemployment benefits play an important role in protecting individuals from poverty and social exclusion and in facilitating transitions between

jobs and labour market statuses. Social protection during unemployment varies greatly between European countries and relies on three interrelated principles which underpin the provision: universalism, social insurance and means-testing (Diderichsen, 2002). Universalism is more prominent in Scandinavian countries, where welfare services are offered to all citizens as long as specific health or demographic criteria are fulfilled. Social insurance systems are common in Central and Southern European countries (e.g. Germany and Spain), where entitlement to benefits is based on previous contributions and the benefit often reflects the previously earned income. Under means-testing, entitlement is restricted on the basis of income and the minimal financial support is targeted at those most in need, after they have exhausted other sources of support (e.g. personal savings) (Rhodes, 1997). The evidence shows that in countries with high levels of social protection (e.g. Denmark, Germany), the unemployed fare much better in terms of general health. However, those in receipt of means-tested unemployment benefits (e.g. in the UK), report lower levels of self-reported general health, when compared to those provided with less restricted social security benefits (Bambra & Eikemo, 2009).

Social protection schemes may be particularly beneficial to young workers due to their high involvement in insecure jobs and periods of joblessness (Lunau et al., 2014). Previous research suggested that the association between job security and poor mental health is less pronounced in countries with more extensive social security systems, because they enhance workers' ability to cope with stressful life events and conditions (Dragano, Siegrist, & Wahrendorf, 2011). In particular, it has been suggested that universal and generous welfare provision enables individuals to have "command over resources in terms of money, possessions, knowledge, psychological and physical energy, social relations, security and so on by means of which the individual can control and consciously direct her conditions in life" (Fritzell & Lundberg, 2011, p. 15). This argument emphasises the increased control over one's life, which should be particularly beneficial to young people in the context of contemporary labour markets characterised by high level of risk, uncertainty and unpredictability. Scholars have argued that control is an important basic human need and if this need is not fulfilled, negative psychological effects arise (Gagne & Deci, 2005). What is more, generous out-of-work benefits give individuals time to secure an appropriate job, rather than having to accept the first available job offer because of financial necessity. As a result, unemployment benefits may contribute to a better match between an individual and a job (Bambra et al., 2014), which should benefit young workers, given their high underemployment in terms of skills and education (Sutherland, 2013). Nevertheless, the evidence shows that in some countries social protection is difficult to

access for certain categories of workers, (such as non-standard workers), and where available, the eligibility conditions can be very difficult to fulfil (Spasova, Bouget, Ghailani, & Vanhercke, 2017).

What is more, the generosity of active labour market policies is often regarded as the key factor affecting youth employment outcomes. The active labour market policies are largely aimed at providing training, work programmes and public employment services to different groups of workers (Eichhorst et al., 2014) and therefore might be particularly beneficial to young people, especially lower skilled individuals, in preserving and developing their skills. Training and the opportunity to develop careers are important aspects of job quality in that they help young people to develop skills and advance in their careers, and therefore avoid dead-end jobs (Berglund & Wallinder, 2015). As a result, they may protect young workers against a threat from being excluded from employment. Active labour market policies have been associated with better working conditions in recent studies among older workers (Lunau et al., 2014). However, there are important complementarities between activation policies and social protection measures described earlier. For example, in higher-income countries with welldeveloped social protection systems in place, the need for, and effectiveness of, activation policies will depend on the strength of the work incentives embedded in existing income support measures (OECD, 2013). Denmark shows the highest public expenditure on activation policies among the OECD countries (OECD, 2013).

Additionally, the power of individuals to demand healthy and well-paid jobs varies across countries and depends on the success of worker association in labour unions (Burgard & Lin, 2013). Strong collective bargaining institutions have been found to be positively related to greater utilization of employees' skills in the workplace, possibly due to their impact on rising labour costs (which encourages employers to use the skills of their workforce more efficiently), and through its positive effect on workers' involvement in the organisations' management (OECD, 2018). Weakening of labour unions in many developed countries in the last few decades has contributed to greater job insecurity and reduced rewards in the workplace for many workers (Price & Burgard, 2006). According to TUC (2018), the current generation of young workers in the UK is less likely to participate in labour unions, when compared to prime-aged workers. This situation may have a negative impact on job quality among young people, as strong unions give workers power and voice, which helps to improve working conditions within occupations and industries and constrain the actions of employers (Korpi, 2006).

International comparisons show that the strength of exposure to low job quality and poor mental health is greater in countries with poor healthcare systems, less regulated labour markets, and more modest or fragmented welfare states. Between-countries differences in the impact of job quality on mental health are, in part, a product of diverse national-based systems of employment and policy-making regimes (Gallie, 2007; Lloyd & Payne, 2011). Recent study by Niedhammer et al. (2012) found that significant differences in several psychosocial work factors were found between 12 European countries. In particular, workers in Denmark, Netherlands and Norway reported a much lower exposure to low job quality. Survey data indicate that overall Scandinavian countries are distinctive in terms of the quality of working life and score higher on most job quality indicators (Gallie, 2007).

In summary, different national institutions and policy contexts may be of importance in two ways: (1) they may affect job quality and the prevalence of psychosocial working conditions in the workplace; (2) they may modify the effect of job quality on mental health (Lunau et al., 2014). From both research and policy perspectives, it is important to know whether certain institutional factors in the UK may impact job quality and reinforce the negative impact of job quality on mental health. For instance, in nations where workers' jobs are more securely protected through employment protection legislation, it could be expected that such a common mental health determinant as job insecurity would have a lower significance to young workers' mental health (Laszlo et al., 2010).

# **Employment regimes**

One possibility to assess the role of institutional context in shaping job quality, and the relationship between job quality and mental health, is the introduction of institutional regime frameworks. These frameworks highlight variations across countries or across a group of countries with similar institutional configurations (Gallie, 2009). Rather than including specific institutional variables (such as the measure of employment protection, for example) which may suffer from multi-collinearity, it is possible to capture such factors via the grouping of employment regimes, and then discuss the results in the light of such factors (Green & Livanos, 2015). This approach puts great emphasis on the role of institutions in shaping job quality and has been successfully adopted in previous studies on job quality among working-age adults (e.g. Bambra & Eikemo, 2009; Gallie, 2007; Gallie, 2013; Holman, 2013; Olsen, Kalleberg, & Nesheim, 2010).

The employment regime frameworks point to several distinct employment systems that vary in terms of a number of different criteria, such as the involvement of organised labour, the role of the state, principles underlying employment policy, the role of the public sector, the level of employment protection, the importance of work-life programmes and education and training systems (Holman, 2013). As suggested earlier in this section, differences in these criteria may also have consequences for job quality (Gallie, 2009) and mental health (Cottini & Lucifora, 2013) among young workers. Employment regimes place those countries that are most related together, highlighting within regime similarities and between regime differences (Korpi, 2006). By examining the sources of differences in job quality between countries, it is possible to uncover the most important determinants of job quality and mental health among young adults at wider country-level.

The early employment regime theories proposed three categories of countries: Social Democratic, Liberal and Corporatist welfare states (Esping-Andersen, 1990). Later, the work of Amable (2003) distinguished between Social Democratic (e.g. Nordic countries), Continental (e.g. Germany, France), Liberal (e.g. the UK) and Southern European regimes (e.g. Spain, Greece). The advantage of the classification proposed by Amable (2003) is certainly its larger geographical coverage and that it uses various criteria to differentiate between institutional regimes (such as educational systems and financial systems) (Holman, 2013). The employment regime theory explains how the combination of different institutional features may affect job quality.

Social Democratic regimes are characterised as having extensive employment policies designed to protect employment rights across the entire working-age population (Gallie, 2007). In Social Democratic regimes, the participation of organised labour in decision-making is highly institutionalised within organisations and the government, with the key aims to promote high levels of employment, to collaborate with employers in developing vocational training programmes and industry-specific skills, and to control pay differentials and increase the pay of low-paid workers (Gallie, 2009; Kristensen & Lilja, 2010). These strategies are expected to protect union members from unemployment, raise the value of workers' skills, and contribute to a much tighter labour market. One possible outcome of a tight labour market is the increased capacity of employees to secure better working conditions in terms of job content (e.g. autonomy, social support) and basic employment conditions (e.g. job security, basic wage levels), greater employee influence in workplace decision-making, and in terms of mental

health the increased ability to resist workplace practices which are detrimental to well-being (e.g. standardization, excessive monitoring) (Gustavsen, 2007). The aim of organised labour to promote skill development and training may contribute to a more highly skilled workforce (Lasonen & Rauhala, 2000), which may also permit the creation of more complex jobs (Prais, Jarvis, & Wagner, 1989). The benefits of complex jobs typically include higher levels of autonomy and they also tend to be more intrinsically motivating, and these jobs are known to promote mental health of workers (Cottini & Lucifora, 2013). Moreover, if unions are successful in controlling pay differentials and increasing the earnings of low-paid workers, pay inequality is likely to be lower (Gallie, 2007). Finally, welfare policies in Social Democratic regimes are more inclusive and promote participation in employment of women and vulnerable groups (Esping-Andersen, 1990), which may help to reduce the variations in working conditions between different categories of employees, such as part-time / full-time, temporary / permanent (Mandel & Semyonov, 2006). This may particularly benefit young workers, given their high participation in non-standard forms of employment. In general, based on the above evidence, it is expected that Social Democratic regimes are likely to promote employment practices which contribute to higher quality jobs among young people.

Continental regimes are characterised as having strong employment rights, but in contrast to the Social Democratic regimes, this is only true in relation to a core workforce, with much weaker rights for those on the periphery (e.g. temporary or part-time workers). In Continental regimes, organised labour plays a more consultative role within organisations, and as a result its influence on job quality (e.g. in terms of promoting high skill levels and wage rates) is weaker (Holman, 2013). Also, organised labour is likely to be stronger among the core workforce of large firms, where mobilising the workforce is easier (Hyman, 2001). As a result, job quality may be better among the core workforce of large organisations than among workers on non-standard contracts or those employed in smaller firms (Gallie, 2009). These arguments suggest that the organised labour in Continental regimes has less capacity to enhance working conditions, especially among certain groups of workers (Gallie, 2007). In general, the level of job quality in Continental regimes is likely to be lower than in Social Democratic regimes, especially among young people in non-standard jobs.

Further, in Liberal regimes low state intervention occurs in relation to the regulation of working conditions. The UK is an example of the Liberal regime. In this employment regime, it is assumed that working conditions and employment levels are best regulated by the market
(Gallie, 2007). Organised labour has little involvement in decision-making within organisations or the government (Hyman, 2001), which reduces its capacity to influence working conditions. This regime type is also characterised by higher levels of employment and lower employment protection, which creates a fluid labour market, that may make employers less willing to provide training and development opportunities within the workplace, because the returns on such investments are less likely (Capelli et al., 1997; Holman, 2013). As a result, employees tend to have relatively lower skill level, which in turn inhibits the creation of complex jobs (Gallie, 2007) and contributes to jobs of lower intrinsic quality (e.g. lower autonomy), and also greater levels of standardization and lower wages (Prais et al., 1989). In summary, these institutional features are likely to promote lower- quality jobs for young people when compared to Social Democratic and Continental regimes.

Finally, the Southern European regimes have relatively little state intervention in terms of the regulation of working conditions and the influence of organised labour is weak (Amable, 2003; Whitley, 1999). The Southern welfare states, such as Spain are characterised by their highly fragmented welfare provision, which has diverse income maintenance programmes, and the healthcare system which provides only limited coverage. In Southern regimes, the reliance on family and the voluntary sector is very common (Bambra, 2007; Bambra & Eikemo, 2009). What is more, government-sponsored education and training is limited, and due to low work security employers often do not invest in training and workers show little initiative to undertake lifelong learning. This results in lower employee skill levels (Goergen, Brewster, & Wood, 2009). As in Liberal regimes, the low levels of employee skill constrain the design of complex jobs, leading to lower-quality jobs and lower earnings (Prais et al., 1989). As a result of these institutional characteristics, Southern regimes are more likely to have a lower level of job quality than Social Democratic and Continental regimes (Holman, 2013).

Studies among working-age populations show that Social Democratic regimes have higher task discretion (Gallie, 2009), offer greater provision of training (Goergen et al., 2009), and have lower wage dispersion (Gallie, 2009) than Continental, Liberal and Southern regimes. In terms of the association between job quality and mental health, the strongest negative association was found in Liberal regimes and the lowest in Social Democratic regimes (Dragano et al., 2011). In summary, by drawing on employment regime theory, it is expected that, in comparison to Liberal regimes, job quality for young people will be higher in Social Democratic and Continental regimes and lower in Southern regimes.

# 4.3 Individual and job-related characteristics

# Job-related characteristics

Beyond country-specific influences, job quality and mental health are affected by job-related characteristics such as occupation, sector, industry, firm size and job tenure (e.g. Boccuzzo & Gianecchini, 2015; Eurofound, 2014; Green, 2006; De Bustillo et al., 2011b; Smith et al., 2008).

According to the Job Demands-Resources model (JD-R; Bakker & Demerouti, 2007), some job characteristics are more prevalent in certain occupational groups. In particular, every occupation has its own set of risk factors, which may have an impact on job quality and workers' psychological well-being. For instance, the intrinsic aspects of work (such as high autonomy, complex tasks and the opportunity for learning new things at work) are more prevalent in skilled, professional and technical occupations (the so-called 'high skilled white-collar occupations') but occur rarely in unskilled and lower-skilled occupations (Eurofound, 2007, Magda et al., 2011; Smith et al., 2008). In contrast, clerks, service workers, and shop and market sales workers (the so-called 'low-skilled white collar occupations') are typically characterised by poor intrinsic aspects of work (such as low skills and autonomy) and additionally have been consistently found to have the lowest quality jobs across multiple dimensions (Eurofound, 2014).

Similarly, jobs vary considerably across industries and sectors (in terms of the ownership type). Industries differ in terms of job demands and job resources inherent in their work (Cottini & Lucifora, 2013). For example, workers in customer service industry (such as wholesale and retail, accommodation and food service, administration and support service) tend to experience lower job demands, but at the same time they also tend to have lower control over their work duties, and often report a lack of training and development opportunities (Eurofound, 2014; Green, 2006). Work intensity was also found to differ across industries. When all EU-27 countries were taken as a whole, the highest levels of perceived work intensity were found in accommodation and food services (i.e. customer service industry), while lowest in education (Eurofound, 2007). Jobs in customer service industry generally score poorly across a range of job quality indicators (Eurofound, 2012). On a positive side, professional industry (which include professional, scientific, technical, and financial industries) was associated with higher

pay and better working conditions in previous research (Magda et al., 2011). Finally, some studies found that working in the public sector (when compared to the private sector) increases the probability that the job involves complex tasks and problem solving but reduces the probability of high job autonomy (Cottini & Lucifora, 2013).

This evidence suggests that some aspects of job quality, particularly the intrinsic quality of work (such as skills or autonomy) and health and safety (physical and psychosocial risks) may be more strongly affected by job-related characteristics, such as occupation, industry or sector (e.g. Handel, 2005; Holman, 2013; Olsen et al., 2010; Smith et al., 2008). A previous study by Smith et al. (2008), which used the European Working Conditions Survey (EWCS) to examine job quality across twenty-seven European countries, found that occupation and industry have more impact on a worker's job content (in terms of problem solving and learning, monotony of tasks, complexity of tasks, and emotional demands), autonomy and physical health and safety than the institutional setting. What is more, based on a comparative analysis of four countries from the International Social Survey Programme (ISSP, 2005), Olsen et al. (2010) found that physical working conditions reflect more differences in occupational and industrial structure rather than the institutional context. Similarly, Handel (2005) suggested that the intrinsic rewards (for instance, 'interesting' and 'meaningful job') are likely to reflect occupation and industry. The above evidence suggests that job-related characteristics may have more influence on intrinsic quality of work and health and safety than the institutional context.

The impact of firm size has also been acknowledged in previous literature, but results are not consistent across studies. Firms can be divided into small firms (employing less than 50 workers), medium firms (employing between 50 and 249 employees) and large firms (employing 250 workers and over) (BIS, 2014). It is often found that pay increases with the size of the firm (Green et al., 2006). One possible explanation for this is that low pay in smaller firms is compensated by other job characteristics (such as work-life balance) that may be better in smaller establishments (Eurofound, 2012). Studies among working-age populations found that pay and career prospects improve with the size of the firm (Eurofound, 2012; Cottini and Lucifora, 2013). In contrast, Storey et al. (2010) found that job quality decreases as the size of the company increases, and some studies among young workers found that this is particularly true for the work-life balance dimension of job quality, which tends to be better in smaller firms (Boccuzzo & Gianecchini, 2015). Larger organisations are more likely than smaller organisations to have formal human resource practices and policies in place in relation to pay,

training and promotion opportunities which may guarantee better working conditions (Boccuzzo & Gianecchini, 2015; Hoque & Noon, 2004). Training and development opportunities are particularly important in the youth context, as they enable young workers to enhance their employability and remain attractive in the external labour market in case of a job loss (Tomlinson, 2012). In contrast, smaller firms are less likely to have resources to provide training and are considered to be disadvantaged by not having the career promotion opportunities that larger firms can offer through well-established internal labour markets (Cable & Graham, 2000). Recent study among graduates found that graduates with the highest-quality jobs are more likely to be employed in larger firms (Boccuzzo & Gianecchini, 2015). This evidence suggests that, in relation to some key aspects of job quality, larger firms may provide higher level of job quality for young workers than small firms.

Finally, in relation to job tenure (i.e. the length of employment), it is commonly found that wages increase with the length of employment (De Bustillo et al., 2011b; Smith et al., 2008). However, in terms of career prospects, the findings are mixed (Eurofound, 2012). Some studies found that job quality is higher for graduates who were employed in the same job for longer (Boccuzzo & Gianecchini, 2015). Based on the stepping stone hypothesis (Section 2.4.1, Chapter 2), it can be expected that young workers' job quality should improve with the length of employment as a result of work experience and training and development opportunities provided by the employer (e.g. Ferrie, 2001; Scarpetta et al., 2010; Virtanen et al., 2005).

# Individual characteristics

Gender and education are well-known determinants of both job quality and mental health (Eurofound, 2012; Marmot, 2005). According to previous research, an elevated risk for stress or greater risk of the onset of common psychological problems (e.g. depression, anxiety) has been found among women and those with lower education (Caron & Liu, 2011; Marchand & Blanc, 2010). The impact of knowledge and skills (which is reflected in one's educational status) has been highlighted as an important resource in contemporary labour markets which contributes to enhancing young workers' employability (Tomlinson, 2012). It can also be expected that individuals may react differently to the same job stressor, based on gender and educational status (Dooley et al., 2000).

Moreover, marital status is considered to be an important source of non-job social support (Turner & Marino, 1994). Studies that have focused on marital status showed that married individuals or those living in a couple, regardless of their gender, enjoy better psychological well-being than unmarried people (e.g. Cottini & Lucifora, 2013; Waite & Gallagher, 2000). In relation to this, some studies found that having dependent children increases the probability of experiencing common mental health problems (Cottini & Lucifora, 2013).

In terms of job quality, being female increases the probability of holding a non-standard employment contract (Dooley et al., 2000), which is also considered a lower quality employment (Feldman, 1996). Male workers have on average greater weekly earnings and are more often offered development opportunities in the workplace when compared to female workers, and this finding is largely consistent across many studies (e.g. Blau, Brinton, & Grusky, 2006; Eurofound, 2012; De Bustillo et al., 2011b; Stier & Yaish, 2014). Women tend to experience greater job security and on average report lower work intensity in the workplace (Eurofound, 2012). Still, in general men score higher on a great majority of job quality indicators according to a recent study by Stier and Yaish (2014), which concluded that women enjoy hardly any advantage over men in terms of job quality – their jobs offer lower earnings and fewer opportunities for advancement, but also higher job insecurity, poorer job content, less time autonomy and greater emotional demands.

The relationship between education and mental health is well-documented. Holding a higher education degree is associated with a wide range of health-related benefits. In particular, education may have both direct and indirect impacts on people's health (Grossman & Kaestner, 1997). Regarding its direct effects, education contributes not only to intellectual development or gaining the formal educational requirements needed for entering working life (e.g. Erikson, 1968), but also improves self-esteem, sense of mastery (Havighurst, 1972) and dispositional optimism (Ek et al. 2004). Education is an investment in human capital, which offers a greater sense of personal control that can benefit mental health (Mirowsky & Ross, 1998). The effect of education on mental health may also be indirect through job quality, such as job strain on the basis of educational level (Hintsa et al. 2006). Some recent studies, however, showed that the impact of education on mental health is weak (Ahnquist et al., 2012; Laaksonen et al., 2007) and that education matters for physical health only (Cottini, 2012). Other studies show that being highly educated increases the probability of suffering from mental health problems (e.g. Cottini & Lucifora, 2013). In terms of its impact on the quality of working life, education is regarded as a positive personal resource, which opens up opportunities for better working conditions, higher pay and a more fulfilling job (Mirowsky & Ross, 2005). Some of these

positive impacts of education have been confirmed in studies on returns to education, which showed that graduates have higher earnings and greater probability of being in employment than non-graduates (HESA, 2017; Lundahl et al., 2011). Lower levels of education increase the probability of holding a non-standard employment contract (Dooley et al., 2000). Therefore, while the impact of education on job quality and mental health seems to be rather positive, the pathways through which it affects mental health are complex and still need to be established.

In summary, studies among working-age populations point to the importance of including the well-known individual determinants of job quality and mental health, such as gender, education, age, marital status and having dependent children when examining these two concepts (e.g. Caron & Liu, 2011; Cottini & Lucifora, 2013; Eurofound, 2012; Marchand & Blanc, 2011; Marmot, 2005; Stier & Yaish, 2014).

4.4 The importance of a 'fit' between an individual and a job for mental health outcomes

The review of the literature on the association between job quality and mental health (Chapter 3) pointed to the importance of a match between an individual and a job (e.g. Bell et al., 2012; Green & Livanos, 2011; Verbruggen et al., 2015). In particular, for certain aspects of job quality (such as contract type, working hours and skills), it is important to address the role of individual abilities and needs, when examining the impact of job quality on mental health among young workers.

The importance of examining these three issues in the youth context can be justified in several ways. First, as shown in Chapter 2, the aspects of contract type, working hours and skills seem to be one of the most important and problematic dimensions of job quality in the youth context and in contemporary labour markets, but have not been given much attention in the current literature on job quality and mental health. Second, some studies suggest that these issues might have long-term effects. For instance, the negative effects of temporary employment and mismatches in terms of skills and working hours are not restricted to the actual period of being in this type of employment and there is a possibility that these issues might continue into the future (e.g. O'Reilly et al., 2015; Scarpetta et al., 2010; Sweet & Meiksins, 2013). The theory

of person-job fit (Edwards, 1991) explains the importance of a 'fit' between an individual and a job for mental health outcomes and is discussed next.

# 4.4.1 Person-job fit and mental health

The theory of person-job fit points to the importance of the compatibility between individuals and their jobs (Edwards, 1991). In particular, the main message of this theory is that a mismatch between a worker and his or her work situation will produce negative outcomes, such as psychological distress, negative job attitudes and poor job performance. French, Caplan and Van Harrison (1982) pointed to two types of person-job fit. The first type, 'job demands-worker abilities fit', refers to the match between the requirements of the job and the skills, knowledge and abilities of the worker. This type of person-job fit may occur when workers' skills are different to those required by the job (e.g. when employees have more or less skills than required for their job). The second type of person-job fit refers to the match between workers' preferences for certain working conditions and the actual working conditions on that job and is called 'worker needs-job supplies fit'. For instance, poor person-job fit may occur when workers are in temporary or part-time jobs but require different conditions. Therefore, the person-job fit model provides a useful theoretical basis for understanding the mental health outcomes of poor match between jobs and young workers' abilities (in terms of skills) and needs (in terms of contract type and working hours).

The relationship between undesired employment (in terms of low person-job fit) and poor mental health can be explained by several mechanisms. First, the relationship between person-job fit and mental health can be explained by potentially lower income, especially among those who are in involuntary non-standard employment. Low pay may affect mental health indirectly by contributing to subjective economic strain. In the context of youth employment, consequent problems of subjective economic strain may include difficulties in pursuing a desired life pattern or be a barrier to individual independency and family formation (Artazcoz et al., 2005). Since individual independence is particularly important for young adults and is often seen as an indication of adulthood (Butterworth et al., 2011), this situation may cause life dissatisfaction (Scherer, 2009) and a state of psychological distress (e.g. Quesnel-Vallee et al., 2010). Beyond this, workers in non-standard jobs are in general exposed to poorer job quality on multiple dimensions (Dahl, Nesheim & Olsen, 2009; Eurofound, 2014b; Sweet & Meiksins,

2013). These may include a lack of development opportunities (such as training or promotion prospects) or inadequate social support (Underhill & Quinlan, 2011). All these characteristics have been suggested as additional potential psychological and material factors that shape the negative association between non-standard employment and health (Virtanen et al., 2005).

Third, it is possible that being in undesired employment (i.e. poor person-job fit) may influence core self-evaluations, such as self-esteem or undermine young adults' sense of confidence, causing young workers to see themselves as less efficacious. Studies which looked at associations between poor working conditions and mental health found that poor working conditions directly influence conceptions of self and mastery (Stansfeld & Candy, 2006). Poor person-job fit may affect mental health through a devaluation of individuals' feeling of self-worth and an erosion of feelings of mastery over the work situation. Therefore, low self-esteem and declining mastery may be underlying mechanisms, which link person-job fit to mental health, as they are underlying mechanisms linking poor working conditions and psychological distress (Brooker & Eakin, 2001). Finally, it is possible that those who are unsatisfactorily employed may engage in behaviours which are detrimental to mental health. For instance, in earlier studies among young school-leavers the involuntary part-time employment was shown to increase the risk of alcohol abuse (Prause & Dooley, 1997).

# 4.4.2 The role of perceived employability

The importance of employability (which is often expressed in an individual's skills, experience, and career self-management) (Tomlinson, 2012) in affecting youth labour market outcomes was established in Chapter 2 (Section 2.4.3). In particular, research shows that employability is considered an important feature, which allows young adults to stay attractive in contemporary labour markets and adjust to changing employer demands and labour market insecurities (Clarke, 2008; Tomlinson, 2012; Wilton, 2014). Within the career literature, employability is considered as key determinant of subjective career success (Fugate et al., 2004). Subjective career success is defined as the accomplishment of desirable work-related outcomes (Arthur, Khapova, & Wilderom, 2005) and therefore should also be associated with the extent to which young people are in jobs which fit their abilities and preferences.

Some authors also suggest that having high employability perceptions is likely to be accompanied by a sense of control over one's career, and this feeling enhances workers' wellbeing (Fugate et al. 2004; Marler, Barringer, & Milkovich, 2002). Thus, employability may be particularly important in relation to young workers' mental health. This study examines the role of employability from a subjective perspective and argues that perceived employability may be an important resource for young workers in the context of contemporary labour markets, characterised by high level of risk, uncertainty and increasingly individualised working lives (O'Reilly et al., 2015; Sweet & Meiksins, 2013).

Perceived employability refers to a person's perceived ability to acquire a job when / if needed (Baruch, 2001) and can be considered a personal resource (De Cuyper, Mauno, Kinnunen, & Makikangas, 2011). Recently, researchers have suggested the need for investigating the consequences of perceived employability for both employees and organisations (e.g. De Cuyper et al., 2008; Vanhercke, De Cuyper, Peeters, & Witte, 2014). For instance, Vanhercke et al. (2014) argued that more research on the effect of perceived employability on different groups of individuals is important. To date, the role of perceived employability in relation to youth employment is limited, which indicates that this area would benefit from further research.

There are reasons to believe that perceived employability may influence the difficult situation of young workers in contemporary labour markets. Recent studies suggested that having high level of perceived employability helps to not only improve the control workers have over their work situation but also over choosing jobs which fit their needs and preferences (De Cuyper et al., 2011; Forrier, Sels, & Stynen, 2009). Conversely, lack of employability could cause workers to become stuck in jobs (such as non-standard employment) that they do not like (Green, 2011). Conservation of Resources Theory (Hobfoll, 1989, 2001) explains the importance of personal resources for mental health outcomes.

# **Conservation of Resources theory**

The Conservation of Resources theory (COR; Hobfoll, 1989, 2001) states that individual resources are strongly linked to health and well-being. Individuals with many resources are more adaptive, can solve life difficulties and achieve their goals more successfully than those with fewer resources (Hobfoll, 2002). This leads to lower levels of strain, which in turn, enhances well-being. According to Hobfoll (2002), personal resources refer to individuals'

sense of their ability to control and impact upon their environment successfully and therefore may be particularly important in the context of contemporary labour markets, which is characterised by high degree of uncertainty and a lack of control in many aspects of working life (De Cuyper et al., 2011), especially for young workers (Chapter 2).

Earlier scholars have considered perceived employability as such a resource because perceived employability is assumed to support individuals' ability to cope with change and uncertainty by providing feelings of control and possibilities to act in the surrounding environment (Green, 2011). Researchers have recently started to investigate the association between perceived employability and employee well-being. However, the results of the found associations are mixed. Few studies found a positive relationship between these two variables. For instance, De Cuyper et al. (2008) found a positive association between perceived employability and both employee work engagement and life satisfaction. What is more, Berntson and Marklund (2007) observed a positive relationship between perceived employability and psychological well-being. In contrast, Silla et al. (2009) did not find any associations between perceived employability and positive affect or life satisfaction. Most research to date has been carried out among working-age populations.

# The moderating effect of perceived employability

There are reasons to believe that perceived employability would moderate the relationship between person-job fit and mental health. This section argues that perceived employability may affect the extent to which young people perceive their job situation negatively and the extent to which they can improve and / or change their job situation. To my knowledge, little research exists on possible moderating factors between person-job fit and mental health of young workers.

Based on the first argument, perceived employability may play a role as a personal resource which buffers the relationship between person-job fit and mental health. For instance, higher levels of perceived employability may help to alleviate the negative effect of low person-job fit and produce more positive mental health outcomes than lower levels of perceived employability. This can be explained by the appraisal theory of stress. According to the appraisal theory of stress (Lazarus & Folkman, 1984), individuals who have high perceived employability are likely to appraise their work situation more positively. The feeling of being employable may provide them with a feeling of control over the employment relationship and

any potential difficulties in the workplace (such as lower person-job fit). This feeling of control, in turn, enhances well-being (Berntson & Marklund, 2007). In a recent study, Elst, De Cuyper and De Witte (2011) found a positive association between perceived control and different measures of mental health.

What is more, studies examining the determinants of turnover intention suggest that whether people initiate change and move to new jobs when they do not fit in their current jobs depends on their levels of perceived employability (De Cuyper et al., 2011). In particular, perceived employability is associated with higher job mobility and it has been argued that people who perceive themselves as more employable are more likely to change their jobs and improve their work situation (Vanhercke et al., 2014). Specifically, based on their employability perceptions, employable workers are more likely to believe there are other and potentially better job alternatives in the labour market. This could, in turn, imply that they eventually find jobs which match their abilities and preferences, and these jobs are known to promote mental health (De Cuyper et al., 2008). In an earlier study Pfeffer (1998) argued that individuals who report high levels of perceived employability are more likely to leave a job position which does not satisfy their needs. In contrast, less employable workers are more likely to be locked in jobs, which they do not like (Aronsson & Goransson, 1999), suggesting that perceived employability may have a positive impact not only on workers' feelings about themselves but also on their behaviours.

The fact that people who perceive themselves as more employable are more likely to leave unfavorable jobs and / or improve their work situation may be explained by their better coping strategies. In particular, some studies found that perceived employability is closely related to coping. For instance, Berntson, Naswall and Sverke (2008) found that perceived employability strengthens more general self-efficacy beliefs. Self-efficacy can be defined as one's belief in one's ability to succeed (Bandura, 1997) and is one of the four core self-evaluations, which are basic fundamental evaluations individuals make about themselves (Bono & Judge, 2003).

Several studies found that these four core self-evaluations tend to be closely related to one another, which means that individuals high in self-efficacy are also likely to score high on self-esteem, internal locus of control and emotional stability (Judge et al., 2011). In general, previous literature suggests that individuals who have high core self-evaluations see themselves more positively across a variety of situations and approach the world in a confident

manner. What is more, people high in self-efficacy believe they are capable of solving problems and may be more successful in dealing with obstacles in the workplace by using better problem-solving strategies (Bono & Judge, 2003). Problem-focused coping is when individuals proactively change their situation to eliminate the source of their distress (Pearlin & Schooler, 1978). In addition, a recent study found that individuals with higher self-efficacy do not only engage in more active coping behavior in difficult situations, but also exert more effort and persistence in the face of obstacles, set higher goals for themselves, develop more concrete plans, and are more likely to achieve their goals (Mortimer, Kim, Staff, & Vuolo, 2016). Finally, it has also been found that employability has a positive impact on the effectiveness of job search behavior (Yizhong, Lin, Baranchenko, Lau, & Yukhanaev, 2017), and job search behaviour has been associated with pre-entry person-job fit perceptions in earlier study among young graduates (Saks & Ashforth, 2002).

In the context of a poor match between a worker and a job, it is possible that young workers who report higher levels of perceived employability are more likely to report higher self-efficacy, and consequently adopt better coping strategies (e.g. problem-focused coping) to resolve their unsatisfactory work situation. As a result, individuals who report higher levels of perceived employability are expected to experience better mental health.

In contrast, previous literature suggests that individuals who perceive themselves as less employable are also more likely to perceive their situation (such as poor person-job fit) as negative, tend to do little about changing their current situation, and are more likely to stay in their jobs when they do not fit (Aronsson & Goransson, 1999). This can be explained by learned helplessness theory. In particular, the learned helplessness theory (Seligman, 1972) suggests that when individuals are exposed to an experience in which they feel they have no control or ability to change things, this can lead to the feeling of helplessness, which can cause stress and negative emotions. When this theory is applied to perceived employability, it can be argued that individuals who perceive themselves as less employable are more likely to show symptoms of helplessness, because they feel that they have little or no control over their work situation and this situation can negatively affect their mental health. Studies which examine problems of locked-in effects found that being locked into one's profession and experiencing difficulties in finding new employment (as is likely among individuals who experience poor person-job fit and among workers who report low levels of perceived employability), is associated with psychological symptoms such as headaches and fatigue (Aronsson & Goransson, 1999). The above evidence suggests that it is very important for the mental health of young workers who are in a non-preferred workplace to find a new job and move to better employment, which is in line with their preferences and abilities. Young workers' perceived employability is very important to them in the context of being in a non-preferred employment, because it affects the way they perceive themselves, their work situation, and their evaluation of 'exit' possibilities. Perceived employability prevents an employee from feeling locked into his / her job, which is associated with poor individual well-being (Aronsson & Goransson, 1990). Thus, perceived employability is an important personal resource, which gives young people more control and the possibility to change their work situation (e.g. poor person-job fit). Poor person-job fit may be less damaging to mental health when individuals perceive themselves to be more employable. Perceived employability in relation to workers' mental health only recently attracted researchers' attention (e.g. De Cuyper et al., 2011; Vanhercke et al., 2014).

4.5 Conceptual framework, research objectives and hypotheses

This section starts with the presentation of this study's conceptual framework. It then develops hypotheses building on the literature presented in Chapters 2 to 4. Four research objectives have emerged from the review of the literature and theory on job quality and mental health in the youth context: (1) to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context; (2) to examine the role of social background in affecting young workers' evaluations of job quality; (3) to examine the relationship between job quality and mental health among young workers; and (4) to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability.

# **Conceptual framework**

Figure 1 presents this study's conceptual framework, which brings together different factors affecting job quality and mental health in the youth context, discussed in Chapters 2 to 4. It shows that these two concepts are affected by a multitude of factors, which go beyond the role of individual factors and personal agency. In general, Figure 1 explains the relative importance of individual and contextual factors in affecting job quality and mental health, the relationship

between job quality and mental health, and finally the role of a match between an individual and a job (i.e. person-job fit) and perceived employability for mental health outcomes. Research objectives and hypotheses are discussed next.

# Figure 1: Conceptual framework



# RO1: to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context

Chapter 2 highlighted the difficult position of young workers in contemporary labour markets. The evidence showed that young workers in the UK and other developed countries are particularly disadvantaged in paid work, but to date little is known about their job quality. While research on unemployment, marginal employment, underemployment, generational studies and the career literature (see Sections 2.3 and 2.4) have made a significant contribution to our understanding of job quality among young adults, they are only part of the story of what makes a given job good or bad (Green, 2006; De Bustillo et al., 2011). The review of the literature carried out in Chapter 2 suggested that research on youth employment is fragmented, with different disciplinary literatures targeting a different array of youth employment issues. This chapter showed that focusing on job quality would help to integrate previous knowledge in the area and further our understanding of youth employment in contemporary labour markets.

In examining young workers' job quality, this thesis adopts a job quality framework proposed by De Bustillo and colleagues (2011), which distinguishes five dimensions of job quality: pay, intrinsic quality of work, employment quality, health and safety and work-life balance. This framework includes a wide array of extrinsic and intrinsic aspects of work which are important to young workers and contemporary labour markets (further discussion of the appropriateness of this framework in the youth context is provided in Section 5.3.3 of the Methodology Chapter). Based on the above considerations, Research Objective 1 first aims to examine how, across different dimensions, young workers evaluate the quality of their jobs in the contemporary labour market in the UK.

Secondly, with the descriptive pattern of job quality among young workers in the UK established, Research Objective 1 aims to examine factors affecting their evaluations of job quality. The review of youth employment issues in Chapter 2 showed that most studies to date have focused on young workers themselves (in terms of individual differences) when interpreting their job quality. For example, lack of skills and lack of education are currently considered the primary determinants of job quality in the youth context (see Section 2.4.3). This focus on individual differences is also reflected in policies that target young people, which

in the UK and wider European context are either focused on bringing more young adults into paid employment, or on increasing their skills and experience, with little attention to job quality and the external context in which every job is embedded (e.g. Brown et al., 2011; Chung et al., 2012; Lundahl, 2011; De Bustillo et al., 2011b; Sutherland, 2013). Overall, past literature highlighted the importance of individual differences in terms of personal attributes (such as education) and personal agency in developing careers and securing high-quality jobs.

However, Chapter 4 has also revealed that today young workers may be constrained by a wide range of contextual factors, such as occupation or national-level institutions, highlighting the importance of structural factors that may constrain individual factors and personal agency. While studies among the working-age populations have pointed to the importance of the wider institutional context (e.g. Gallie, 2007, 2009; Holman, 2013; De Bustillo et al., 2011b; Olsen et al. 2010; Smith et al. 2008), the research and policy approaches to youth employment have primarily focused on a limited number of personal attributes to explain how young adults fare in paid work in contemporary labour markets (see Section 2.4.1). This study aims to contribute to knowledge by taking a holistic approach into the interpretation of young workers' job quality, which considers the role of individual and contextual (i.e. structural) factors.

The overview of factors affecting job quality and mental health (Chapter 4) showed that these two concepts are influenced by factors at multiple levels, which include contextual factors (institutional and job-related characteristics) and individual differences (such as gender, education, marital status, age, and having dependent children). In relation to contextual factors, Section 4.2. argued that institutional and policy conditions set a stage for the study of job quality and mental health, and that in countries with certain institutional configurations young workers may fare better in terms of job quality. For example, studies on youth unemployment show that the degree of labour market regulation and the vocational specificity of the education system are very important institutional factors which influence job quality and career patterns among young people (Breen, 2005; De Grip & Wolbers, 2006; Van der Velden & Wolbers, 2003). Other studies, mainly among working-age populations, also pointed to the importance of social protection (in terms of unemployment benefits and health insurance, for example), collective bargaining and union density, and active labour market policies in shaping job quality and mental health outcomes (see Section 4.2).

Based on these considerations, the classification of employment regimes provided by Amable (2003) is used in this study to examine the role of institutional and policy context in affecting young workers' job quality and to develop the hypotheses. This classification highlights variations across countries with similar institutional configurations (Gallie et al., 2013). Section 4.2. argued that this approach to examining the impact of institutional and policy context has advantages over using specific institutional measures (such as the measure of employment protection, for example) which may suffer from multi-collinearity (Green & Livanos, 2015). The classification of employment regimes puts great emphasis on the role of institutions in shaping job quality and has been successfully adopted in previous studies on job quality among working-age adults (e.g. Bambra & Eikemo, 2009; Gallie, 2007; Gallie, 2013; Holman, 2013; Olsen et al., 2010).

Four countries were chosen in this study as proxies for four employment regimes: the UK (which represents the Liberal employment regime), Denmark (which represents the Social Democratic employment regime), Germany (which represents Continental employment regime) and Spain (which represents the Southern European regime). The chosen countries have an interesting combination in terms of labour market characteristics, especially in relation to key institutional aspects which may affect youth employment patterns (such as active labour market policies, education systems, and the degree of labour market regulation) and at the same time also show similarities to the UK on at least one key criteria. Further discussion of the chosen countries is provided in Section 5.3.3 of the Methodology Chapter.

Based on employment regime theory and past research (e.g. Gallie, 2007; 2009; Holman, 2013; De Bustillo et al., 2011; Olsen et al. 2010; Smith et al. 2008), it is expected that in countries with more regulated labour markets, higher investment in active labour market policies, greater focus on vocation-specific education, more generous social provision, and higher collective bargaining coverage and / or union density, young people will fare considerably better in terms of job quality. At the same time, it is also expected that the institutional and policy setting might be more relevant to some aspects of job quality, especially pay, employment quality (contract type, job security, training and career advancement) and work-life balance (work intensity and working hours). In relation to the employment quality, stricter employment protection in Denmark, Germany and Spain is likely to contribute to higher job security among young workers, when compared to the UK. In relation to the work-life balance dimension, high collective bargaining coverage (especially in Denmark and Spain) and high union density (in

Denmark) are likely to prevent high job intensity. Strict regulations in relation to working hours (in Denmark and Germany) are likely to affect the maximum length of working time and protect young workers against long working hours. Pay regulations in the UK (in terms of NMW) may potentially contribute to lower earnings among young people, when compared to those in Denmark and Germany (see Section 4.2). Based on these considerations, the first hypothesis is, therefore:

Hypothesis 1: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will differ between countries. In comparison to the UK, job quality will be higher in Denmark and Germany and lower in Spain, particularly in relation to pay, employment quality and work-life balance.

Moreover, Chapters 2 to 4 showed that jobs vary across individual differences and job-related characteristics. In relation to job-related characteristics, studies showed that certain industries and occupations were consistently associated with lower quality jobs (see Sections 2.4.5 and 4.3). In particular, jobs in Customer Service industry (which includes wholesale and retail, accommodation and food services, administration and support services) were consistently found to offer the lowest pay, less training and development opportunities and poor work-life balance (e.g. Cottini & Lucifora, 2013; Eurofound, 2014; De Bustillo et al., 2011; OECD, 2014), especially for young workers (Eurofound, 2014; OECD, 2014). In relation to occupation, service and sales occupations and clerical support occupations (the so-called 'low-skilled white collar occupations') were found to offer (on average) the lowest quality jobs in terms of its multiple aspects (Eurofound, 2012). When it comes to sector in terms of the ownership type, public sector was associated with higher job quality than private sector, especially in relation to career prospects and intrinsic quality of work (De Bustillo et al., 2011; Smith et al., 2012). In general, the reviewed literature pointed to potentially large workforce divisions in the youth context, based on occupation and industry.

Section 4.3 also showed that job quality differs by firm size (i.e. the number of employees per firm) and job tenure (i.e. the length of employment), and these are also important factors affecting job quality (e.g. Boccuzzo & Gianecchini, 2015; Cottini & Lucifora, 2013; Smith et al., 2012). This section established that job quality for young people is likely to be higher in larger firms (when compared to smaller firms). Larger firms are more likely than smaller firms

to have formal human resource practices and policies regarding pay, working hours, training and development opportunities, that may guarantee better working conditions and easier career progression (Boccuzzo & Gianecchini, 2015; Hoque & Noon, 2004), and as a result the opportunity to enhance young people's employability, which is an important feature in the youth labour market (Tomlinson, 2012). In relation to job tenure, it was commonly found that wages increase with the length of employment (Eurofound, 2012). Based on the stepping stone hypothesis (see Section 2.4, Chapter 2), it can be expected that young workers' job quality should improve with the length of employment (e.g. Ferrie, 2001; Scarpetta et al., 2010; Virtanen et al., 2005), because it may give them the opportunity to gain work experience, and potentially the access to training and promotion opportunities. Overall, the evidence reviewed in Section 4.3 suggested that job quality should increase with firm size and job tenure. The second hypothesis is as follows:

Hypothesis 2: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for lowskilled white collar occupations compared to other occupations; (b) for private compared to public sector workers; (c) for those with short job tenure (less than 1 year) compared to those with longer tenure; (d) for workers employed in small firms (1-49 workers) compared to those in medium or large firms; and (e) for those employed in the Customer Service industry compared to other industries.

Section 4.3 also suggested that each occupation and industry have its own set of risk factors inherent in their work (Bakker & Demerouti, 2007; Eurofound, 2007; Smith et al., 2008). Therefore, health and safety conditions are more likely to reflect differences in industrial and occupational structure rather than the institutional setting. Similar to this, the intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) may reflect more the occupation or industry than the institutional arrangements. For example, complex tasks and the opportunity for learning new things at work are more prevalent in skilled, professional and technical occupations, but occur rarely in unskilled, semi-skilled and service occupations (Eurofound, 2007). Based on this, the third hypothesis is as follows:

Hypothesis 3: Occupation and industry will be stronger predictors of intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) and health and safety (in terms of physical and psychosocial risks) dimensions of job quality rather than wider institutional context.

In relation to individual differences, Section 4.3 showed that gender and education are wellknown determinants of both job quality and mental health (e.g. Caron & Liu, 2011; Eurofound, 2012; Marchand & Blanc, 2011; Marmot, 2005; Mirowsky & Ross, 2005). Previous literature in the youth context highlighted the role of individual factors (e.g. skills, education) in affecting the extent to which young workers are able to secure high quality jobs (see Section 2.4). Studies showed that women often have lower pay, more insecure contractual conditions, face greater emotional demands at work, receive poorer training and development opportunities than men (e.g. Blau et al., 2006; Eurofound, 2012; De Bustillo et al., 2011; Stier & Yaish, 2014), and in general men score higher on a great majority of job quality indicators according to a recent study by Stier and Yaish (2014). In relation to education, it is particularly important for developing young people's employability (Tomlinson, 2012), which is considered a key feature affecting youth career outcomes in the today's labour market (see Section 2.4.3, Chapter 2). Some of these positive impacts of education have been confirmed in studies on returns to education, which showed that graduates have higher earnings and greater probability of being in employment than non-graduates (HESA, 2017; Lundahl et al., 2011) (see Section 2.4.4). In general, previous research pointed to the importance of including the well-known individuallevel determinants of job quality and mental health, such as gender, education, age, marital status and having dependent children when investigating these two concepts (see Section 4.3). Based on these considerations, the fourth hypothesis is as follows:

Hypothesis 4: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for female compared to male workers; (b) for single compared to married workers; (c) for workers who have dependent children compared to those who do not have dependent children; (d) for younger (18-24) compared to older workers (25-34); and (e) for nongraduates compared to graduates.

# *RO2: to examine the role of social background in affecting young workers' evaluations of job quality*

Chapter 2 pointed to the importance of social background in developing careers and securing high quality jobs. Section 2.4.5 showed that, in the context of contemporary labour markets, which is characterised by increased individual responsibility in securing jobs and managing careers (Sweet & Meiksins, 2013), young people often lack resources to exercise choice and navigate their labour market transitions (Furlong, 2015; O'Reilly et al., 2015). The amount of available resources depends partially on their social background. These resources may include economic capital (e.g. financial support, purchasing housing, or inheritance) (Ayllon & Gabos, 2017; Mills, Blossfeld, & Klijzing, 2005) but also human, social and cultural capital, which can be gained or improved by factors such as having well-educated parents (Bynner & Parsons, 2002; Hyggen, 2006; Kauppinen et al., 2014; Mirowsky & Ross, 2005). Recent studies suggested that prolonged and more variable transitions to independence and adulthood have contributed to an increase of parental support in contemporary labour markets (e.g. Fingerman, Miller, Birditt, & Zarit, 2009; Fingerman et al., 2012; Waithaka, 2014; Wightman, Schoeni, & Robinson, 2012). Some scholars argue that parental assistance helps young adults navigate the many challenges and uncertainties of contemporary transitions to adulthood, enabling them to achieve independence and well-being (e.g. Aquilino, 2005; Eggebeen, 2005; Johnson & Benson, 2012; Settersten & Ray, 2010).

In addition, Section 2.4.5 showed that individuals from more advantaged social backgrounds are considered as 'better equipped' in soft-skills (Archer & Davison, 2008), and today employers are particularly keen in employing young workers with such skills, in both low-skilled and high-skilled jobs (Brown & Hesketh, 2004; Sutherland, 2013). These skills are regarded as important in increasingly service-oriented jobs (Eurofound, 2014).

At the same time, Section 4.2 showed that in some institutional settings (such as the UK), the role of the family support may be more important, which implies that young people may rely more strongly on their social background to improve their labour market prospects. For instance, Nordic countries (such as Denmark) have been classified as 'universalistic transition regimes', where there is a comprehensive schooling system and most importantly, social assistance linked to citizenship status, regardless of the family situation (Walther, 2006). In contrast, Southern European countries (such as Spain) are characterised by the absence of

government resources and social support for young people. In the UK, welfare provision is limited and usually based on strict requirement criteria (OECD, 2013) and as a result, young adults in Spain and the UK may rely more strongly on the support provided by their family (Moreno, 2012). This evidence highlights the importance of social background, especially in countries where there is limited state support for young people (such as Spain and the UK). Chapter 2 (see Section 2.4.5) discussed the importance of social background in contemporary labour markets and provided an overview of pathways which may link social background to job quality. Based on these considerations, the aim of Research Objective 2 is to examine the role of social background in affecting young workers' evaluations of job quality. This is addressed in the thesis through the proposal that those from less advantaged social background will experience a lower level of job quality and is articulated in the following hypothesis:

Hypothesis 5: Young workers from less advantaged social background (using parental education and occupation as a proxy) will experience a lower level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), when compared to those from more advantaged social background.

# **RO3**: to examine the relationship between job quality and mental health among young workers

Chapter 2 showed that there is a lack of consensus among researchers in relation to the extent to which young people have been affected by the changing demands of contemporary labour markets and involvement in lower quality jobs (such as marginal employment or underemployment), suggesting that outcomes of job quality in the youth context is an area which would benefit from further research (see Sections 2.4.2 and 2.4.4). The literature review carried out in this chapter showed that the uncertainty and insecurity of employment, combined with increasing individual responsibility in securing jobs and developing careers may undermine young workers' basic psychological needs for control, security and autonomy, and as a result may carry risks with regard to their psychological well-being (e.g. Colakoglu, 2011; Rodrigues & Guest, 2010; Ryan & Deci, 2000; Sheldon et al., 2001) (see Section 2.4). The lack of consensus in relation to the consequences of lower quality employment in the youth context provided a rationale for this thesis to investigate mental health as an important outcome of job quality in contemporary labour markets.

Chapter 3 examined the relationship between job quality and mental health while pointing to the key work-related predictors of psychological well-being in the youth context. This chapter concluded that studies in the area are limited, often based on old data sets, and to date have mainly focused on a specific aspect (or a set of aspects) of job quality and studied its impact on mental health in isolation. In addition, the role of contextual factors (such as occupation or institutional context) is often a neglected issue in studies examining job quality and mental health among young people, but studies among working-age populations highlight the importance of including contextual factors together with individual-level factors in job quality and mental health studies (e.g. Burgard & Lin, 2013; Cottini & Lucifora, 2013; Lewchuk et al., 2011). In general, few studies have taken a multidimensional approach to job quality when examining its impact on young workers' mental health.

In line with studies among working-age populations, which show that psychosocial quality of work is important for the mental health of adult workers, Chapter 3 concluded that the same is expected in relation to the mental health among young people - lower job security, lower job autonomy, lower skill level of a job, less social support, higher work intensity and greater exposure to psychosocial risks in the workplace are likely to be associated with poorer mental health status among youth (see Section 3.4). It is expected, therefore, that the psychosocial quality of work is associated with mental health outcomes. Specifically, it is hypothesised that:

Hypothesis 6: Psychosocial quality of work for young people (in terms of skills, autonomy, social support, job security, psychosocial risks and work intensity) will be inversely related to (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and positively related to (e) affective well-being.

At the same time, Chapter 3 showed that most research to date has focused almost exclusively on the psychosocial quality of work and certain aspects of job quality may have more explanatory value in contemporary labour markets and in the youth context (Furlong, 2015; Mills et al., 2005, Sweet & Meiksins, 2013; Sutherland, 2013). In particular, the review of youth employment issues in Chapter 2 highlighted that today young workers face specific job quality issues, which are particular to this age group. The studies on unemployment, marginal employment, underemployment, generational research and the career literature point to issues in relation to employment quality (job security, contract type, training and career prospects), skills and working hours, which are expected to be more important to psychological well-being among young workers than other aspects of job quality (see Section 2.4). Based on these considerations, Hypothesis 7 is as follows:

Hypothesis 7: Employment quality (in terms of contract type, job security, training and career prospects), and skills and working hours will be more strongly associated with (a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being among young workers, when compared to other dimensions of job quality.

# **RO4**: to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability

Chapter 3 showed that, for certain aspects of job quality (such as contract type, working hours and skills), it is important to consider the role of individual abilities and needs, when examining the impact of job quality on mental health in the youth context. This is in addition to the need for a job to be good in terms of more universal aspects (such as high pay or high job security). This chapter indicated that it is not the skill level of a job and / or the number of working hours and / or the type of contract that seems to matter most for mental health outcomes, but whether there is a fit between these aspects of job quality and young workers' abilities and needs (see Section 3.4)

Studies on marginal employment and underemployment (see Sections 2.4.2 and 2.4.4) showed that involuntary engagement in temporary work and underemployment in terms of skills and working hours seem to be major issues for young workers in contemporary labour markets. The study of young workers' person-job fit in general, and more specifically in the context of contemporary labour markets and mental health outcomes has been given little attention. Therefore, the first aim under Research Objective 4 is to examine the role of a match between an individual and a job (in terms of person-job fit) and how it affects mental health status among young workers. Based on the theory of person-job fit (Edwards, 1991), it is predicted that young workers who perceive high fit between their abilities / needs on the one hand and their job role on the other (i.e. high person-job fit) will also experience better mental health. Therefore, it is hypothesised that:

Hypothesis 8: Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.

Moreover, the evidence suggests that poor quality jobs may be less detrimental to mental health if workers have resources to cope with the situation of being in undesirable employment. Chapter 2 showed that employability (which is often expressed in terms of one's skills, experience and career self-management) is an important feature in the youth labour market, affecting the extent to which young workers are able to secure high quality jobs (e.g. Clarke, 2008; Tomlinson, 2012; Wilton, 2014) (see Section 2.4.3). Chapter 4 showed that perceived employability is likely to be accompanied by a sense of control over one's career and this feeling, in turn, enhances workers' well-being (Fugate et al. 2004; Marler et al. 2002), suggesting that perceived employability may be particularly important in relation to young workers' mental health. This study examines the role of employability from a subjective perspective and argues that perceived employability may be an important resource for young workers in the context of contemporary labour markets, characterised by high level of risk, uncertainty and increasingly individualised working lives (Furlong, 2015; O'Reilly et al., 2015). Section 4.4.2 argued that perceived employability may improve the degree of control over the work situation and over choosing jobs that match workers' abilities and needs. Following the assumptions of the COR theory (Hobfoll, 1989, 2001), the consequences of perceived employability on young workers' mental health can be investigated. In line with the principles of COR theory, young workers reporting higher levels of perceived employability are assumed to have more resilience to cope, adjust and adapt to the changing circumstances in current workplaces and more widely in contemporary labour markets. Therefore, the aim of the two remaining hypotheses under Research Objective 4 is to examine the role of perceived employability. It is expected that higher levels of perceived employability would be beneficial for the mental health of young adults and might have a moderating effect on the relationship between person-job fit and mental health (see Section 4.4.2).

Hypothesis 9: Perceived employability will be positively related to the mental health of young workers such that those with higher perceived employability will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue,

and higher (e) affective well-being, when compared to those with lower perceived employability.

Hypothesis 10: Perceived employability moderates the relationship between personjob fit (in terms of skills, contract type and working hours) and mental health among young workers such that those with higher perceived employability and low person-job fit will demonstrate lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.

# 4.6 Chapter summary

This chapter has brought together different factors affecting job quality and mental health. It highlighted the relative importance of individual and contextual factors in influencing job quality and mental health in the youth context. This included institutional factors, individual differences, as well as job-related characteristics. It was concluded that institutional setting may be particularly important for pay, employment quality and work-life balance whereas the intrinsic quality of work and health and safety are more likely to reflect the occupational and / or industrial structure.

This chapter also showed that, for some aspects of job quality (such as contract type, working hours and skills), their association with mental health among young people depends on the match between an individual and a job. In relation to this, perceived employability was proposed as an important personal resource for young people in the context of contemporary labour markets, characterised by high levels of risk, uncertainty and unpredictability. Perceived employability is likely to be accompanied by a sense of control over one's career which suggested that it might be particularly important in relation to young workers' mental health. Thus, perceived employability may not only directly affect mental health but also the extent to which young workers are affected by being in lower quality employment. In general, this chapter highlighted the importance of going beyond the role of individual factors and personal agency when examining job quality and mental health in the youth context.

The chapter finished with the presentation of this study's conceptual framework, research objectives and hypotheses. The following chapter provides an overview of the research design and methods used to examine the associations between job quality, its determinants and mental health outcomes.

# Chapter 5: Methodology

# 5.1 Introduction

This chapter presents the research design, which consists of five stages of secondary data collection, evaluation and analysis. Three large social surveys were selected to address the research objectives and hypotheses of this study: (1) the European Working Conditions Survey (EWCS, 2015), (2) the European Social Survey (ESS, 2010), and (3) the Labour Force Survey (LFS, 2017). Data analysis was divided into three phases, which allowed for the examination of four research objectives and the corresponding hypotheses.

The layout of this chapter is as follows: Section 5.2 provides an overview of this study's methodological approach. It discusses the secondary data analysis as a research method, its advantages and limitations, and explains why this research method is appropriate to address this study's research objectives and hypotheses. Section 5.3 develops the process of secondary data analysis. It provides an overview of five stages which were involved in the process of secondary data collection, evaluation and analysis. This includes the review of secondary data sources (Stage 1), survey selection, thorough evaluation, sample selection and selection of measures (Stage 2), the analytical strategy (Stage 3), preparing the secondary data for analysis (Stage 4), and finally the data analysis (Stage 5). In addition, Stage 2 also discusses the approach to measuring job quality and the role of institutional context in this study. It critically reviews different proposals to measuring job quality and points to the framework which is most appropriate to use in the context of youth employment in contemporary labour markets. It then provides an overview of four countries (UK, Denmark, Germany and Spain) and explains why this group of countries is appropriate for the purpose of addressing the role of institutional context in this study. Finally, Section 5.4 provides the overall summary of this chapter.

# 5.2 Methodological approach: secondary data analysis as a research method

The overarching aim of this study is to examine job quality, its determinants and mental health outcomes among young workers in contemporary labour markets, while considering the role of individual differences and contextual factors. To address this aim, the analysis of carefully selected, nationally and internationally representative secondary data sources, is considered an appropriate research strategy (Antonius, 2013).

Two key advantages of using secondary data sources for research purposes are that they are time- and cost-effective. Secondary data provides a good alternative for this study, due to restricted time and resources (Castle, 2003; Smith et al., 2008). Representativeness of study samples is also one major advantage of secondary data. In particular, sample sizes tend to be relatively large and participants are often chosen at random from a target population (based on population or address registers), minimising potential sample bias. This increases the generalisability of the results, which is the extent to which findings can be applied to the wider population from which the study sample was selected (De Vaus, 2014).

Based on the conceptual framework (see Figure 1, Section 4.5), it would not be possible to address this study's objectives with the use of primary data. This study aims to examine the effects of both individual and contextual factors (such as occupation, sector and institutional context) on young workers' job quality and requires data that is representative of a wide range of industries, occupations, as well as cross-national data. Therefore, it requires a relatively large sample size, which is representative of the population under study (young workers in the UK, Denmark, Germany and Spain), which would not be achievable to obtain with the use of primary data (MacInnes, 2017).

Most secondary data sources are now collecting data on a wide range of topics and contemporary issues, which allows researchers to manipulate large amount of information in a single study and answer important research and policy-related questions quicker, when compared to smaller scale research (Magee, Lee, Giuliano, & Munro, 2006). In addition, some secondary data sources have elaborated strategies for quality assurance, and therefore data collection is done to a high standard, and measurement techniques are tested and refined by statisticians on regular basis (MacInnes, 2017).

There are several types of secondary data, such as surveys, administrative data which is often collected by Government departments and agencies (e.g. health data, education data, employment data, etc.), or population censuses (De Vaus, 2014). Most of the secondary data sources contain quantitative data, which is "data that can be described numerically in terms of objects, variables and its values" (Hox & Boeije, 2005, p. 593). This thesis will use quantitative secondary data sources, which are available to researchers free of charge. Surveys will be used in all phases of the secondary data analysis.

#### Survey research

Survey research involves obtaining information on attitudes, opinions or behaviours from large groups of people (MacInnes, 2017). The key distinguishing features of surveys are the form of the data and the purpose of data analysis. Surveys are characterised by a structured set of data, where information about different cases (such as individuals, households or countries) is collected and then recorded in the form of variable by case data grid. The key aims of survey research are to describe the characteristics of a set of cases, examine what may cause some phenomenon to happen by comparing cases, and searching for other characteristics which are systematically associated with it. As such, survey research also aims to draw causal inferences by a thorough comparison of the numerous characteristics of cases (De Vaus, 2014; Tabachnick & Fidell, 2014). Therefore, survey research fits well with the aims of this study, which is to examine young workers' perceptions about their job quality, its determinants and mental health outcomes in contemporary labour markets.

# Limitations of secondary data sources

While the advantages of secondary data sources are considerable, they also come with some limitations. The most obvious disadvantage of using the secondary data is that researchers do not have control over the data collection process: the population studied, sampling strategy and measures used (Hair, Wolfinbarger, Money, Samouel, & Page, 2015). In particular, secondary data may be limited in terms of the population studied and may not cover those samples of the population which researcher wishes to examine. What is more, the original investigators may not have collected all the information that the researcher requires (MacInnes, 2017). In addition, the operationalization of variables may not fit very well to the way variables are defined in the study at hand (Castle, 2003).

Furthermore, regarding surveys, another major limitation is the issue of non-response. In many Western countries survey non-response rates have increased considerably in the last two decades, which may threaten the representativeness of the sample, and consequently the generalizability of the research findings (Hox & Boeije, 2005). What is more, when doing survey research, researchers need to be very careful to "avoid mistaken attribution of causal links (simply to demonstrate that two things go together does not prove a causal link)" (De Vaus, 2014, p. 5).

Finally, some secondary data sources may be of low quality (e.g. poor sampling strategy, unreliable measures, data errors and missing values) or outdated (Tabachnick & Fidell, 2014). For example, some studies examining job quality among young workers (as described in Chapters 2 to 4) have used outdated data sets to make assumptions about contemporary labour markets, which makes interpretation of these studies very difficult.

Many of these limitations can be overcome by ensuring only the highest quality data is selected and the data source chosen is in line with the aims of research at hand. Previous literature argued that the key to using secondary data successfully to find meaningful results is a good fit between the hypotheses and the dataset (Doolan & Froelicher, 2009; MacInnes, 2017). Surveys selected for the purpose of this thesis are a good match with this study in terms of their research aims and thematic coverage. All surveys use strict quality control measures, which ensures their data is accurate and of high quality.

# 5.3 The process of secondary data analysis

The process of secondary data analysis was developed (Figure 2) based on the recommendations given in past research on how to select, evaluate and analyse secondary data (e.g. De Vaus, 2014; Doolan & Froelicher, 2009; Hair et al., 2015; MacInnes, 2017; Stewart & Kamins, 1993; Tabachnick & Fidell, 2013). This included five stages of data collection, evaluation and analysis. The process of secondary data analysis started with an in-depth review and evaluation of existing secondary data sources, based on set criteria (Stage 1). This was followed by Stage 2, which included four sub-stages: (1) survey selection, based on its appropriateness for this study's objectives and hypotheses; (2) thorough analysis and evaluation of each survey's methodology and data documentation to ensure its high quality and

suitability for this study; (3) selection of sample and an overview of its key characteristics; and finally (4) selection of survey measures and an overview of how the selected variables will be used to measure different concepts included in this study's conceptual framework.

Stage 3 provided an overview of statistical techniques that were used for hypothesis testing. Stage 4 provided an overview of procedures which were used to prepare the data for analysis. This stage involved data cleaning and data modifications (e.g. data coding and creating new variables).

Finally, Stage 5 involved data analysis, the results of which will be presented in the next chapter (Chapter 6: Results). Data analysis involved three phases. Phase 1 allowed for the investigation of Research Objective 1 ('to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, jobrelated characteristics and wider institutional context'), and Research Objective 3 ('to examine the relationship between job quality and mental health among young workers'). The European Working Conditions Survey (EWCS, 2015) was used to address these two research objectives.

Phase 2 enabled the investigation of Research Objective 2 ('to examine the role of social background in affecting young workers' evaluations of job quality'). For this purpose, the European Social Survey (ESS, 2010) was used. Finally, phase 3 allowed for the investigation of Research Objective 4 ('to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability'). The European Working Conditions Survey (EWCS, 2015) and the UK Labour Force Survey (LFS, 2017) were used to address this research objective.

Figure 2 illustrates the process of secondary data analysis which guided this study by using a step-by-step strategy. This chapter next provides a detailed overview of each of the five stages.

Figure 2: The process of secondary data analysis



5.3.1 Review of secondary data sources (Stage 1)

Prior to selecting secondary data, a comprehensive overview of existing surveys has been conducted. Different criteria were considered when reviewing the surveys and evaluating their appropriateness for this study's objectives. The criteria were based on previous recommendations given by different authors on how to collect, evaluate and analyse secondary data sources (Castle, 2003; De Vaus, 2014; Hair et al., 2015; MacInnes, 2017; Stewart & Kamins, 1993; Tabachnick & Fidell, 2014). The following criteria were considered in this study: (1) topical coverage; (2) sample description; (3) sample size; (4) the aim of the survey; (5) survey methodology; (6) the operationalisation of variables; (7) data quality (the implementation of quality measures and sample selection strategy); (8) the comprehensiveness and transparency of data documentation; and (9) the year of data collection.

This section presents an overview of existing surveys in Europe and evaluates their appropriateness for this study's objectives, based on the above criteria. The review is limited to surveys which cover the topics of job quality and mental health.

# National Surveys in Europe

Several European countries have conducted their own surveys at national level that cover the area of work and employment reasonably well. The earliest interest in measuring the issues related to job quality developed in Finland where the Quality of Work Life Survey (QWLS) has been running since 1977 to monitor working conditions of the Finnish population. Although the QWLS has a very small sample size and low periodicity (only several surveys have been conducted so far), it covers quite a wide range of job quality aspects. Nevertheless, the data is not publicly available and must be purchased from the Statistics Finland.

The research into job quality has also attracted a lot of attention in Italy and the Quality of Work Life Survey (QWLS) was launched in 2002 to measure the impact of some major labour market reforms that took place a few years earlier (in 1997). So far, the QWLS has been conducted three times and although it offers some interesting data on the working conditions in Italy, the reports are the only available source of information in English. Similarly, every five years the National Research Centre for the Working Environment (NRCWE) in Denmark conducts the Danish Work Environment Cohort Study (DWECS) which is a very comprehensive survey into work-related issues and consists of a large sample size (8,600-20,000 workers). The DWECS offers a very rich data that is nationally representative but likewise the Finnish survey, it is not available for a public use.

Some other European countries have also expressed their interest in examining the work and employment issues. Nonetheless, most of the national surveys are either not available for the public use, or they are only accessible in the language of the country where the study took place. For instance, in Germany the BIBB/IAB-Survey assesses working conditions of the German population. Unfortunately, the survey is only available in German.

Most European countries have a public research organisation that provides various statistics in the field of work and employment. For instance, the most comprehensive in terms of the thematic coverage appears to be the Italian National Institute of Statistics (Istat) that has its own website available in both Italian and English. The Istat aims to provide a free access to data and reports on employment and other issues important to citizens and policymakers in Italy. Similarly, Statistics Finland offers some useful data for the study of job quality in Finland but not all of its statistics is publicly available. Therefore, public data availability seems to be the main issue that considerably limits the usefulness of research conducted at national level. Moreover, although a wide range of statistics on employment issues is available in Europe, many European countries do not make their official statistical websites available in English, at the same time restricting the access for international researchers to use the data outside the country of origin.

In summary, there is a lot of interest in examining the quality of working life in Europe and many European countries have attempted to measure (sometimes in great detail) numerous aspects of job quality. Nevertheless, the research carried out at national level is not very well harmonised. In particular, national surveys are rarely comparable due to quite large differences between them in terms of periodicity, targeted population, sample size and methodology (De Vaus, 2014). Therefore, although the research listed above may be very useful for assessing the state of work and employment at the national level, it would be difficult to use it in the context of a comparative international analysis.

# National surveys in the UK

In the UK, data covering the job quality dimensions can be derived from several national surveys such as the British Household Panel Survey (BHPS), the Understanding Society (US), the Workplace Employment Relations Study (WERS), the British Social Attitudes Survey, the Skills and Employment Survey (SES), and the Labour Force Survey (LFS). Most surveys cover Great Britain only (Scotland, England and Wales).

The BHPS is one of the few surveys which covers the whole of the UK (Scotland, England, Wales and the Northern Ireland) and is updated on annual basis. The main advantage of this survey is its periodicity and that it can be analysed at both individual and household levels. It covers several job quality issues (such as autonomy, training, working time and job security). However, the size of the Scottish and Welsh samples is currently around 1500 households per country which may not be nationally representative. It is important to notice that the BHPS had stopped running in 2008 and a new larger survey called Understanding Society (US) has been developed in 2009 to replace the BHPS and extend its topical coverage. The US is four times
larger in terms of sample size and covers a much wider range of job quality dimensions (such as flexibility and working conditions).

What is more, the WERS covers quite a large number of job quality dimensions but is not being updated on a regular basis (every 4-8 years) and therefore the pattern of changes may not be easy to capture due to its low periodicity. In contrast to the BHPS and the US, the WERS is much smaller in size (2,500 workplaces) and only covers the countries of Great Britain, not the whole of the UK. However, what differentiates this survey from other national surveys is that the data comes from three unique sources (employees, managers, and workers' representatives).

Moreover, the BSAS is an important source of information on the attitudes of British citizens in relation to social and political issues. However, the employment issues are not covered in much depth in this survey. Therefore, a very limited amount of information on job quality can be derived from it, making this survey unsuitable for the study of job quality in the youth context.

Furthermore, the SES contains very rich data on job quality and skills requirements of jobs. The questionnaire content stays mostly the same across its different waves which allows for mapping changes over time. The SES is intended to be representative of the working population of Great Britain. This survey was developed by a group of academic researchers at Cardiff University and therefore is theory driven. It maintains high quality through implementation of rigorous quality assurance procedures. However, the main disadvantage of this survey is its small sample size and the fact that it is updated only every five-six years.

Finally, the Labour Force Survey (LFS) is the largest household survey in the UK, which is based on a panel design (where households stay in the sample for five consecutive waves). The survey provides important information on employment circumstances of the UK population and is updated regularly (on a quarterly basis). The sample size is certainly its main advantage: it involves approximately 100,000 individuals in the UK. It is sponsored by the Office for National Statistics (ONS), which is the UK's national statistical body, and several other Government's departments. However, in terms of its topical coverage, this survey is certainly limited, as it does not cover many aspects of job quality and mental health. It does, nevertheless, include the measures of workers' preferences in relation to contract type. In fact, this is the

only survey in the UK which allows for the investigation of workers' contractual preferences. Therefore, in general, its coverage of extrinsic aspects of work (such working hours, contract type, pay, training opportunities) is certainly very good. The LFS is used in this study to examine young workers' contractual preferences (i.e. person-job fit in terms of contract type) under Research Objective 4.

In summary, the UK national data on job quality is quite rich in comparison to information offered in other European countries. However, likewise the national surveys elsewhere, the UK surveys are not harmonised in terms of their frequency, sample size and methodology.

#### International Surveys

In some cases, the surveys measuring issues related to job quality are of an international nature. The advantage of such surveys is the fact that they often follow the same methodology and are conducted simultaneously in all countries which makes the international comparisons easier.

Every five years the European Foundation for the Improvement of Living and Working Conditions (Eurofound) conducts the European Working Conditions Survey (EWCS) which covers a large geographical area within Europe (35 countries in total for its latest 2015 edition) and provides information on the widest range of topics related to job quality at the European level. It also includes measures of mental health. Some recent proposals of job quality indicators have been derived from it and it has been widely used in previous research when examining topics related to work and employment issues (e.g. De Bustillo et al., 2011; Eurofound, 2012). Among all the surveys reviewed here, the EWCS is the only survey which aims to collect information about the conditions of work and employment in Europe. It also provides information on workers' mental health status and their underemployment in relation to skills and working hours. Therefore, this survey fits well with the objectives of this study and provides relevant data to address the hypotheses of this study. The disadvantage of this survey is however a lack of information to measure participants' social background and their preferences in relation to contract type.

In terms of methodology, one of the main advantages of the EWCS is that the entire survey is developed and coordinated centrally at Eurofound by a group of experts in the field of work and employment and the whole research process is transparent and very well documented (De Bustillo et al., 2011). Moreover, it is worth mentioning that the questionnaires included in the

survey together with the fieldwork procedures follow the same principles across all participating European countries which ensures a high level of comparability. Although the EWCS may be the best source of information for the study of job quality in Europe, it has a relatively small sample size of approximately 1000 individuals per country (or 600 for smaller countries) and is updated every five years. The periodicity may be another problematic issue and it is debatable whether updating the survey every five years is enough. However, according to a Eurofound report carried out earlier, there have not been many changes in the levels of job quality in the 15-year period (from 1991-2005) and therefore updating the results on a 5-year basis may be enough to capture any new trends in work and employment studies (Eurofound, 2007).

The European Labour Force Survey (ELFS) solves some of the above issues. In contrast to the EWCS, it has a very large sample size (approximately 12,000 to 540,000 individuals per country) and is updated on annual basis (or even quarterly for some countries). The ELFS is the largest European household survey and according to De Bustillo et al. (2009) "the ELFS is the most important source of information on employment in Europe". The survey has been running since 1983 so it provides information on employment issues going back many years in time. Nevertheless, in terms of coverage the survey is extremely limited, and it provides information only in relation to few aspects of job quality and little information on mental health. The ELFS does not go beyond basic employment characteristics (such as occupation, working hours or contract type) and other important areas of job quality are not covered by this survey. In particular, there is very little information on the intrinsic quality of work (for instance, skills and autonomy at work) and the employees' health and safety.

Moreover, it is important to notice that the ELFS constitutes a joint effort of the European countries and the European Institutions (mainly Eurostat) and therefore the survey is not designed and conducted centrally by one organization (like the EWCS). The Labour Force Survey (LFS) described earlier, is the UK's contribution to the ELFS. First, the National Statistical Offices (NSOs) and Eurostat discuss the rules and agree on the concepts, definitions and categorisations of the questionnaire and on the sampling procedure. Second, the NSO in each country is responsible for designing the questionnaires, sampling and data collection. Therefore, the questions found in such a survey are not identical across countries and this issue may have some important implications for the comparability of the results, especially if one is interested to carry out country comparisons. The ELFS offers a great source of information for

the study of basic employment characteristics. Although it is a very large and representative survey, it cannot offer a holistic picture of job quality and mental health in Europe.

Furthermore, it is possible to find many relevant information on job quality issues in attitude surveys. One of them is the European Social Survey (ESS) that has recently been awarded the European Research Infrastructure Consortium (ERIC) status. The main objective of the ESS ERIC is to provide the trend data on how people's attitudes, beliefs and values change over time. The survey covers around 30 European nations and one of its main advantages is that it maintains high standards in terms of methodology and data collection process. In particular, all countries have to follow a set of rigorous recommendations and the questionnaires are identical across Europe, so the results are highly comparable between countries. What is more, the survey consists of 'core' and 'rotating' modules, so each wave is focused on a different additional topic. The topical module called "family, work and well-being" contains some highly relevant information on job quality issues (e.g. training, job security, health and safety, work-life balance and job autonomy) and so far has been repeated twice (in 2004 and 2010). This survey also contains information on workers' social background and mental health status. Therefore, this survey covers many of the issues included in this study's conceptual framework (such as job quality, social background and mental health).

While the above surveys cover a large number of job quality issues (the EWCS and the ESS) or are large and representative (the ELFS), most of the other international surveys seem to be more limited in terms of their periodicity and the topical coverage. Other international surveys include: the European Survey of Income and Living Conditions (EU-SILS), the European Structure of Earnings Survey (ESES), the European Quality of Life Survey (EQLS), and the International Social Survey Program (ISSP). Both the EU-SILC and the ESES offer very detailed information on respondents' earnings and working hours. However, most of the above surveys cover a very limited number of job quality issues and provide little information on respondents' mental health status. Therefore, they can be used to examine only very specific aspects of job quality (such as working hours, pay or job security) and are not appropriate to address this study's hypotheses.

#### 5.3.2 Survey selection and thorough evaluation (Stage 2)

Based on the review of secondary data sources, three surveys in total were chosen to address this study's research objectives and hypotheses: the European Working Conditions Survey (2015), the European Social Survey (2010), and the UK Labour Force Survey (2017). Overall, the selected surveys satisfy the key selection criteria (Section 5.3.1), fit well with the objectives of this study, contain suitable variables to measure different concepts included in this study's conceptual framework, and are considered of high quality.

All survey documentation (which included questionnaires, reports and fieldwork documents) was downloaded – this stage aimed to evaluate and analyse each survey in terms of its overall quality and to ensure its appropriateness for this study. What is more, this stage also enabled researcher to learn in great depth about the surveys chosen, which is an important step during the process of secondary data analysis (MacInnes, 2017). Table 1 shows which surveys were used to investigate each of the four research objectives and their corresponding hypotheses. The detailed description and evaluation of each survey is included in Appendix 1. For illustration purposes, Figure 3 presents how different surveys were used to address this study's conceptual framework.

Research Objectives	Hypotheses	Surveys Used
<b>RO1</b> : to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account	H1: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will differ between countries. In comparison to the UK, job quality will be higher in Denmark and Germany and lower in Spain, particularly in relation to pay, employment quality and work-life balance.	European Working Conditions Survey (2015)
the role of individual differences, job- related characteristics and wider institutional context	H2: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for low-skilled white collar occupations compared to other occupations; (b) for private compared to public sector workers; (c) for those with short job tenure (less than 1 year) compared to those with longer tenure; (d) for workers employed in small firms (1-49 workers) compared to those in medium or large firms; and (e) for those employed in the Customer Service industry compared to other industries.	European Working Conditions Survey (2015)
	<b>H3</b> : Occupation and industry will be stronger predictors of intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) and health and safety (in terms of physical and psychosocial risks) dimensions of job quality rather than wider institutional context.	European Working Conditions Survey (2015)
	H4: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for female compared to male workers; (b) for single compared to married workers; (c) for workers who have dependent children compared to those who do not have dependent children; (d) for younger (18-24) compared to older workers (25- 34); and (e) for non-graduates compared to graduates.	European Working Conditions Survey (2015)
<b>RO2</b> : to examine the role of social background in affecting young workers' evaluations of job quality	<b>H5</b> : Young workers from less advantaged social background (using parental education and occupation as a proxy) will experience a lower level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), when compared to those from more advantaged social background.	European Social Survey (2010)

# Table 1: Surveys used to address Research Objectives and Hypotheses of this study

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Research Objectives	Hypotheses	Surveys Used
<b>RO3</b> : to examine the relationship between job quality and mental health among young workers	H6: Psychosocial quality of work for young people (in terms of skills, autonomy, social support, job security, psychosocial risks and work intensity) will be inversely related to (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and positively related to (e) affective well- being.	European Working Conditions Survey (2015)
	<b>H7</b> : Employment quality (in terms of contract type, job security, training and career prospects) and skills and working hours will be more strongly associated with (a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being among young workers, when compared to other dimensions of job quality.	
RO4: to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with	<b>H8:</b> Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.	European Working Conditions Survey (2015) / UK Labour Force Survey (2017)
mental health among young workers and the moderating effect of perceived employability	H9: Perceived employability will be positively related to the mental health of young workers such that those with higher perceived employability will experience lower (a) work-related stress, (b) work- related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.	European Working Conditions Survey (2015)
	H10: Perceived employability moderates the relationship between person-job fit (in terms of skills, contract type and working hours) and mental health among young workers such that those with higher perceived employability and low person-job fit will demonstrate lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.	European Working Conditions Survey (2015) / UK Labour Force Survey (2017)



Figure 3: Conceptual framework and surveys used to address Research Objectives and Hypotheses of this study

5.3.3 Overview of sample characteristics and survey measures (Stage 2)

This section provides an overview of sample characteristics and measures selected from EWCS (2015), ESS (2010), and the UK LFS (2017). The measures were selected based on their correspondence to the concepts included in this study's conceptual framework (Figure 3). Prior to the selection of sample and measures from each of the three surveys, the approach to measuring job quality and institutional context is discussed.

## The approach to measuring job quality in this study

Despite a lack of consensus on what job quality is (see Section 1.5), to date there have been several attempts in both academic and institutional literatures to design a job quality measure, or propose a framework specifying the most important dimensions that should be included when assessing a quality of any given job. The aim of this section is to review some of the most important proposals and point to the framework which is most appropriate to use in the context of youth employment in contemporary labour markets.

The approaches to measure job quality can be divided into three broad groups. In the first group, there are *lists of dimensions and indicators* (it can be one indicator or more) that offer a list of job quality components and its corresponding indicators, which are measured independently of one another (but in some cases, only job quality dimensions are proposed). In the second group, there are *composite indicators* which go one step further and combine all the dimensions of job quality together to produce a single measure of the quality of working life (Burchell et al., 2013). Finally, the third approach is to use job satisfaction as the overall measure of job quality. Within these three groups, job quality measures differ in terms of their source (academic or institutional) and scope (national or international). Other variations include: the inclusion or absence of indicators to measure different components of job quality, the type and number of indicators selected, the level of analysis, and the sources of data to name just a few (De Bustillo et al., 2011).

The following sub-sections present examples for all types of measures. It should be noted that this is not an inclusive list of all proposals to date but has been chosen to show the breadth of contributions in the area, and to highlight a great diversity of approaches to measuring job quality. Table 2 summarises the main features of ten propositions to measure job quality.

## Table 2: Propositions to measure job quality

KEY COMPONENTS	1. LEAKEN INDICATORS (2001)	2. GREEN (2006)	3. GALLIE (2007)	4. HANDEL (2005)	5. BROWN ET AL. (2007)
рау	Рау	Рау		Рау	Satisfaction with pay
skills		Skills required by the job	Skill level of the job		
autonomy		Personal discretion	Task discretion	Autonomy	<ul> <li>Satisfaction</li> <li>with</li> <li>influence</li> <li>Influence</li> <li>over pace</li> <li>Influence</li> <li>over methods</li> </ul>
meaningfulness					
social support				Interpersonal relations	
type of contract	Flexibility and security				
job security		Risks and security	Job security	Job security	Job security
training	Lifelong learning and career development		Opportunities for skill development		
promotion				Promotion opportunities	
physical demands	Health and safety			Physical effort	
emotional demands	Diversity and non- discrimination	Affective well-being		Stress	Stress
working time	Work-life balance		Work-life balance		
job intensity		Work effort		Workload	Effort
other	<ul> <li>Job satisfaction</li> <li>Gender equality</li> <li>Inclusion and access to the labour market</li> <li>Social dialogue and workers' involvement</li> <li>Overall economic performance and productivity</li> </ul>	Job satisfaction		Intrinsic rewards	

## Table 2: Continued

KEY COMPONENTS	6. ESSER & OLSEN (2011)	7. DAHL ET AL. (2009)	8. EUROPEAN JOB QUALITY INDEX (LESCHKE ET AL., 2008)	9. JOB QUALITY INDEX (DE BUSTILLO ET AL., 2011)	10. BOCCUZZO ET AL. (2015)
рау	Income	Pay and fringe benefits	Wages	Рау	Wages
skills		Skills		Skill level of the job	Skill match
autonomy	Autonomy	Autonomy and control		Autonomy	
meaningfulness	Useful to society			Meaningfulness	
social support	Interpersonal relations			Social support	Teamwork
type of contract			Non-standard employment	Contract type	Type of contract
job security	Job security	Job security	Working conditions and job security	Job security	
training			Access to training	Training	
promotion	Advancement opportunities		Career advancement	Career prospects	Career advancement
physical safety	Physical risks			Physical risks	
emotional demands				Psychosocial risks	
working time			Working time and work-life balance	<ul> <li>Duration;</li> <li>Scheduling;</li> <li>Flexibility</li> </ul>	Working hours
job intensity	Work intensity	Work intensity		Work intensity	
other	<ul> <li>Interesting job</li> <li>Opportunity to help other people</li> </ul>	Intrinsic job rewards	Collective interest representation and participation	<ul><li>Powerfulness</li><li>Self-fulfilment</li></ul>	<ul> <li>Employment relationship</li> <li>Educational match (horizontal and vertical)</li> <li>Responsibility level</li> <li>Home-work distance</li> </ul>

### Lists of dimensions and indicators

Most of the initiatives measure the quality of working life along a number of specific dimensions. The main aim is to evaluate each dimension of job quality separately. In some cases, the proposals to measuring job quality include list of dimensions and corresponding indicators. In other cases, the authors only offer the list of dimensions and it is up to researchers to define the specific components of job quality.

Regarding institutional proposals to measuring job quality, it is clear that the European institutions have been concerned about the quality of working life in the last two decades. This resulted in the development of Laeken Job Quality Indicators in 2001, which comprise two main dimensions: (1) the characteristics of the job itself; and (2) the work and wider labour market context. Although the Laeken Indicators are the biggest effort of the European institutions towards the establishment of a representative job quality measure at the European level, they have many weaknesses and have been widely criticized by the international research community (e.g. Bothfeld & Leschke, 2012; Burchell et al., 2013; Davoine et al., 2008; De Bustillo et al., 2011). In particular, several dimensions included in the Laeken Indicators (such as productivity or overall economic performance) do not seem to measure issues related to job quality, while other important job characteristics (such as pay and work intensity) are left out. Moreover, the inclusion of job satisfaction alongside other job quality dimensions is highly debatable, since it is often considered to be a proxy measure for the overall quality of working life (Clark, 1996; Davoine et al., 2008; De Bustillo et al., 2009).

To address some of this criticism, several initiatives tried to improve the Laeken Indicators by limiting the number of issues covered and / or incorporating other dimensions of job quality. For example, Davoine et al. (2008), suggested reducing the number of dimensions related to the labour market performance and adding a complementary list of indicators, which included: wages and wage dispersion (mean wage in purchasing power parity and proportion of working poor), work intensification (proportion of individuals working to tight deadlines and at high speed), the cost and duration of training and other variables describing working conditions. Nevertheless, despite various efforts, many of the original weaknesses of the Laeken Indicators remained and most of the new proposals resulted in a disorganised aggregation of issues, which covered not only the quality of individual jobs, but also participation rates and different forms of distributional inequalities (Burchell et al., 2013).

Beyond the institutional approaches to measuring job quality, the academic initiatives appeared to be more theoretically grounded. Among the most influential proposals is a framework for measuring job quality suggested by Green (2006). The author recommended six dimensions that should be considered when evaluating job quality: (1) skills required by the job; (2) work effort; (3) personal discretion; (4) pay; (5) risks and security; and (6) job satisfaction and affective well-being. Green's concept of job quality is based on Sen's capabilities approach and therefore recommends assessing the quality of working life through the capabilities that are available to workers in the job to pursue well-being and achieve personal goals. According to Green, job quality "is constituted by the set of work features which foster the well-being of the worker" (Green, 2006, p. 9). This definition is worker-oriented, and the set of dimensions proposed by the author is relatively wide and balanced, while also taking into account the interdisciplinary nature of the construct. However, the inclusion of job satisfaction as one of the dimensions of job quality is questionable. Job satisfaction is often regarded as a measure of overall job quality (Clark, 1996; De Bustillo et al., 2011).

While Green (2006) points to the importance of job satisfaction and affective well-being, Gallie (2007) recommends focusing on the key job-level characteristics of work. In particular, the author suggested five core dimensions of job quality: (1) skill level of the job; (2) the degree of task discretion or autonomy; (3) opportunities for skill development; (4) job security; and (5) the extent to which jobs are compatible with work-life balance. In addition, Gallie also recommends including work pressure in the context of work-family conflict and pay in the context of changing skill profiles. These five dimensions were tested and applied in international context to examine whether the employment and production regime theories can explain variations in job quality across several European countries. The set of indicators provided by Gallie is based on the job-level characteristics of work, which is an important advantage. However, at the same time, the coverage of issues related to intrinsic aspects of job quality (such as social support and meaningfulness) is poor, which is the main limitation of this approach. What is more, the measure does not consider the health and safety dimension (De Bustillo et al., 2011) which, as mentioned in Chapter 1, is important in the context of contemporary labour markets.

In contrast to Gallie (2006), Handel (2005) includes a wider variety of intrinsic aspects of work and considers health and safety risks to be important in the study of job quality. Using a nationally representative sample of workers from the General Social Survey (GSS; 1989-1998), the author measures perceived job quality in the United States and examines how workers evaluate pay, job security, promotion opportunities, intrinsic rewards, autonomy, stress, workload, physical effort and interpersonal relations. Similarly, Brown, Charlwood, Forde and Spencer (2007) study the evolution of job quality in Great Britain by examining changes on a wide array of job quality dimensions. Interestingly, Esser and Olsen (2011) measure perceived job quality along a number of key dimensions and then utilise job satisfaction as the overall single measure of job quality. This approach is noteworthy and may be caused by the fact that the authors are aware of the incompleteness of their set of indicators, and therefore rather than adding all dimensions together, they hope to achieve a more reliable result with the use of the global measure of job satisfaction.

Furthermore, Dahl, Nesheim and Olsen (2009) do not intend to measure job quality but based on the review of the literature in the area, the authors propose six dimensions that should be included when performing such task: (1) job security; (2) pay and fringe benefits; (3) intrinsic job rewards; (4) work intensity; (5) skills; and (6) autonomy and control. This approach is useful because it draws from a large interdisciplinary literature on the subject. On the downside, the dimensions are not clearly defined, and some important dimensions are left out (such as work-life balance).

Finally, it is important to note that not all authors aim to provide an exhaustive list of job quality components, when measuring job quality. The lack of consensus on what job quality is, has led to many studies which examine one or two dimensions of job quality, without considering other important aspects of this phenomenon (e.g. Schokkaert et al., 2009; Smith et al., 2008).

### **Composite indicators**

While lists of dimensions and indicators evaluate jobs along its various components, the composite indices aim to combine different job characteristics together to produce a single measure of job quality. Various options are available when combining the different dimensions of the quality of working life into an overall index. For instance, the components can be weighted, and weights can be applied at different levels of aggregation. Choosing one option over another may often be arbitrary (Kalleberg & Vaisey, 2005).

For comparative purposes of job quality at the European level, a successful proposal has been made by the European Trade Union Institute (ETUI). Leschke at.al (2008) proposed the European Job Quality Index (EJQI), which was updated in 2012 and is designed to measure

job quality both over time and across European countries. It consists of six dimensions: (1) wages; (2) non-standard forms of employment; (3) working time and work-life balance; (4) working conditions and job security; (5) access to training and career advancement; and (6) collective interest representation and participation. No attempt was made to weigh the six different dimensions, however, the contributions of the different indicators to each dimension were weighted, which, as authors have recognised themselves, introduced an element of subjectivity (Leschke et al., 2008). The EJQI covers a wide range of job characteristics identified in the previous literature as crucial to the overall job quality. However, at the same time, it omits some other important aspects of work, such as social support and the deployment of skills in the workplace (De Bustillo et al., 2011).

Moreover, also at the European level, De Bustillo et al. (2011) proposed the Job Quality Index (JQI). This measure is based on the operational definition of job quality, proposed earlier by the authors. According to this definition, "job quality refers to the characteristics of jobs that have a direct impact on the well-being of workers" (De Bustillo et al., 2011, p. 150). In particular, the authors argue that the measure of job quality should be limited to information about the characteristics of jobs and it should omit the contextual information (e.g. unemployment rates or institutional settings). The JQI comprises five dimensions: (1) pay; (2) intrinsic quality of work; (3) employment quality; (4) health and safety; and (5) work-life balance. This index is theory-driven and based on a very comprehensive literature review of the most important aspects of work that have an impact on workers' well-being. In contrast to most job quality measures proposed to date, the JQI is calculated at the individual level, so it allows the researcher to study different groups of workers. Another advantage is that the chosen indicators measure both the objective facts (e.g. type of contract) and workers' subjective perceptions (e.g. perceived job security). This is a very strong proposal, which includes a wide variety of dimensions that reflect key youth employment issues and aspects of work that are important to consider in contemporary labour markets (such as skills, working hours, job security, career and development opportunities and work-life balance) (see Chapter 2).

In contrast to other composite indices reviewed here, a recent study by Boccuzzo and Gianecchini (2015) did not follow a universal approach to measuring job quality, and instead proposed a job quality index designed to measure the quality of young graduates' jobs. According to the authors "different groups of workers may require different dimensions and weights" (p. 472). The proposed composite indicator comprises three dimensions: (1)

economic, (2) professional, and (3) work-life balance. Interestingly, weights are applied using a stated preference approach, which derives weights for different components from the opinions of a representative sample of Italian graduates. This approach to measuring job quality has certainly many advantages. The literature has acknowledged that there are large job quality differences between different groups of workers (e.g. Smith et al., 2008) and different individuals may have different expectations of their jobs based on their age, skills and educational status (Eurofound, 2012). However, this index has been validated in a specific national context and the weighting has been applied based on the opinions of Italian graduates. As a result, it reflects the attitudes of Italian population, and therefore it may not be equally useful when examining the quality of graduates' jobs in international context. In addition, this measure includes some rarely used components of job quality (such as teamwork and homework distance) and excludes some other important dimensions of job quality (such as health and safety and job security).

## Job satisfaction as the overall measure of job quality

Following a different approach, some studies consider that the best way to measuring job quality is to use the overall job satisfaction as a proxy for job quality (Clark, Oswald, & Warr, 1996; Spector, 1997; Clark, 2005). This strategy has several advantages. First, it allows all workers to decide which dimensions to consider and how much importance to assign to each job characteristic when evaluating the quality of their working life. Secondly, it simplifies the process of data analysis and it overcomes data limitations. However, this approach to measuring job quality has also many important disadvantages. It does not inform how good or bad a job is along its various dimensions. Moreover, people differ in their needs and expectations (Burchell et al., 2013) and can adapt to unfavourable circumstances (such as poor working conditions), which distorts their ability to assess their working lives objectively (Sen, 1993). For instance, Clark (1996) found that although female workers have, on average, poorer quality jobs than male workers, they report higher job satisfaction than male workers. This may be caused by the fact that men have higher expectations of their jobs. Finally, job satisfaction is influenced by comparisons with other individuals (Clark, Oswald, & Warr, 1996). Therefore, the measures of job quality based on the degree of workers' satisfaction with their jobs proved to be extremely problematic and not specific enough (Dahl, Nesheim & Olsen, 2009).

## Comparative overview of different proposals to measuring job quality

The overview on how to measure job quality shows great diversity of approaches to assessing this complex construct. Since there is no consensus in the previous literature on what job quality is, different researchers and institutions focus on different sets of dimensions, quite often without any clear theoretical explanations, which leads to a large amount of research in this area that is not easily comparable. Few conclusions can be drawn.

*Institutional vs academic proposals*. The European institutions tend to have a very broad understanding of the concept of job quality and often rely on a set of labour market-type indicators, which say little about the quality of the actual jobs that workers do. In contrast, the academic proposals are more concerned with the job-level characteristics of work and workers' well-being (Smith et al., 2008).

*Subjective vs more objective approaches.* Most proposals relied on subjective perceptions of workers when measuring job quality. However, the degree of subjectivity varies between studies. For instance, some measures are factual (such as the occurrence of noise in the workplace) and therefore are more objective, while other measures are more evaluative and based on workers' subjective perceptions (such as perceived job security or satisfaction with training received in the workplace) and these measures can be considered as more subjective.

*Job satisfaction as a component of job quality.* Some proposals include job satisfaction in their measures alongside other dimensions of job quality. However, as mentioned before, job satisfaction is considered to be a proxy for the overall quality of working life. Therefore, other components of job quality are the determinants of job satisfaction (Burchell et al., 2013).

*The level of analysis.* Many proposals contain variables that are unrelated to job quality. For instance, the inclusion of contextual information (such as unemployment rates) and distributional variables (such as gender or pay gaps) has certain advantages but is not measuring the quality of the jobs that individuals do. The more sensitive the measure is to the national institutional and socio-economic context, the more difficult the comparability of its results across different countries (De Bustillo et al., 2011).

*The 'completeness' of the measure*. It is important to note, that many of the measures proposed to date intend to serve as a guideline to other researchers, rather than an explicit and complete system for measuring job quality (e.g. Leschke et al., 2008; Smith et al., 2008).

*The conceptualisations of chosen dimensions.* It should be highlighted that some dimensions are conceptualised differently by different researchers or by the same researcher at different times. For instance, while the concept of wages may be measured as gross monthly income in some studies (e.g. De Bustillo et al., 2011), others use different indicators to assess pay, such as the share of working poor (e.g. Leschke et al., 2008). Therefore, it is not certain whether we are always comparing the same concepts in some of the proposals to measuring job quality. To draw conclusions and make studies comparable, it is necessary for the indicators to rely on the same definition of the construct that is being measured. However, this is not always the case.

*The issue of weighting*. In general, there are two possibilities: equal weights to all components or varying weights, depending on the relative importance of each component to the overall quality of working life. It is important to note that the first approach is the most common in the literature, while the second option is often followed when constructing composite indices.

*List of dimensions and indicators / composite indices calculated at individual or aggregate level.* Some measures were calculated based on information collected at individual level (e.g. De Bustillo et al., 2011) which is only possible when using a single data source. Other measures aggregated the information at higher level than individual (based on averages or other summary functions), which allowed for greater breath of measures to be used while drawing on multiple data sources (e.g. Leschke et al., 2008).

*Composite indices vs the lists of dimensions and indicators.* Composite indices can be used to summarise complex issues and provide the 'big picture'. They are useful in certain instances and are often used for comparing countries' performances and progress over time (for instance by placing different countries on a one-dimensional axis ranging from high to low in terms of job quality). What is more, composite indices may help attracting public policy attention by providing single summary figures that are easy to interpret (Saisana, Saltelli, & Tarantola, 2005). However, they present a radical simplification of reality (De Bustillo et al., 2011) and if poorly constructed or misinterpreted, composite indices may send misleading, non-robust policy messages (Saisana et al., 2005). In particular, job quality is a multidimensional construct and its complexity is difficult to express when all positive and negative information are combined together, often cancelling each other out (Leschke & Watt, 2013). Moreover, the simple 'big picture' results which composite measures offer may invite public policymakers to draw simplistic policy conclusions. Many researchers agree that lists of dimensions and indicators should be used alongside composite indicators if one wants to draw accurate policy

recommendations (De Bustillo et al., 2013). Measuring all aspects of job quality separately allows to derive a more comprehensive measure of the quality of working life, and to have a better understanding of the outcomes of positive and negative aspects of work.

In summary, previous literature showed that job quality is undoubtedly a multidimensional construct, which consists of a wide array of both intrinsic and extrinsic aspects of work. Given the challenges of defining job quality, measuring this concept is even more complex. The reviewed proposals to measuring job quality showed a great variety of approaches, which include the lists of dimensions, but also more complex measurement tools, such as composite indicators, that involve complex methodologies and are able to assess the overall quality of any given job. While there is no agreement on what elements the concept of job quality should encompass, based on a thorough examination of past research, this review argues that multidimensional approaches to measuring job quality should be used, and measures focusing on job-level characteristics of work are most appropriate, rather than studies focusing on aspects unrelated to job quality (such as unemployment rates or the availability of social benefits). Nevertheless, it has been concluded in Chapter 4 that contextual variables are important influencing factors and should be acknowledged when measuring job quality. Finally, the models of job quality outlined in this chapter suggest that there is a range of common features, which may be important when defining and measuring job quality. These include: pay, job security, autonomy, skills, social support, physical risks, emotional demands, promotion opportunities, training, and work-life balance. This study adopts the job quality framework proposed by De Bustillo and colleagues (2011). This framework is considered appropriate for the study of job quality among young workers in the context of contemporary labour markets, based on several justifications, which are as follows:

- It is based on the thorough literature review of the most important aspects of job quality in the social sciences;
- It incorporates multidisciplinary insights into the study of job quality, while considering important job quality issues favoured by the discipline of psychology, sociology and economics (Eurofound, 2012);
- It focuses on issues which are attributes of jobs, not workers who hold them or institutional context, which ensures the model is strictly about job quality, unlike some of the other proposals;

- The areas of job quality included in the framework are exhaustive, and cover relevant aspects of job quality, which were identified as important to young workers and contemporary labour markets in both the UK and wider European context (see Chapter 2);
- The components are clearly defined, and contain combinations of both objective and subjective elements, which, as argued by some of the recent studies (e.g. Dieckhoff, 2011; Eurofound, 2012), should provide a more comprehensive picture of job quality and its consequences;
- Finally, this model comprises a balanced number of dimensions. With fewer dimensions, the analysis of job quality becomes more manageable and easier to interpret (Eurofound, 2012).

The job quality framework developed by De Bustillo and colleagues (2011) provides a list of five dimensions which should be included when measuring the quality of working life. There is no intention to measure the overall job quality in this study (i.e. by adding different dimensions together). The aim is to evaluate each dimension of job quality separately to have a good understanding of young workers' employment issues in contemporary labour markets, and to test their associations with mental health outcomes (see Section 4.5 which provides an overview of this study's Research Objectives and Hypotheses).

## The approach to measuring the role of institutional context in this study

In understanding job quality among young workers, the focus of this study is on the UK context, where high rates of youth underemployment (Bell & Blanchflower, 2011) and high involvement of young people in precarious forms of employment have been reported (Eurofound, 2013), as well as a significant decrease in the provision of training provided by employers in the past decade (Green, Felstead, Gallie, Inanc, & Jewson, 2016) (see Chapter 2 for the overview of youth employment issues in the UK and other European countries).

The UK is known to have a specific institutional setting, characterised by low state regulation of working conditions (Gallie, 2007; Holman, 2013; Lloyd & Payne, 2011) and in relation to young adults, little state intervention in terms of job quality (Sutherland, 2012; Warhurst et al., 2008). While the main focus of this study is on the UK context, for hypotheses examining the

role of institutional context in affecting job quality and mental health (H1-H7), three other European countries (Denmark, Germany and Spain) are included.

For examining the role of institutional context in affecting job quality and mental health, this thesis uses country as a proxy for each of the four employment regimes proposed by Amable (2003). This allows to examine the effects of institutional context on job quality and mental health among young people in the UK by drawing on comparisons to countries with different institutional configurations. The overview of the employment regimes was already provided in Section 4.2 (Chapter 4).

Based on the employment regime theory, the UK represents the Liberal employment regime in this study (Amable, 2003). The following countries were chosen as proxies for three other employment regimes: Denmark (which represents the Social Democratic employment regime in this study), Germany (which represents Continental employment regime in this study), and Spain (which represents the Southern European regime in this study). The chosen countries have an interesting combination in terms of key institutional features that are likely to impact job quality in the youth context (such as labour market characteristics, education systems and social expenditure, see Section 4.2), and therefore it is expected to find differences between this set of countries in relation to job quality and mental health among young people. While each country differs from the UK on some important institutional features, the selected countries also show similarities to the UK on at least one key criteria, which allows to examine how a lack or presence of a specific institutional characteristic may influence job quality and mental health among young people. As argued in Section 4.2, this approach to examining the role of institutional context has advantages over using specific institutional criteria (such as the measure of employment protection), which may suffer from multicollinearity (Green & Livanos, 2015). Comparing job quality across different employment regimes allows to investigate whether, in comparison to the UK, in other institutional configurations young people fare considerably better or considerably worse in terms of job quality and mental health.

Denmark has the highest public expenditure on activation policies among the OECD countries (OECD, 2013) and numerous work-life balance policies in place. While Denmark promotes 'flexicurity', which is a model of employment that allows employers to 'hire and fire at will', at the same time workers in Denmark are guaranteed high social security, and this is expected to offset the negative impacts of low job security (Holman, 2013). Germany is regarded as the

best example of vocational education system that provides vocation-specific skills (Scherer, 2004). In both Denmark and Germany, the coverage of collective bargaining is high, but in Germany this only applies to the 'core' workforce. Spain is an example of the biggest Southern employment regime, which is similar to the UK in relation to the education system (that focuses predominantly on providing general education), and in relation to the level of labour market regulation, which is low in both countries. However, in contrast to the UK, Spain is characterised by modest investments in active labour market policies and the employment protection is high (OECD, 2013). Beyond the institutional configurations, the level of youth unemployment varies greatly among the chosen countries, ranging from 5% in Denmark to 50% in Spain (OECD, 2013). Table 3 shows key institutional features of the chosen countries.

Key institutional	Denmark	Germany	UK	Spain
features				
The role of the	strongly	modest state	little state	little state
state	interventionist state	involvement	involvement	involvement
Welfare provision	universal access to welfare and generous social security for all	modest access to welfare, based on 'status differentiating' welfare programmes and modest access to social security	minimal welfare provision and highly restricted access to social security	highly fragmented welfare provision and restricted access to social security
Strictness of employment protection	high for 'core' workers	high for 'core' workers	low for all	high for all
Education system	mostly vocational	mostly vocational	mostly general	mostly general
Collective bargaining coverage	high	high but only for 'core' workers	low	high
Union density	high	low	low	low
Labour market policies	high investment in active labour market policies* and numerous work-life balance policies in place	high investment in active labour market policies but minimal work-life policies in place	minimal investment in active labour market policies and minimal work-life policies in place	modest investment in active labour market policies and minimal work-life policies in place
The role of the family support	not as important	modest	important	important

Table 3: Key institutional features of the UK, Denmark, Germany and Spain

Note. Strictness of employment protection, collective bargaining, union density, and labour market policies based on OECD (2013) data.

\* highest public expenditure on activation policies in 2013, among the OECD Member States (OECD, 2013).

### European Working Conditions Survey (EWCS, 2015)

The EWCS (2015) was used to examine Research Objectives 1, 3 and 4. In particular, the EWCS was used to measure young workers' job quality across different dimensions, while controlling for individual, job-related and country characteristics (RO1); to examine the relationship between job quality and mental health of young workers (RO3); and finally to test the associations between person-job fit, mental health and perceived employability (RO4) (see Table 1 for the summary of research objectives and hypotheses). The detailed overview of the EWCS (2015) is included in Appendix 1.

## Sample description

The EWCS (2015) targeted individuals (aged 15 or older) in paid employment (for at least one hour per week) in 35 European countries. The total sample consisted of 43,850 participants. For the purpose of this study, the sample was restricted to young workers (aged 18-34), who are employees, in paid employment, and live in the UK, Denmark, Germany and Spain. Individuals were considered to be in paid employment if they had worked for pay or profit for at least an hour in the week preceding the interview (Eurofound, 2015). This restriction resulted in 1820 participants in the sample (50% female; mean age=27.28, SD=4.54). In terms of education, 31% of respondents were graduates and 75% were employed in the private sector. The majority of young workers (70%) were employed in full-time jobs (30 hours and over; mean working hours=33.64, SD=12.84) and 63% had permanent contracts. In terms of occupation, 41% of young workers were employed in low-skilled white collar jobs, 34% in high-skilled white collar jobs, 13% in low-skilled blue collar jobs, and 10% in high-skilled blue collar jobs. Table 4 shows sample characteristics across four countries.

	UK	Denmark	Germany	Spain	Total
	(N=382)	(N=192)	(N=478)	(N=768)	(N=1820)
Age <sup>a</sup>	26.36 (4.64)	26.6 (4.63)	27.31 (4.81)	28.01 (4.13)	27.28 (4.54)
Female	48.10%	46.40%	51.20%	50.10%	49.50%
Graduates	44.80%	38.30%	12.50%	34.30%	31.60%
Married <sup>b</sup>	49.20%	52.60%	51.10%	46.90%	49.20%
Children	21.60%	25.00%	28.90%	20.50%	23.40%
Private Sector	70.20%	60.40%	75.20%	84.50%	75.90%
Industry <sup>c</sup>					
Customer Service	46.40%	44.50%	40.30%	55.50%	48.20%
Professional Service	12.80%	7.20%	8.30%	4.60%	7.80%
Public Service	27.60%	33.70%	27.50%	19.60%	25.20%
Manufacturing	8.40%	7.00%	19.00%	14.30%	13.20%
Construction	4.90%	7.60%	4.90%	6.00%	5.70%
Occupation <sup>d</sup>					
HS white collar	41.50%	44.20%	34.20%	28.60%	34.90%
HS blue collar	5.00%	9.60%	10.50%	13.30%	10.20%
LS white collar	40.00%	39.40%	41.70%	42.60%	41.30%
LS blue collar	13.80%	6.80%	13.60%	15.50%	13.60%
Firm size					
1-9 workers	10.30%	10.40%	22.90%	33.20%	22.30%
10-249 workers	29.50%	35.50%	44.20%	34.20%	35.10%
250 and over	60.20%	52.00%	32.70%	26.60%	38.10%
Job tenure					
Less than 1 year	25.70%	25.50%	19.20%	33.10%	27%
1-2 years	35.60%	34.90%	25.70%	23.40%	28.20%
3-5 years	20.00%	22.90%	28%	21.30%	22.80%
6 years and over	18.70%	16.70%	27.10%	22.20%	22%
Permanent contract	78.90%	69.00%	71.80%	47.10%	63.50%
Full-time <sup>e</sup>	68.10%	76.90%	75.60%	68.50%	70.90%
Working hours <sup>a</sup>	35.0 (12.97)	29.45 (14.52)	33.19 (11.11)	34.5 (13.0)	33.64 (12.84)

Table 4: EWCS (2015): Sample characteristics across four countries

*Note.* Data source: European Working Conditions Survey (2015); **a** - refers to descriptives: mean (standard deviation); **b** - married includes cohabiting couples;

**c** - Industry refers to SIC (2007) which was re-coded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction);

**d** -Occupation refers to ISCO-08 (2008) which was re-coded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1-managers, 2-professionals and 3-technicians and associate professionals); (2) low-skilled white collar (ISCO-08 codes 4-clerical support workers and 5-service and sales workers); (3) high-skilled blue collar (ISCO-08 codes: 6-skilled agricultural, forestry and fishery workers and 7-craft and related trades workers); and (4) low-skilled blue collar workers (ISCO-08 codes 8-process, plant and machine operators and 9-elementary occupations); **e** - full-time refers to 30 hours per week and over.

### Measures

Measures used from the EWCS (2015) were: job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), mental health (in terms of work-related stress, work-related exhaustion, anxiety, fatigue, and affective well-being), person-job fit (in terms of skills and working hours), perceived employability, and individual and contextual variables (in terms of individual differences, job-related characteristics and country). Detailed overview of all measures selected from the EWCS (2015) is provided next.

### Job quality

The definition of job quality adopted for the purpose of this study is based on the job quality framework provided by De Bustillo et al. (2011), which includes five dimensions: pay, intrinsic quality of work, employment quality, health and safety and work-life balance. Twenty-seven indicators in total were selected from the EWCS (2015) to measure job quality among young workers. These variables were selected based on their correspondence to the framework of job quality provided by De Bustillo et al. (2011).

Prior to the data analysis, following the example of De Bustillo et al. (2011), the values of job quality components were normalised to a 0-100 metric, where higher values represent higher levels of job quality (0 and 100 mark the highest and lowest levels of job quality, respectively). Data normalisation allowed for different variables representing the same job quality dimension to be standardized and added together, and to uncover the specific areas of employment which score high and low in terms of job quality. Data normalisation is a common strategy and was used in other studies on job quality (e.g. Eurofound, 2012; Green, 2013; Leschke et al., 2008; Leschke & Watt, 2013; De Bustillo et al., 2011). Following the data normalisation, an overall score was calculated for each dimension of job quality by averaging its individual components. Pay dimension was measured with net monthly earnings. Values in the UK national currency (pound sterling) were used for the UK analysis (RO4) and values in euros were used for international analyses (RO1-RO3). For international analyses, the pay variable was adjusted for Purchasing Power Parity (PPP) by dividing each country's pay value by an appropriate PPP value from Eurostat tables (Eurostat, 2017). Purchasing power is determined by the relative cost of living in different countries. By adjusting rates to account for local purchasing power differences, international contrasts are more valid (Eurostat, 2019) and this procedure was used in other studies in the area (e.g. De Bustillo et al., 2011; Green, 2013; Leschke & Watt, 2014).

Next, the pay variable was normalised to a 0-100 metric to make it internationally comparable and also comparable to other job quality dimensions (see Table 5). This was done by: (1) setting a maximum value (at the value of the highest performer across countries) and a minimum value (at the value of the worst performer across countries); (2) subtracting the minimum value from the maximum value to calculate the variable's range value; and (3) subtracting the minimum value from each of the existing values and dividing it by the variable's range value (OECD, 2008). The min-max method was followed in previous studies on job quality (Leschke, et al., 2008; De Bustillo et al., 2011). Each normalised pay value expresses how far an individual is from the top and bottom of the possible pay values within the group of countries of interest. This comparable pay indicator is adequate for international comparisons (De Bustillo et al., 2011). For the UK analysis (RO4), the second pay indicator was constructed which was based on the values in the UK national currency and eliminated the country differences. This was done by setting the minimum and maximum values at the values of the highest / lowest performers within the UK. Other steps of the min-max procedure remained the same as for creating the pay indicator for international analyses. Following the min-max method, the newly created pay variable ranged from 0 to 1. In order to put this variable on the scale of 0-100, each value was simply multiplied by 100.

*Intrinsic quality of work* included four components: skills, autonomy, meaningfulness and social support. In their original study, De Bustillo et al. (2011) also included powerlessness and self-fulfilment as components of intrinsic quality of work, but in this study these two components were excluded. The reason is simply the lack of relevant information in the EWCS. In addition, both concepts are very vaguely defined, which was also acknowledged by the authors. These concepts were in fact removed by the authors from the second updated version of the job quality framework (see De Bustillo et al., 2014). Finally, it can be argued that they do not feature as key aspects of young workers' job quality based on the literature review carried out in Chapter 2.

*Employment quality* comprised four components: contract type, job security, training and career prospects. *Health and safety* comprised two components: physical and psychosocial risks. For physical risks, the highest level of exposure to any of the risks was considered to be the value that determined the score for each individual. This is based on the assumption that each of the risks can on its own have a severe impact on the health of workers, and in most cases, it is impossible to be exposed to more than two of them simultaneously (De Bustillo et

al., 2011). Therefore, for physical risks, individuals got a score of 100 if they were 'never' exposed to any of the physical risks, and a score of 0 if they were 'all the time' exposed to at least one of the risks. The intermediate values corresponded to the highest level of exposure to any of the physical risks. For the component of psychosocial risks, similar rationale was followed based on the approach taken by De Bustillo et al. (2011) where the exposure to at least two risks was coded as 0, the exposure to one risk was coded as 25 and no exposure to risks was coded as 100.

*Work-life balance* included working hours and work intensity. The duration of work was coded based on the example given by Munoz de Bustillo et al. (2011) and Eurofound (2012) which suggests that working shorter hours is more desirable for the well-being of workers. In contrast, working 48 hours and over is coded as the least desirable outcome and receive a value of 0.

Table 5 provides a detailed overview of indicators selected from EWCS (2015), based on five different dimensions of job quality (pay, intrinsic quality of work, employment quality, health and safety and work-life balance) and its corresponding components. In most cases, for each dimension of job quality, the correlations between different indicators are positive and small to moderate (see Appendices 2 and 5) which means that they tend to go together (De Bustillo et al., 2011). The aggregation of information within each dimension is done by averaging the scores of individual components. All components within each job quality dimension are equally weighted, which is the most common approach in the past literature (Burchell et al., 2012; De Bustillo et al., 2011).

Dimensions	Components	Indicator from EWCS	Survey responses and assigned values
Pay		<b>Q104:</b> 'Please can you tell us how much your NET monthly earnings from your main paid job are?'	Net monthly earnings (pound sterling or euros) normalised to 0- 100
Intrinsic Quality of Work	Skills	Q5: 'What is the title of your main paid job? By main paid job, we mean the one where you spend most hours?' (coded to four broad skill levels of the International Standard Classification of Occupations, ISCO)	1 (100), 2(67), 3 (33), 4 (0)
		<b>Q53:</b> 'Generally, does your main paid job involve' D – monotonous tasks	yes (100), no (0)
		<b>Q53</b> : 'Generally, does your main paid job involve' E – complex tasks	yes (100), no (0)
		<b>Q53</b> : 'Generally, does your main paid job involve' F – learning new things	yes (100), no (0)
	Autonomy	<b>Q54</b> : 'Are you able to choose or change' A – your order of tasks	yes (100), no (0)
		<b>Q54</b> : 'Are you able to choose or change' B – your methods of work	yes (100), no (0)
		Q54: 'Are you able to choose or change' C – your speed or rate of work	yes (100), no (0)
		<b>Q42</b> : 'How are your working time arrangements set?' 1 – they are set by the company/organization with no possibility for changes; 2 – you can choose between several fixed working schedules determined by the company; 3 – you can adapt your working hours within certain limits (e.g. flexitime); 4 – your working hours are entirely determined by yourself	1 (0), 2 (33), 3 (67), 4 (100)
		Q53: 'Generally, does your main job involve, or not?' B – assessing yourself the quality of your own work	yes (100), no (0)
	Meaningfulness	<b>Q61J</b> : 'You have the feeling of doing useful work'	almost always (100), often (67), sometimes (33), rarely (16), almost never (0)
	Social support	Q61A: 'Your colleagues help and support you'	always (100), most of the time
		Q61B: 'Your manager helps and supports you'	(67), sometimes (33), rarely (16), never (0)

# Table 5: Overview of job quality measures selected from the EWCS (2015)

Dimensions	Components	Indicator from EWCS	Survey responses and assigned values
Employment Quality	Contract type*	<b>Q11</b> : 'What kind of employment contract do you have in your main job?' 1 – contract of unlimited duration (UK: permanent); 2 – contract of limited duration (UK: fixed-term); 3 – a temporary employment agency contract; 4 – an apprenticeship or other training scheme; 5 – no contract	values         permanent (100),         not permanent in         some way (0)         *For analyses         related to RO3,         this variable was         dummy coded: (0)         permanent, (1)         not permanent in         some way
	Job security	<b>Q89G</b> : 'I might lose my job in the next 6 months'	strongly agree (100), agree (75), neither agree nor disagree (50), disagree (25), strongly disagree (0)
	Training*	Q65: 'Over the past 12 months, have you undergone any of the following types of training to improve your skills?' A – training paid for or provided by your employer	yes (100), no (0) <ul> <li><u>*For analyses</u></li> <li><u>related to RO3,</u></li> <li><u>this variable was</u></li> <li><u>dummy coded</u>: (0)</li> <li>yes, (1) no</li> </ul>
	Career prospects	<b>Q89B</b> : 'My job offers good prospects for career advancement'	strongly agree (100), agree (75), neither agree nor disagree (50), disagree (25), strongly disagree (0)
Health and Safety	Physical risks*	Q29: 'Please tell me, using the following scale, are you exposed at work to?' A – Vibrations from hand tools, machinery, etc.; B – Noise so loud that you would have to raise your voice to talk to people; C – High temperatures which make you perspire even when not working; D – Low temperatures whether indoors or outdoors; E – Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust) etc.; F – breathing in vapours such as solvents and thinners; G – Handling or being in skin contact with chemical products or substances; H – Tobacco smoke from other people; I – Handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc. Q30: 'Please tell me, using the same scale, does your main paid job involve?' A – tiring or painful positions; B – lifting or moving people; C – carrying or moving heavy loads; D – sitting.	always (0), almost always (10), three quarters of a time (25), half of the time (50), one quarter of the time (75), almost never (90), never (100) *The highest level of exposure to any of the risks is the value that determines the score for each individual

Table 5: Continued

Dimensions	Components	Indicator from EWCS	Survey responses and assigned values
	Psychosocial risks*	<b>Q81:</b> 'And over the past 12 months, during the course of your work have you been subjected to any of the following?' A – verbal abuse; B – threats; C – physical violence;	the exposure to at least two risks (0), the exposure to one risk (25),
	*For analyses related to RO3, these two variables are combined, and dummy coded as follows: (0) no exposure to risks, (1) exposure to at least 1 risk	<ul> <li>D – bullying/harassment</li> <li>Q30: Please tell me, does your main paid job involve?</li> <li>H - Being in situations that are emotionally disturbing for you</li> </ul>	no exposure to risks (100)
Work-life Balance	Working time	Q24: 'How many hours do you usually work per week in your main paid job?'	1-20 (100), 20-38 (75), 38-42 (50), 42-48 (25), 48 and over (0)
		Q37: 'Normally, how many times a month do you work?" A – at night, for at least 2 hours between 10.00pm and 05.00am?; B – on Sundays; C – on Saturdays; D – more than 10 hours a day	never (100), 1 (75), 2 (50), 3 (25), 4 or more (0)
		Q42: 'How are your working time arrangements set? 1 – they are set by the company/organization with no possibility for changes; 2 – you can choose between several fixed working schedules determined by the company/organization; 3 – you can adapt your working hours within certain limits; 4 – your working hours are entirely determined by yourself	1 (0), 2 (50), 3 (75), 4 (100)
	Work intensity	<b>Q49</b> : 'And, does your job involve' A – working at very high speed	always (0), almost all of the time (10), around
		<b>Q49</b> : 'And, does your job involve?' B – working to tight deadlines	three quarters of a time (25), around half of the time (50), around one quarter of the time (75), almost never (90), never (100)
		<b>Q61G</b> : 'You have enough time to get the job done'	always (100), often (67), sometimes (33), rarely (16), almost never (0)

#### Mental health

Mental health was conceptualised based on Warr's model (1990; 2013), which defines mental health as consisting of two broad dimensions: affective well-being and cognitive-affective syndromes (see Section 3.3 for further discussion on the definition of mental health). Based on Warr's recommendations (2013) and recent studies in the area (e.g. Burgard & Lin, 2013; Ek et al., 2014; Huppert, 2009), both positive and negative aspects of mental health were measured. This included: affective well-being, anxiety, fatigue, work-related stress and work-related exhaustion.

Negative aspects of mental health included four measures. The first two measures covered context-free mental health in relation to common psychological problems. Respondents were asked to indicate whether they have experienced the following psychological problems: (1) anxiety and (2) fatigue in the past 12 months (dichotomous variable; yes / no). The remaining two items measured work-related mental health (i.e. context-specific mental health). Respondents were asked to indicate: (1) how often (in general) they experience stress in their work (5-point scale ranging from 'always' to 'never'), and (2) how often (in general) they experience exhaustion at the end of the working day (5-point scale ranging from 'always' to 'never'). As anxiety, fatigue, work-related stress and exhaustion are potentially overlapping, simple correlations between these items were explored (Field, 2013). The correlation between stress and exhaustion is positive and moderate (r=.41, p < .001), which is to be expected given that both variables are different measures of the same concept) (Field, 2013). The point-biserial correlation ( $r_{pb}$ ) between: (1) exhaustion and anxiety,  $r_{pb}=.21$ , p < .001; (2) exhaustion and fatigue,  $r_{pb}$ =.33, p < .001; (3) stress and anxiety,  $r_{pb}$ =.23, p < .001; and (4) stress and fatigue,  $r_{pb}=.31$ , p < .001, are positive and moderate which indicates that variables tend to go together (Field, 2013). In summary, all indicators of negative mental health were measured at trait levels (respondents were asked how often, in the past 12 months / in general, they experience the above issues) and in relation to both context-free and work-related mental health (Warr, 2013).

Positive aspects of mental health included affective well-being which was measured with four indicators: (1) 'I have felt cheerful and in good spirits'; (2) 'I have felt calm and relaxed'; (3) 'I have felt active and vigorous'; (4) 'I woke up feeling fresh and rested'. Based on these four statements, respondents were asked to indicate the frequency of the above feelings, on a 6-point Nordic scale (ranging from 'all of the time' to 'no time') which is the closest to how they have been feeling in the last two weeks. Cronbach's alpha is .88, which indicates good internal

consistency (Field, 2013). All items were reverse coded so higher scores indicate higher affecting well-being. An average score for affective well-being was then calculated. In summary, all indicators of affective well-being measured positive mental health states in relation to context-free mental health and covered both low activation (e.g. 'calm', 'relaxed', 'rested') and high activation feelings (e.g. 'active', 'vigorous', 'cheerful'), as recommended in previous studies (Burke, Brief, George, Roberson, & Webster, 1989; Warr, 1990, 2013) and discussed in more depth in Section 3.3.

### Person-job fit

The EWCS (2015) contains two variables suitable for measuring person-job fit. This includes person-job fit in terms of skills (which is defined as the extent to which an individual is matched to his / her job in terms of skills) and person-job fit in terms of working hours (which is defined as the extent to which an individual is matched to his/her job in terms of working hours) (Edwards, 1991). Due to data unavailability, the third dimension of person-job fit (in relation to contract type) was measured with the use of the UK LFS (2017) and is further discussed in the next section.

Person-job fit in terms of skills (P-J Fit Skills) was measured with a single indicator: 'Which of the following statements would best describe your skills in your own work?' (1-'I need further training to cope well with my duties', 2-'My present skills correspond well with my duties', 3-'I have the skills to cope with more demanding duties'). For analyses, this indicator was recoded into two response categories: the *high person-job fit* group (for participants who indicated 'My present skills correspond well with my duties') and the *low person-job fit* group (for participants who indicated 'I need further training to cope well with my duties', or 'I have the skills to cope with more demanding duties').

Person-job fit in terms of working hours (P-J Fit Working Hours) was measured with a single indicator: 'Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living: how many hours per week would you prefer to work at present?' (numerical variable representing the number of hours the participant would prefer to work per week; participants who would prefer to work the same number of hours as they work currently are coded as: 'the same number of hours as currently'). For analyses, this indicator was recoded into two response categories: the *high person-job fit* group (for participants who indicated they would prefer to work 'the same number of hours as currently') and the *low* 

*person-job fit* group (for participants who indicated that they would prefer to work 'different number of hours').

## Perceived employability

Perceived employability was measured with a single indicator: 'If I were to lose or quit my current job, it would be easy for me to find a job of similar salary' (5-point scale; ranging from 'strongly agree' to 'strongly disagree'). This item was reverse coded so higher scores represent higher levels of perceived employability. While having multiple items would have been preferable, the EWCS (2015) only includes one item which captures the concept of perceived employability. However, to date many studies in the area have used one-item measures (e.g. Cottini & Lucifora, 2013; De Cuyper et al., 2011; De Bustillo et al., 2011) while other research showed that in general one-item measures are reliable, valid and empirically tend to correspond with more complex measures of the same concept (Narisada & Schieman, 2016; Warr, 2013). Given these considerations, the one-item measure was thus considered appropriate for the purpose of this study.

## Individual and Contextual measures

The choice of individual and contextual measures was influenced by the previous research findings which pointed to the importance of including not only individual but also contextual factors (in terms of job-related characteristics and institutional context) when investigating job quality and mental health (see Sections 4.2 and 4.3 for the discussion of key individual and contextual factors in the youth context).

*Individual factors*. Individual characteristics were measured with 5 items: *age group* (18-24 / 25-34), *gender* (male / female), *education* (non-graduates / graduates), *marital status* (single / married), and *children* (no children / children).

*Job-related characteristics*. Five job-related variables were selected from the EWCS (2015). These included: occupation, industry, sector, firm size and job tenure.

*Occupation.* The EWCS (2015) uses the International Standard Classification of Occupations (ISCO-08) (ILO, 2012) to classify workers into different occupational categories, according to their skill level and content of their jobs. The ISCO-08 distinguishes ten major groups which represent a set of broad occupational categories:

(1) managers; (2) professionals; (3) technicians and associate professionals; (4) clerical support workers; (5) service and sales workers; (6) skilled agricultural, forestry and fishery workers; (7) craft and related trades workers; (8) process, plant and machine operators; (9) elementary occupations; and (10) armed forces. Following the example of Eurofound (2013), for the purpose of this study, ISCO-08 was recoded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1, 2 and 3); (2) low-skilled white collar (ISCO-08 codes 4 and 5); (3) high-skilled blue collar (ISCO-08 codes 8 and 9). Armed forces (ISCO-10) were excluded due to the fact that none of the respondents were in this occupational category.

Industry. The EWCS (2015) uses Standard Industrial Classification of Economic Activities (SIC 2007) (ONS, 2009) to categorise all economic activities into one of 21 sections, based on the nature of their business. SIC is entirely consistent with the United Nation's International Standard Classification of all Economic Activities (ISIC). Due to data limitations in terms of small sample size and low numbers of participants in certain industrial sections (such as 1-agriculture, forestry and fishing; 2-mining and quarrying; 4-electricity; 5-water supply; and 12-real estate activities), the SIC (2007) was recoded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction). Other SIC codes (A-Agriculture; B-Mining and quarrying; D-Electricity; E-Water supply; J-Information and communication; L-Real estate activities; R-Arts, entertainment and recreation; T-Activities of households as employers; U-Activities of extraterritorial organisations and bodies) were excluded due to a very low number of respondents in these industries (which ranged from 0 to 3).

Sector, firm size and job tenure. The remaining job-related variables were sector (private / public), firm size (4 categories; (1) 1-49 workers; (2) 50-99 workers; (3) 100-249 workers; (4) 250 and over), and job tenure (4 categories; (1) Less than 1 year; (2) 1 to 2 years; (3) 3 to 5 years; (4) 6 years and over).

In the multivariate analysis, all categorical variables were dummy coded by coding the reference category with a 0 and all other categories with a 1. It was expected that job quality and mental health would vary across individual and job-related characteristics (e.g. Bakker & Demerouti, 2007; Eurofound, 2012; Smith et al., 2008; OECD, 2012) (see Section 4.3).

*Institutional context.* This thesis used the classification of employment regimes provided by Amable (2003) to examine the role of institutional context. Based on the employment regime framework (Amable, 2003), four countries were used as proxies for four different employment regimes. The UK was used as a proxy for the Liberal employment regime. Three countries were chosen as proxies for other employment regimes: Denmark (which represents the Social Democratic employment regime), Germany (which represents Continental employment regime), and Spain (which represents the Southern European regime). The data was coded, and each country assigned a value ranging from 1 to 4 (1-Denmark; 2-UK; 3-Germany; and 4-Spain). For multivariate analyses, the variable representing four countries was dummy coded (with the UK coded with a 0 as the reference category and all other countries coded with a 1).

## European Social Survey (ESS, 2010)

The ESS (2010) was used to investigate Research Objective 2 ('to examine the role of social background in affecting young workers' evaluations of job quality'). The EWCS (2015) did not include variables suitable for measuring the social background of respondents and the ESS (2010) was considered appropriate for this purpose, as it contains detailed questions about respondents' parents in terms of their occupational and educational status. The detailed overview of the ESS (2015) is included in Appendix 1.

### Sample description

The ESS (2010) targeted individuals (aged 15 or older, no upper age limit) resident within private households and included 28 European countries. The total sample consisted of 52,458 participants. For the purpose of this study, the sample was restricted to young workers (aged
18-34), who are employees, in paid work, and live in the UK, Denmark, Germany and Spain. This restriction resulted in 1029 participants in the sample (48% female; mean age=27.65, SD=4.52). In terms of education, 28% of respondents were graduates and 72% were employed in the private sector. The majority of young workers (85%) were employed in full-time jobs (30 hours and over; mean working hours=39.05, SD=12.39) and 71% had permanent contracts. In terms of occupation, 42% of young workers were employed in high-skilled white collar jobs, 31% in low-skilled white collar jobs, 13% in low-skilled blue collar jobs, and 13% in high-skilled blue collar jobs. Table 6 shows sample characteristics across four countries.

	UK	Denmark	Germany	Spain	Total
	(N=318)	(N=138)	(N=346)	(N=227)	(N=1029)
Age <sup>a</sup>	26.67 (4.70)	27.80 (4.92)	27.42 (4.56)	28.57 (3.99)	27.65 (4.52)
Female	45.7%	49.1%	43.9%	49.0%	48.8%
Graduates	32.5%	37.3%	21.0%	34.3%	28.8%
Married <sup>b</sup>	49.9%	56.2%	41.3%	42.1%	46.0%
Children	28.4%	31.0%	20.7%	18.8%	27.0%
Private Sector	71.6%	67.8%	71.4%	79.4%	72.1%
Industry <sup>c</sup>					
Customer Service	42.0%	42.6%	24.3%	30.5%	35.8%
Professional Service	16.2%	20.0%	17.4%	18.9%	17.9%
Public Service	23.6%	18.1%	26.0%	23.5%	24.9%
Manufacturing	11.8%	11.2%	22.0%	12.8%	14.7%
Construction	6.5%	3.5%	6.5%	10.3%	6.8%
Occupation <sup>d</sup>					
HS white collar	37.1%	54.3%	44.8%	34.8%	42.2%
HS blue collar	7.8%	10.1%	18.3%	14.0%	13.0%
LS white collar	36.8%	26.4%	25.5%	34.2%	31.0%
LS blue collar	18.3%	9.3%	11.4%	16.9%	13.8%
Firm size					
Under 25 workers	31.0%	42.9%	35.4%	57.9%	39.5%
25-99 workers	26.2%	25.3%	22.3%	23.7%	24.6%
100-499 workers	18.5%	21.2%	24.9%	9.6%	19.0%
500 or more workers	24.3%	10.5%	17.4%	8.7%	16.8%
Job tenure					
Less than 1 year	4.3%	2.3%	2.9%	2.9%	3.3%
1-2 years	31.2%	26.0%	37.1%	25.7%	29.5%
3-5 years	27.4%	40.6%	25.8%	40.7%	32.0%
6 years and over	37.1%	31.0%	34.0%	30.8%	34.7%
Permanent contract	79.0%	78.0%	68.5%	58.1%	71.1%
Full-time <sup>e</sup>	80.4%	85.2%	83.3%	89.8%	85.2%
Working hours <sup>a</sup>	37.56 (12.14)	38.59 (16.68)	39.65 (12.06)	40.78 (10.52)	39.05 (12.39)

Table 6: ESS (2010): Sample characteristics across four countries

Note. Data source: European Working Conditions Survey (2015); N=1029 (UK, Denmark, Germany and Spain); a - refers to descriptives: mean (standard deviation); b - married includes cohabiting couples;

**c** - Industry refers to SIC (2007) which was re-coded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction);

**d** -Occupation refers to ISCO-08 (2008) which was re-coded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1-managers, 2-professionals and 3-technicians and associate professionals); (2) low-skilled white collar (ISCO-08 codes 4-clerical support workers and 5-service and sales workers); (3) high-skilled blue collar (ISCO-08 codes: 6-skilled agricultural, forestry and fishery workers and 7-craft and related trades workers); and (4) low-skilled blue collar workers (ISCO-08 codes 8-process, plant and machine operators and 9-elementary occupations); **e** - full-time refers to 30 hours per week and over.

#### Measures

Measures used from the ESS (2010) were: job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), social background (in terms of parental education and occupation), and individual and contextual variables (in terms of individual differences, job-related characteristics and institutional context). Detailed overview of all measures selected from the ESS (2010) is provided next.

#### Job quality

Twenty-seven indicators in total were selected from ESS (2010) to measure job quality among young workers. The indicators were selected based on their correspondence to the job quality framework provided by De Bustillo et al. (2011), and according to their similarity to the indicators of job quality from EWCS (2015), described in the previous section.

Prior to data analysis, the same procedure of data normalisation was followed as in relation to job quality indicators selected from EWCS (2015). In particular, the values of job quality components were normalised to a 0-100 metric, where higher values represent higher levels of job quality (0 and 100 mark the best and worst levels of job quality, respectively). Following the data normalisation for each indicator, an overall average score was calculated for each dimension of job quality by averaging its individual components.

For the measure of *Pay* the same procedure of data normalisation was followed as for EWCS (2015). In particular, for international analyses, the pay variable was adjusted for Purchasing Power Parity (PPP) by dividing each country's pay value by an appropriate PPP value from Eurostat tables (Eurostat, 2017). Next, the pay variable was normalised to a 0-100 metric by first following the min-max method and then by multiplying each value of the newly created pay variable by 100. Other indicators were coded following the same rationale as for the EWCS (2015). In most cases, for each dimension of job quality, the correlations between different indicators are positive and small to moderate (see Appendix 3), which means the indicators tend to go together (De Bustillo et al., 2011). The aggregation of information within each dimension is done by averaging the scores of individual components. All components within each job quality dimension are equally weighted, which is the most common approach in the past literature (Burchell et al., 2012; De Bustillo et al., 2011).

Table 7 provides a detailed overview of all indicators selected from ESS (2010), based on five different dimensions of job quality (pay, intrinsic quality of work, employment quality, health and safety and work-life balance) and its corresponding components. For comparison purposes, the table also shows how the indicators of job quality selected from ESS (2010) compare to the indicators selected from EWCS (2015).

Dimensions	Components	Indicator from EWCS	Indicator from ESS	Survey responses and assigned values
Pay		<b>Q104:</b> 'Please can you tell us how much are your NET monthly earnings from your main paid job?'	<b>G56: '</b> What is your usual gross pay before deductions for tax and insurance?' [To	ESS: Gross monthly earnings in euros (numerical continuous variable) EWCS: Net monthly earnings in euros / national
			be recorded in country's own currency and later converted into Euros]	currency units (numerical continuous variable)
Intrinsic Quality of Work	Skills	<b>Q5</b> : 'What is the title of your main paid job? By main paid job, we mean the one where you spend most hours?'	<b>F33</b> : 'What is/was the name or title of your main job?'	<b>ESS and EWCS:</b> coded to four broad skill levels of the International Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (0)
		<b>Q53:</b> 'Generally, does your main paid job involve' D – monotonous tasks	re your NETG56: 'What is your usual gross pay before deductions for tax and insurance?' [To be recorded in country's own currency and later converted into Euros]ESS: Gross mo (numerical co EWCS: Net mo currency units)b? By main end mostF33: 'What is/was the name or title of your main job?'ESS: and EWCS of the Interna Occupations,involve'G26: 'There is a lot of variety in my work'ESS: not at all true (67), very EWCS: yes (10)involve'G27: 'My job requires that I keep learning new things'ESS: not at all true (67), very EWCS: yes (10)F27: 'please say how much 	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: yes (100), no (0)
		<b>Q53</b> : 'Generally, does your main paid job involve' E – complex tasks	Not available in the ESS	ESS: N/A EWCS: yes (100), no (0)
		<b>Q53</b> : 'Generally, does your main paid job involve' F – learning new things	job?'gross pay before deductions for tax and insurance?' [To be recorded in country's own currency and later converted into Euros](numerical continuous variable)I job? By main spend mostF33: 'What is/was the name or title of your main job?'ESS and EWCS: coded to four broad skill leve of the International Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of Occupations, ISCO: 1 (100), 2(67), 3 (33), 4 (international Standard Classification of 	
	Autonomy	<b>Q54</b> : 'Are you able to choose or change' A – your order of tasks	the management at your work allows/allowed you to decide how your own daily	
		<b>Q54</b> : 'Are you able to choose or change' B – your methods of work	Not available in the ESS	
		<b>Q54</b> : 'Are you able to choose or change' C – your speed or rate of work	the management at your work allows/allowed you to choose or change your pace	

# Table 7: Overview of job quality measures selected from the ESS (2010)

Dimensions	Components	Indicator from EWCS	Indicator from ESS	Survey responses and assigned values
	Autonomy (continued)	<b>Q42</b> : 'How are your working time arrangements set?' 1 – they are set by the company/organization with no possibility for changes; 2 – you can choose between several fixed working schedules determined by the company; 3 – you can adapt your working hours within certain limits (e.g. flexitime); 4 – your working hours are entirely determined by yourself	<b>G31: '</b> I can decide the time I start and finish work'	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: 1 (0), 2 (33), 3 (67), 4 (100)
		Q53: 'Generally, does your main job involve, or not?' B – assessing yourself the quality of your own work	Not available in the ESS	ESS: N/A EWCS: yes (100), no (0)
	Meaningfulness	<b>Q61J</b> : 'You have the feeling of doing useful work'	Not available in the ESS	ESS: N/A EWCS: almost always (100), often (67), sometimes (33), rarely (16), almost never (0)
	Social support	Q61A: 'Your colleagues help and support you'	<b>G29: '</b> I can get support and help from my co- workers when needed'	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: always (100), most of the time (67),
		Q61B: 'Your manager helps and supports you'	Not available in the ESS	sometimes (33), rarely (16), never (0)
Employment Quality	Contract type	<b>Q11</b> : 'What kind of employment contract do you have in your main job?' 1 – contract of unlimited duration (UK: permanent); 2 – contract of limited duration (UK: fixed-term); 3 – a temporary employment agency contract; 4 – an apprenticeship or other training scheme; 5 – no contract	<b>F23:</b> 'Do/did you have a work contract of?' 1-unlimited duration; 2- limited duration, 3-no- contract	ESS and EWCS: permanent or of unlimited duration (100), not permanent in some way (0)
	Job security	<b>Q89G</b> : 'I might lose my job in the next 6 months'	G32: 'My job is secure'	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: strongly agree (100), agree (75), neither agree nor disagree (50), disagree (25), strongly disagree (0)

# Table 7: Continued

Table 7: Continue
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Dimensions	Components	Indicator from EWCS	Indicator from ESS	Survey responses and assigned values
	Training	Q65: 'Over the past 12 months, have you undergone any of the following types of training to improve your skills?' A – training paid for or provided by your employer	F70: 'During the last twelve months, have you taken any course or attended any lecture or conference to improve your knowledge or skills for work?' F70C: 'How much of this training or education was paid for by your employer or firm?'	ESS (F70): yes (score determined based on the answer to F70C), no (0) ESS (F70C): all (100), most (75), about half (50), some (25), none (0) EWCS: yes (100), no (0)
	Career prospects	<b>Q89B</b> : 'My job offers good prospects for career advancement'	<b>G36:</b> 'My opportunities for advancement are good'	ESS: agree strongly (100), agree (75), neither agree nor disagree (50), disagree (25), disagree strongly (0) EWCS: strongly agree (100), agree (75), neither agree nor disagree (50), disagree (25), strongly disagree (0)
Health and Safety	Physical risks	Q29: 'Please tell me, using the following scale, are you exposed at work to?' A – Vibrations from hand tools, machinery, etc.; B – Noise so loud that you would have to raise your voice to talk to people; C – High temperatures which make you perspire even when not working; D – Low temperatures whether indoors or outdoors; E – Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust) etc.; F – breathing in vapours such as solvents and thinners; G – Handling or being in skin contact with chemical products or substances; H – Tobacco smoke from other people; I – Handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc.	<b>G30*: '</b> My health or safety is at risk because of my work' *this indicator measures both physical and psychosocial risks	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: always (0), almost always (10), three quarters of a time (25), half of the time (50), one quarter of the time (75), almost never (90), never (100). -The highest level of exposure to any of the risks is the value that determines the score for each individual.

Table 7: Continu	ued
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Dimensions	Components	Indicator from EWCS	Indicator from ESS	Survey responses and assigned values
	Physical risks (continued)	Q30: 'Please tell me, using the same scale, does your main paid job involve?' A – tiring or painful positions; B – lifting or moving people; C – carrying or moving heavy loads; D – sitting.	As above	As above
	Psychosocial risks	<ul> <li>Q81: 'And over the past 12 months, during the course of your work have you been subjected to any of the following?'</li> <li>A – physical violence; B – sexual harassment; C – bullying/harassment</li> <li>Q30: Please tell me, does your main paid job involve?</li> <li>H - Being in situations that are emotionally disturbing for you</li> </ul>	<b>G46</b> : 'How often do you keep worrying about work problems when you are not working?'	ESS: never (100), hardly ever (75), sometimes (50), often (25), always (0) EWCS: the exposure to at least two risks (0), the exposure to one risk (25), no exposure to risks (100)

Dimensions	Components	Indicator from EWCS	Indicator from ESS	Survey responses and assigned values
Work-life Balance	Working time	<b>Q24</b> : 'How many hours do you usually work per week in your main paid job?'	<b>F30:</b> Regardless of your basic or contracted hours, how many hours do/did you <i>normally work</i> a week (in your main job), including any paid or unpaid overtime.	ESS and EWCS: 1-20 (100), 20-38 (75), 38-42 (50), 42-48 (25), 48 and over (0)
		Q37: 'Normally, how many times a month do you work?" A – at night, for at least 2 hours between 10.00pm and 05.00am?; B – on Sundays; C – on Saturdays;	<b>G15:</b> 'How often does your work involve working evenings or nights?'	ESS (G15): never (100), less than once a month (10), once a month (25), several times a month (50), once a week (75), several times a week (90), every day (0) ESS (G17): never (100), less than once a month (75),
		D – more than 10 hours a day	<b>G17: '</b> How often does your work involve working at weekends?'	once a month (50), several times a month (25), every week (0) EWCS: never (100), 1 (75), 2 (50), 3 (25), 4 or more (0)
		Q42: 'How are your working time arrangements set? 1 – they are set by the company /organization with no possibility for changes; 2 – you can choose between several fixed working schedules determined by the company / organization; 3 – you can adapt your working hours within certain limits; 4 – your working hours are entirely determined by yourself	<b>G31: '</b> I can decide the time I start and finish work'	ESS: not at all true (0), a little true (33), quite true (67), very true (100) EWCS: 1 (0), 2 (50), 3 (75), 4 (100)
	Work intensity	Q49: 'And, does your job involve?' A – working at very high speed Q49: 'And, does your job involve?' B – working to tight deadlines	<b>G34: '</b> My job requires that I work very hard'	<b>ESS:</b> agree strongly (0), agree (25), neither agree nor disagree (50), disagree (75), disagree strongly (100) <b>EWCS:</b> always (0), almost all of the time (10), around three quarters of a time (25), around half of the time (50), around one quarter of the time (75), almost never (90), never (100)
		<b>Q61G</b> : 'You have enough time to get the job done'	<b>G35:</b> 'I never seem to have enough time to get everything done in my job'	<ul> <li>ESS: agree strongly (0), agree (25), neither agree nor disagree (50), disagree (75), disagree strongly (100)</li> <li>EWCS: always (100), often (67), sometimes (33), rarely (16), almost never (0)</li> </ul>

# Table 7: Continued

#### Social background

Parental education and occupation were used as a proxy for social background in this study. First, parental education was measured with two indicators, measuring each parent's educational status: 'What is the highest level of education your father successfully completed?' (question F58) and 'What is the highest level of education your mother successfully completed?' (question F64). The ESS uses the harmonized educational attainment measures for respondents' father and mother, based on the International Standard Classification of Education (ISCED, 2011). The ISCED (2011) distinguishes seven educational levels: (1) less than lower secondary; (2) lower secondary; (3) lower tier upper secondary; (4) upper tier upper secondary; (5) advanced vocational, sub-degree; (6) lower tertiary education, BA level; (7) higher tertiary education. For the purpose of this study, first each of the two indicators was recoded into three categories (1 – primary; 2 – secondary and post-secondary; 3 – tertiary education) and then the two indicators were combined together to represent the educational level of both parents. This was done by re-coding the two indicators into three categories, where each category represented the highest educational level of at least one parent (1 - primary; 2 secondary and post-secondary; 3 – tertiary education). For example, if one parent had a tertiary education and the other parent had secondary education, the educational level of both parents would display as 'tertiary education'.

Moreover, parental occupation was measured with two indicators, measuring each parent's occupational status: 'When you were 14, what was the name or title of your father's main job?' (question F63); 'When you were 14, what was the name or title of your mother's main job?' (question F69). The ESS (2010) uses the International Standard Classification of Occupations (ISCO-08) (ILO, 2012) to classify workers into nine different occupational categories: (1) managers; (2) professionals; (3) technicians and associate professionals; (4) clerical support workers; (5) service and sales workers; (6) skilled agricultural, forestry and fishery workers; (7) craft and related trades workers; (8) process, plant and machine operators; (9) elementary occupations; (10) armed forces. Armed forces (ISCO-10) were excluded due to the fact that none of the respondents were in this occupational category. For the purpose of this study, ISCO-08 for each parent's occupational category was first re-coded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 4 and 5); (3) high-skilled blue collar (ISCO-08 codes 6 and 7); and (4) low-skilled blue collar workers (ISCO-08 codes 8 and 9). These categories correspond with the way young workers' occupational categories were coded in this study. Then, the two indicators

measuring each parent's occupational status were combined together. This was done by recoding the two indicators into three categories, where each category represented the highest occupational level of at least one parent (1 – high-skilled white collar; 2 – low-skilled white collar; 3 – high-skilled blue collar; 4 – low-skilled blue collar). For example, if one parent was in high-skilled white collar category and the other parent had a lower occupational status, the occupational level of both parents would display as 'high-skilled white collar'.

#### Individual and Contextual measures

Similar to the EWCS (2015), the choice of individual and contextual variables was influenced by past research findings (see Sections 4.2 and 4.3 for the discussion of key individual and contextual factors in the youth context).

*Individual factors*. Individual characteristics were measured with 5 items: *age group* (18-24 / 25-34), *gender* (male / female), *education* (non-graduates / graduates), *marital status* (single / married), and *children* (no children / children).

*Job-related characteristics*. Five job-related variables were selected from the ESS (2010). These included: occupation, industry, sector, firm size and job tenure.

*Occupation.* Similar to the EWCS (2015), the ESS (2010) uses the International Standard Classification of Occupations (ISCO-08) (ILO, 2012) to classify workers into different occupational categories, which were already reviewed in the previous section. For the purpose of this study, ISCO-08 was recoded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1, 2 and 3); (2) low-skilled white collar (ISCO-08 codes 4 and 5); (3) high-skilled blue collar (ISCO-08 codes 6 and 7); and (4) low-skilled blue collar workers (ISCO-08 codes 8 and 9). Armed forces (ISCO-10) were excluded due to the fact that none of the respondents were in this occupational category. This classification was applied successfully in other studies in the area (Eurofound, 2012).

*Industry*. Similar to the EWCS (2015), the ESS (2010) uses Standard Industrial Classification of Economic Activities (SIC 2007) (ONS, 2009) to categorise all economic activities into one of 21 sections, based on the nature of their business. Due to data limitations in terms of small sample size and low numbers of participants in

certain industrial sections (such as 1-agriculture, forestry and fishing; 2-mining and quarrying; 4-electricity; 5-water supply; and 12-real estate activities), the SIC (2007) was recoded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction). Other SIC codes (A-Agriculture; B-Mining and quarrying; D-Electricity; E-Water supply; J-Information and communication; L-Real estate activities; R-Arts, entertainment and recreation; T-Activities of households as employers; U-Activities of extraterritorial organisations and bodies) were excluded due to a very low number of respondents in these industries (0-2).

Sector, firm size and job tenure. The remaining job-related variables were sector (private / public), firm size (4 categories; (1) Under 25 workers; (2) 25-99 workers; (3) 100-499 workers; (4) 500 and over), and job tenure (4 categories; (1) Less than 1 year; (2) 1 to 2 years; (3) 3 to 5 years; (4) 6 years and over).

In the multivariate analysis, all categorical variables were dummy coded by coding the reference category with a 0 and all other categories with a 1. It was expected that job quality and mental health would vary across occupations, sectors, industries, firm size and job tenure (e.g. Bakker & Demerouti, 2007; Eurofound, 2012; Smith et al., 2008; OECD, 2012) (see Section 4.3).

*Institutional context.* Similar to the EWCS (2015), four countries were chosen as proxies for four employment regimes (Amable, 2003). The UK represented the Liberal employment regime in this study and the following countries were chosen as proxies for other employment regimes: Denmark (which represented the Social Democratic employment regime), Germany (which represented the Continental employment regime), and Spain (which represented the Southern European regime) The data was coded and each country assigned a value ranging from 1 to 4 (where 1-Denmark; 2-Germany, 3-UK; and 4-Spain). For multivariate analyses,

the variable representing four countries was dummy-coded (with the UK coded with a 0 as the reference category and all other countries coded with a 1).

## UK Labour Force Survey (UK LFS, 2017)

The UK Labour Force Survey (January-March Quarter, 2017) was used to address the remaining part of Research Objective 4, which could not be addressed with the EWCS (2015) due to the lack of suitable measures. In particular, the LFS is used to address a small segment of Hypothesis 8, which states: '*Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.' The January to March quarter of the LFS (2017) is chosen as it provides measures needed to examine the health status of workers (as a part of its non-core questions, which vary from quarter to quarter).* 

It is important to note that for Hypothesis 8, the LFS was used to examine person-job fit in terms of contract type, whereas for the same hypothesis (as explained earlier) the EWCS (2015) was used to examine person-job fit in terms of skills and person-job fit in terms of working hours. The LFS is the only UK survey which measures contractual preferences of workers and has been successfully used in other recent study on job quality (e.g. Green & Livanos, 2015).

However, the LFS does not include any variables suitable to measure the concept of perceived employability. As a result, one segment of Hypothesis 10, which examines the moderating role of perceived employability on the relationship between person job-fit and mental health, could not be examined for person-job fit in terms of contract type. The detailed overview of the UK LFS (2017) is included in Appendix 1.

### Sample description

The LFS (2017) is a quarterly UK national survey which targets individuals living in private households in the UK. The total sample for January-March quarter (2017) consisted of around 100,000 individuals. For the purpose of this study, the sample was restricted to young workers (aged 18-34), who were employees and in paid employment at the time of the survey. Individuals were considered to be in paid employment if they had worked for pay or profit for at least an hour in the week preceding the interview. This restriction resulted in 11275 participants in the sample (48% female; mean age=26.8, SD=4.53). In terms of education, 44%

of respondents were graduates and 76% were employed in the private sector. The majority of young workers (70%) were employed in full-time jobs (30 hours and over; mean working hours=32.59, SD=15.46) and 92% had permanent contracts. In terms of occupation, 33% of workers were employed in low-skilled white collar jobs, 39% in high-skilled white collar jobs, 18% in low-skilled blue collar jobs, and 8% in high-skilled blue collar jobs. Table 8 shows sample characteristics for the UK.

	UK (N	=11275)	
Age <sup>a</sup>	26.80 (4.53)	Firm size	
Female	48.50%	1-49 workers	50.50%
Graduates	44.30%	50-249 workers	24.40%
Married <sup>b</sup>	49.40%	250 and over	25.10%
Children	38.30%	Job tenure	
Private Sector	76.30%	Less than 1 year	25.80%
Industry <sup>c</sup>		1 to less than 2 years	18.90%
Customer Service	40.00%	2 to less than 5 years	29.70%
Professional Service	17.60%	5 years and over	25.60%
Public Service	28.10%	Permanent contract	92.20%
Manufacturing	9.00%	Full-time <sup>e</sup>	70.30%
Construction	5.30%	Working hours <sup>a</sup>	32.59 (15.46)
Occupation <sup>d</sup>			
HS white collar	39.70%		
HS blue collar	8.60%		
LS white collar	33.30%		
LS blue collar	18.50%	2047), N. 44275 (UK anh.)	

Table 8: LFS (2017): Sample characteristics in the UK

*Note*. Data source: UK Labour Force Survey (2017); N=11275 (UK only).

a - refers to descriptives: mean (standard deviation); b - married includes cohabiting couples;

**c** - Industry refers to SIC (2007) which was re-coded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health

and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction);

**d** -Occupation refers to ISCO-08 (2008) which was re-coded into four occupational categories: (1) highskilled white collar (ISCO-08 codes 1-managers, 2-professionals and 3-technicians and associate professionals); (2) low-skilled white collar (ISCO-08 codes 4-clerical support workers and 5-service and sales workers); (3) high-skilled blue collar (ISCO-08 codes: 6-skilled agricultural, forestry and fishery workers and 7-craft and related trades workers); and (4) low-skilled blue collar workers (ISCO-08 codes 8process, plant and machine operators and 9-elementary occupations);

e - full-time refers to 30 hours per week and over.

#### Measures

Measures used from the LFS (2017) were: job quality (in terms of pay, contract type and working hours), person-job fit (in terms of contract type), mental health (in terms of stress, depression or anxiety) and individual and contextual variables (in terms of individual differences and job-related characteristics). Detailed overview of all measures is provided next.

### Job quality

The LFS only contains three indicators to measure job quality: pay, contract type and working hours. The indicators were selected based on their correspondence to the job quality framework provided by De Bustillo et al. (2011), and according to their similarity to the indicators of job quality from the EWCS (2015) and the ESS (2010).

*Pay* was measured using the NET monthly earnings (after the deductions for tax and national insurance). *Contract type* was measured with one indicator which was dummy coded (permanent / temporary). *Working hours* was measured with one indicator (continuous variable measuring the number of working hours per week). Due to the limited number of variables and the fact that all job quality measures were used as control variables in the UK national context, there was no need to carry out the data normalization procedure.

#### Person-job fit

The UK LFS (2017) contains variables suitable for measuring the permanency of the contract and whether an individual is in temporary employment voluntarily. In particular, based on two indicators, one measuring the permanency of the contract ('Leaving aside your own personal intentions and circumstances, was your job...?': 1 - a permanent job'; 2 - o was there some way that it was not permanent?') and second measuring the reason for being in contract of limited duration ('Did you take that type of job rather than a permanent job because...': 1 - ayou could not find a permanent job', 2 - a you did not want a permanent job), a dichotomous variable measuring the degree of person-job fit (high / low) in terms of contract type was created. Young workers were assigned to the 'high person-job fit' group if they stated that their job is non-permanent and, at the same time, they stated that they chose temporary job because they could not find a permanent job. This variable implies that a person who is in a temporary job because of not being able to find a permanent job, is in this type of employment involuntarily. Consequently, there is a mismatch between their job and their contract type preferences (i.e. *low person-job fit*). Young workers were assigned to the *high person-job fit*  *group* if they stated one of the following: (1) that they are in permanent jobs; or (2) that they are in temporary jobs because they did not want a permanent job.

#### Mental health

Most indicators included in the LFS measure physical health and / or health in general. Given these limitations, two indicators were selected: (1) first variable measuring whether a respondent suffered from any health problems in the last 12 months that were caused or made worse by work ('..within the last 12 months have you suffered from any illness, disability or other physical or mental problem that was caused or made worse by your job or by work you have done in the past') (dichotomous variable: yes / no); (2) second variable, which was a follow-up question related to the previous variable and measured the type of illness cause or made worse by work in the past 12 months ('How would you describe this illness?': 7 – stress, depression or anxiety). The two variables were combined, and a new variable was constructed, which measured whether participants suffered from any work-related mental health problems (in terms of stress, depression and anxiety) in the past 12 months (dichotomous variable; yes / no).

### Individual and contextual variables

Similar to the EWCS (2015) and the ESS (2010), the choice of individual and contextual variables was influenced by past research findings (see Sections 4.2 and 4.3 for the discussion of key individual and contextual factors in the youth context).

*Individual factors*. Individual characteristics were measured with five items: *age group* (18-24 / 25-34), *gender* (male / female), *education* (non-graduates / graduates), *marital status* (single / married), and *children* (no children / children).

*Job-related characteristics*. Five job-related variables were selected from the LFS (2017). These included: occupation, industry, sector, firm size and job tenure.

*Occupation*. Similar to previous surveys, the LFS (2017) uses the International Standard Classification of Occupations, (ISCO-08) (ILO, 2012) to classify workers into ten different occupational categories. For the purpose of this study, ISCO-08 was recoded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1, 2 and 3); (2) low-skilled white collar (ISCO-08 codes 4 and 5); (3) high-skilled blue

collar (ISCO-08 codes 6 and 7); and (4) low-skilled blue collar workers (ISCO-08 codes 8 and 9). Armed forces (ISCO-10) were excluded due to the fact that none of the respondents were in this occupational category. This classification has been applied successfully in other studies in the area (Eurofound, 2012).

Industry. Similar to previous surveys, the LFS (2017) uses Standard Industrial Classification of Economic Activities (SIC 2007) (ONS, 2009) to categorise all economic activities into one of 21 sections, based on the nature of their business. For the purpose of this study, the SIC (2007) has been recoded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction). Other SIC codes (A-Agriculture; B-Mining and quarrying; D-Electricity; E-Water supply; J-Information and communication; L-Real estate activities; R-Arts, entertainment and recreation; T-Activities of households as employers; U-Activities of extraterritorial organisations and bodies) were excluded due to a very low number of respondents in these industries (which ranged from 0 to 2).

Sector, firm size and job tenure. The remaining job-related variables were sector (private / public), firm size (3 categories; (1) Under 50 workers; (2) 50-249 workers; (3) 250 and over), and job tenure (4 categories; (1) Less than 1 year; (2) 1 to less than 2 years; (3) 2 to less than 5 years; (4) 5 years and over).

In the multivariate analysis, all categorical variables were dummy coded by coding the reference category with a 0 and all other categories with a 1. It was expected that job quality and mental health would vary across occupations, sectors, industries, firm size and job tenure (e.g. Bakker & Demerouti, 2007; Eurofound, 2012; Smith et al., 2008; OECD, 2013) (see Section 4.3).

#### 5.3.4 Analytical Strategy (Stage 3)

For each Research Objective, descriptive statistics were chosen to conduct an initial analysis of the data. This included means, standard deviations, frequencies (for categorical variables), and distributions for each measure. Simple bi-variate correlations were calculated to examine potential multicollinearity between the main variables (Howitt & Cramer, 2008; Field, 2013). The distribution of social background variables (parental education and occupation) across different job quality dimensions was examined. Tests of group differences (by individual characteristics, job-related characteristics and institutional context) were also examined for each job quality dimension.

Following the initial examination of the data, a range of multivariate analyses were performed. For Research Objectives 1 and 2, multiple hierarchical regression analyses were used to test country differences in five dimensions of job quality (H1), job-related and individual variations in job quality (H2, H3 and H4), and the role of social background in affecting young workers' evaluations of job quality (H5). This statistical technique allows for the effects of multiple predictor variables on a single dependent variable to be examined (Tabachnick & Fidell, 2013) to uncover which have the greatest effect. In hierarchical regression, predictors (independent variables) are entered into the model in order of their importance in predicting the outcome (the dependent variable) based on past research (Field, 2013). The hierarchical method of variable entry allowed for testing the relative effects of individual differences, job-related characteristics and country on job quality.

For Research Objective 3, multiple linear and logistic regressions were used (depending on the level of measurement of the dependent variable) to test the role of psychosocial quality of work on five aspects of mental health among young workers (H6) and the relative impact of contract type, job security, training, career prospects, skills and working hours on mental health, in comparison to other dimensions of job quality (H7), while controlling for individual and contextual variables (individual differences, job-related characteristics and wider institutional context). This technique allowed the relative effects of different aspects of job quality on mental health to be examined. All variables were entered into the regression model using the hierarchical entry method which isolated the effects of other aspects of job quality and controlled for the effects of other important predictors (Field, 2013; Tabachnick & Fidell, 2013). Known predictors (from past research) were entered first (Field, 2013). Since the main

motivation of RO3 was to examine the impact of job quality on mental health, the main focus of the analyses was on the estimation of multivariate regression models that held constant factors affecting job quality and mental health (in terms of individual and contextual variables). Similar techniques of data analysis were used in other studies in the area (Boxall & Macky, 2014; Smith et al., 2008).

For Research Objective 4, multiple linear and logistic regressions were used (depending on the level of measurement of the dependent variable) to test whether being in employment characterised by a greater fit between an individual and a job (in terms of skills, contract type and working hours) (H8) and having higher perceived employability (H9) were associated with better mental health among young workers, while controlling for job quality, individual and contextual variables (individual differences, job-related characteristics and institutional context). Finally, the moderating effect of perceived employability on mental health (H10) was tested with the use of moderated linear and logistic regressions (depending on the level of measurement of the dependent variable) as recommended by previous research (Baron & Kenny, 1986). To identify the nature of the significant interactions between person-job fit and perceived employability, stacked column charts of significant person-job fit X perceived employability interactions were created for representative perceived employability groups (as recommended by Aiken & West, 1991).

#### 5.3.5 Preparing data for analysis (Stage 4)

All data was checked for errors, outliers and missing values, based on recommendations given in past research on how to prepare the secondary data for analysis (MacInness, 2017; Tabachnick & Fidell, 2014). This was done using descriptive statistics (mean, standard deviation, maximum and minimum values, scatterplots for continuous variables, and tables of frequencies for nominal and ordinal variables). There were no errors or obvious outliers in the data and only few missing values (all below 5%), and this is an indication of good data quality (Eurofound, 2012; Tabachnick & Fidell, 2014).

However, in all three surveys, there was a high percentage of missing values for the variable of pay. In the EWCS (2015), approximately 15% of values were missing for pay, either as a result of 'don't know' (4.6%) or 'refusal' (12.4%). Unfortunately, there are as yet no strong

guidelines on how to deal with missing data and all solutions to handling missing values have their drawbacks. According to Tabachnick and Fidell (2014, p. 97) "the decision is among several bad alternatives". To minimise the number of missing values, following the example of Eurofound (2012), the question on pay (which is a numerical continuous variable measuring NET monthly earnings in euro or national currency for the UK context), was combined with another variable measuring pay bands (which is an ordinal variable classifying each worker into one of ten pay bands). Specifically, for young workers who responded to the question measuring pay bands, the banded responses were replaced with average pay levels obtained from the continuous pay variable for the same bands. This procedure decreased missing values from 15% to 9% and was performed separately for the UK (based on national currency). Similarly, in the ESS (2010) and the UK LFS (2017) approximately 22% and 19% of the values were missing for the variable of pay. Given such high percentage of missing values, the decision was made to impute the missing values, following the example of De Bustillo et al. (2011). Multiple imputation procedure was used based on the assumption that pay depends on gender, age, occupation and working hours. While this method of handling missing data is based on hypothetical model which is one of its main drawbacks, it is useful when there is a key variable for which there is a high percentage of missing values (De Bustillo et al., 2011). This is the method of choice for data sources that are made available for analyses outside the agency that carried out the data collection (Tabachnick & Fidell, 2014).

Prior to multivariate analyses, the data was checked for the assumptions of linearity, normality, multicollinearity, homogeneity of variance and independence (Field, 2013; Howitt & Cranmer, 2008). Residual and scatter plots indicated the assumptions of linearity and normality were all satisfied (Hair et al., 1998; Pallant, 2010). Prior to logistic regression analyses, the assumption of linearity was tested by checking whether the interaction term between the independent variable and its log transformation was significant (Hosmer & Lemeshow, 1989). Homogeneity of variance was tested with the use of Levene's statistics (Field, 2013). In terms of multicollinearity, the collinearity tolerance (all greater than .78) and VIF indicators (all less than 2.0) were all found to be within the acceptable limits (Field, 2013; Hair et al., 2015). Finally, the assumption of independence of errors was tested with the Durbin-Watson test (Field, 2013) and was found to be within the acceptable values. Survey weights were applied for multivariate analyses as advised in the data documentation for each of the three surveys.

#### 5.4 Chapter summary

This chapter provided the overview of the study's methodological approach, which comprises the secondary research design based on three large social surveys (EWCS, 2015; ESS, 2010; and the UK LFS, 2017). This chapter first outlined a rationale for choosing the secondary data analysis as a research method, its strengths and potential limitations in the context of this study. The process of secondary data analysis was then developed based on the recommendations given in past research on how to select, evaluate and analyse secondary data. This included five stages of data collection, evaluation and analysis. The first stage involved the review of secondary data sources, which was followed by survey selection, survey evaluation, and the detailed overview of sample characteristics and selected survey measures based on this study's conceptual framework (Stage 2). The approach to measuring job quality and international context was also discussed as part of this stage. The third stage included the analytical strategy, and this was followed by preparing data for analysis (Stage 4). Developing the process of secondary data analysis ensured the quality criteria in relation to collecting, evaluating and analysing secondary data are carefully considered at each stage of the process. The next chapter presents the findings of this study, which is the fifth stage in the process of secondary data analysis.

# Chapter 6: Findings

#### 6.1 Introduction

This chapter presents the findings of data analysis, which was carried out to answer four research objectives of this study, which were as follows: (1) to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context; (2) to examine the role of social background in affecting young workers' evaluations of job quality; (3) to examine the relationship between job quality and mental health among young workers; and finally (4) to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability.

The chapter is divided into four sections, with each section addressing one of the four research objectives and their corresponding hypotheses. Section 6.2 addresses Research Objective 1. In this section job quality is measured across its different dimensions and components to provide the first comprehensive account on how young workers in the UK evaluate the quality of their jobs, when compared to countries with distinct institutional configurations (Denmark, Germany and Spain). Country differences in five dimensions of job quality (H1) and job-related and individual variations in job quality (H2, H3 and H4) are examined as part of this section. All data analyses carried out in this section are based on EWCS (2015) and include young workers (18-34) in the UK, Denmark, Germany and Spain.

Section 6.3 addresses Research Objective 2. This section examines the role of social background (using parental education and occupation as a proxy) in affecting young workers' evaluations of job quality (H5), while controlling for the effects of individual differences, job-

related characteristics and wider institutional context (using country as a proxy). All data analyses conducted in this section are based on ESS (2010) and include young workers (18-34) in the UK, Denmark, Germany and Spain.

Section 6.4 addresses Research Objective 3. This section examines the relationship between job quality and five dimensions of mental health (work-related stress, work-related exhaustion, anxiety, fatigue and affective well-being), while controlling for the effects of individual differences, job-related characteristics and wider institutional context (using country as a proxy). Two hypotheses are investigated in this section, which examine the role of psychosocial quality of work on five dimensions of mental health (H6), and the relative impact of employment quality (in terms of contract type, job security, training and career prospects) and skills and working hours on mental health, in comparison to other dimensions of job quality (H7). All data analyses carried out in this section are based on EWCS (2015) and include young workers (18-34) in the UK, Denmark, Germany and Spain.

Section 6.5 addresses Research Objective 4 and examines whether being in employment characterised by a greater fit between an individual and a job (in terms of skills, contract type and working hours) (H8) and reporting higher levels of perceived employability (H9) are associated with better mental health in the youth context, and the moderating role of perceived employability in alleviating the negative effects of poor person-job fit (H10). All data analyses conducted in this section are based on EWCS (2015) and the UK LFS (2017) and include young workers (18-34) in the UK only (see Table 3 for the overview of Research Objectives and Hypotheses of this study). Finally, Section 6.6 provides a summary of the findings.

6.2 Research Objective 1: Job quality in the youth context

This section addresses Research Objective 1 which aimed "to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context".

Four hypotheses were investigated in this section in relation to Research Objective 1. Using data from EWCS (2015), this section reports results from multiple hierarchical regression analyses, which examined the effects of institutional context (using country as a proxy) (H1),

job-related characteristics (H2), and individual variations (H4) on each aspect of job quality, and the relative impact of occupation and industry, in comparison to the institutional context, on the intrinsic quality of work and health and safety dimensions of job quality (H3).

Prior to multivariate analyses all categorical predictor variables were dummy coded (by coding a reference category with a 0 and all other categories with a 1) (Field, 2013) and were entered in blocks into the regression models. Each block was entered separately into the regression model to investigate the amount of variance independently explained by different types of predictors (Howitt & Cramer, 2008). Separate regression models (five in total) were run for each job quality dimension (pay, intrinsic quality of work, employment quality, health and safety, and work-life balance), which was entered as the dependent variable. The order in which different blocks of predictors were entered depended on the hypothesis in the Research Objective 1. In hierarchical regression predictors (independent variables) are entered into the model in order of their importance in predicting the outcome (the dependent variable) based on past research (Field, 2013).

For the dimensions of pay, employment quality and work-life balance, predictors were entered in the following order: In Step 1, the country-level variable was entered. In Step 2, all individual-level variables were entered: gender, age group, education, marital status and children. In Step 3, all job-related variables were entered: occupation, sector, industry, firm size and job tenure.

For the dimensions of intrinsic quality of work and health and safety, predictors were entered in the following order: In Step 1, all job-related variables were entered: occupation, sector, industry, firm size and job tenure. In Step 2, all individual-level variables were entered: gender, age group, education, marital status and children. In Step 3, the country-level variable was entered.

6.2.1 Country differences in five dimensions of job quality (H1)

Hypothesis 1: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will differ between countries. In comparison to the UK, job quality will be higher in Denmark and Germany and lower in Spain, particularly in relation to pay, employment quality and work-life balance.

This section addresses Hypothesis 1 by examining the impact of institutions of the labour market (using country as a proxy) on the level of job quality among young workers. Drawing on employment regime theory (Amable, 2003), this section measures job quality across four European countries: the UK, Denmark, Germany, and Spain (representing different employment regimes) to assess whether macro-level features shape young workers' evaluations of job quality. It is expected that, in comparison to the UK (which in this study represents the Liberal employment regime), Denmark and Germany (which represent the Social Democratic and Continental regimes, respectively) will score higher in terms of job quality, and Spain (which represents the Southern employment regime) will score lower in terms of job quality, particularly in relation to pay, employment quality and work-life balance (H1). Hypothesis 1 was addressed by first examining the level of job quality dimensions in each country (descriptive statistics), followed by hierarchical multiple regressions which examined the effect of country on each aspect of job quality (pay, intrinsic quality of work, employment quality, health and safety, and work-life balance), while controlling for other predictors of job quality (individual differences and job-related characteristics).

#### **Descriptive statistics**

Prior to multivariate analysis, the level of job quality was cross-tabulated by four countries. Table 9 shows mean values of job quality dimensions for young workers (18-34) in the UK, Denmark, Germany and Spain (N=1820). In Figure 4 five dimensions of job quality were considered in relation to each of the four countries. The mean score for each country was plotted for each job quality dimension to illustrate how job quality varies between countries. Table 9: Job quality dimensions: mean values by country

Dimensions	UK	Denmark	Germany	Spain	<i>p</i> <sup><i>g</i></sup>
	(N=382)	(N=192)	(N=478)	(N=768)	_
PAY	26.13 (15.2)	27.12 (18.64)	30.02 (18.44)	22.39 (11.82)	b,c,e,f
	1108.75 <sup>h</sup>	1376.81 <sup>h</sup>	1290.96 <sup>h</sup>	1071.03 <sup>h</sup>	b,c,e,f
INTRINSIC QUALITY OF	65.50 (17.88)	72.53 (13.26)	63.24 (18.26)	63.30 (18.34)	a,d,e
WORK	55.80 (25.52)	59.78 (25.01)	59.09 (26.1)	47.81 (25.57)	a,b,c,e,f
Skills	65.87 (26.27)	75.59 (22.12)	57.35 (28.2)	53.56 (28.06)	a,b,c,d,e,f
Autonomy	67.55 (29.99)	77.68 (22.64)	76.25 (25.79)	77.50 (30.25)	a,b,c
Meaningfulness	72.85 (26.21)	77.09 (21.63)	61.06 (27.44)	74.88 (26.31)	a,b,c,d,e,f
Social support					
EMPLOYMENT QUALITY	68.80 (22.98)	69.51 (22.62)	62.82 (23.58)	45.47 (28.13)	b,c,e,f
Contract type	78.91 (40.84)	68.98 (46.35)	71.80 (45.04)	47.13 (49.95)	a,b,c,e,f
Job security	79.36 (26.82)	82.14 (33.59)	80.36 (26.71)	55.83 (38.97)	c,e,f
Training	53.82 (49.90)	59.68 (46.39)	47.97 (50)	33.75 (47.31)	a,b,c,d,e,f
Career prospects	64.32 (31.34)	67.26 (31.13)	55.21 (31.07)	47.36 (37.36)	a,b,c,d,e,f
HEALTH AND SAFETY	64.45 (30.44)	57.78 (29.78)	61.66 (29.82)	52.47 (31.14)	a,c,e,f
Physical risks	53.88 (37.19)	49.75 (33.68)	54.64 (34.72)	40.54 (38.29)	a,c,d,e,f
Psychosocial risks	74.96 (39.20)	65.63 (41.13)	68.69 (40.46)	65.20 (39.93)	a,b,c,d,f
WORK-LIFE BALANCE	53.33 (16.61)	57.94 (16.55)	58.19 (16.84)	52.39 (18.25)	a,b,e,f
Working time	52.53 (16.67)	63.89 (17.35)	57.99 (16.34)	48.42 (16.36)	b,d,e
Work intensity	54.14 (26.35)	52.00 (24.59)	58.40 (25.88)	56.36 (29.67)	b,c,d,e,f

Note. Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain).

Descriptive statistics refer to: Mean (Std. Dev.); a - UK significantly different from Denmark; b - UK significantly different from Germany;

c - UK significantly different from Spain; d - Denmark significantly different from Germany; e - Denmark significantly different from Spain; f - Germany significantly different from Spain;  $^{g}$  - significance of t-test (p < .05);  $^{h}$  – median pay value in euros.



Figure 4: Job quality dimensions: mean values by country

*Note*. Data source: EWCS (2015); N=382 (UK); N=192 (Denmark); N=478 (Germany); N=768 (Spain).

Table 9 reveals that, on average, job quality is lower in the UK and Spain. From Figure 4 it is clear that young workers in Denmark reported higher levels of job quality across multiple dimensions when compared to the UK, Germany and Spain. In contrast, young workers in Spain tended to report lower levels of job quality, when compared to the other countries of interest.

Pay is the dimension with the lowest average mean values and generally low cross-country variation. The highest average value was reported in Germany and lowest in Spain. Table 9 also shows the median pay values across four countries. Since the distribution of pay is skewed in all countries, median is a better indication of the 'middle scores' for each country than the mean (Antonius, 2013; Tabachnick & Fidell, 2013). It is clear from Table 9 that young workers in Denmark and Germany reported higher median monthly pay (at 1376.81 and 1290.96 euro per month, respectively) than those in the UK and Spain (at 1108.75 and 1071.03 euros per month, respectively).

In terms of intrinsic quality of work, from Figure 4 it is clear that Denmark stands out and performs considerably higher than the other countries. Young workers in the UK, Germany and Spain reported lower mean values, ranging from 63.24 to 65.50, which shows low variation between these three countries. Within the intrinsic quality of work dimension, the component of skills received the lowest mean values across all countries (with mean values below 60), especially in the UK and Spain, which indicates that a large proportion of young workers in these two countries is employed in lower-skilled jobs. Meaningfulness and social support showed generally higher values across all countries when compared to more objective components of skills and autonomy. Table 9 also reveals that the UK scored significantly lower in terms of meaningfulness when compared to Denmark, Germany and Spain.

The largest cross-country variation was observed for the dimension of employment quality (see Figure 4), which ranges from very low in Spain to considerably higher in Denmark. Within this dimension, Denmark outperformed the remaining countries in terms of job security, training and career prospects, while Spain fell largely behind on most aspects of the employment quality dimension (see Table 9). The first component of the employment quality dimension (contract type), which measures contractual stability had generally high values across all countries, with the exception of Spain. In the UK, young workers were significantly less likely to hold a temporary contract, when compared to the other countries. The level of job security was similar across Denmark, Germany, and the UK (with mean values ranging from 79.36 in the UK to 82.14 in Denmark), with the exception of Spain which again was clearly falling behind. This suggests that although young workers in the UK are significantly less likely to have a temporary contract when compared to those in Denmark, Germany and Spain, this does not seem to translate into higher job security. The component of training received midlow values across all countries and showed even larger cross-country variation (with mean values ranging from 33 to 59). In comparison to the UK, the availability of training was significantly higher in Denmark and lower in Germany and Spain. Closer examination of this component (through tables of frequencies) showed that across all countries, 48% - 66% of young workers reported a lack of training provided by employers in the last 12 months. The component of career prospects had generally low values and relatively high cross-country variation. In comparison to the UK, young workers rated their career prospects significantly higher in Denmark but lower in Germany and Spain.

The dimension of health and safety which comprises physical and psychosocial risks received rather low scores across all countries, with mean values ranging from 52.47 to 64.45. This is the only dimension of job quality on which young workers in the UK reported the highest mean values (i.e. the lowest exposure to physical and psychosocial risks), ahead of Germany, Denmark and Spain. The general pattern appeared to be that of young workers in the UK and Germany reporting lower exposure to both physical and psychosocial risks than those in Denmark and Spain.

The dimension of work-life balance which comprises working time and work intensity showed relatively low variation between countries, with mean values ranging from 52.39 in Spain to 57.94 in Denmark. The scores on this dimension showed a clear division between Denmark and Germany on the one hand, and the UK and Spain on the other. In general, Denmark and Germany scored significantly higher on this dimension than the UK and Spain. Closer inspection of individual components of work-life balance showed that working time received lower mean values than work intensity, especially in the UK and Spain, where young people reported poorer quality working time.

Table 10 shows the distribution of weekly working hours across all countries. In Denmark, young workers tend to report shorter working hours and are significantly less likely to report long working hours (39-41 hours per week) and very long working hours (42 hours and over), when compared to the other countries. In contrast, the prevalence of long and very long working hours is significantly greater in other countries, with at least 44% of young people reporting working long or very long hours (39 hours and over) in the UK, Germany and Spain. In the UK young people reported working very long hours (42 hours and over) significantly more often than those in Denmark, Germany and Spain. Table 10 also shows that young workers in Denmark are significantly more likely to report standard full-time working hours (35-38 hours per week) when compared to the other countries.

Regarding work intensity, mean values were also rather low across all countries (with mean values below 60), but a different pattern of findings emerged: Germany scored highest, Denmark and the UK lowest, and Spain somewhere in between (Table 9). This suggests that young workers in the UK experience poor conditions in both dimensions of work-life balance: they are more likely to work very long hours and experience higher job intensity. In contrast, in Denmark work intensity is higher, but working hours are shorter when compared to the other

countries. In Germany and Spain, working hours tend to be longer but work intensity is relatively lower than in Denmark and the UK.

	UK	Denmark	Germany	Spain	Total	p <sup>g</sup>
0-34 hours	32.7%	39.1%	32.6%	33.5%	33.7%	a,d,e
35-38 hours	22.4%	36.9%	22.1%	10.3%	18.8%	a,d,e,f
39-41 hours	22.5%	10.5%	37.2%	38.8%	31.9%	a,b,c,d,e,f
42 hours and over	22.4%	13.5%	8.1%	16.4%	15.6%	a,b,c,d,e,f

Table 10: Distribution of weekly working hours by country

Note. Data source: EWCS (2015); N=382 (UK); N=192 (Denmark); N=478 (Germany); N=768 (Spain). a - UK significantly different from Denmark; b - UK significantly different from Germany; c - UK significantly different from Spain; d - Denmark significantly different from Germany; e - Denmark significantly different from Spain; f - Germany significantly different from Spain; g - significance of t-test.

Simple correlations between job quality dimensions and components (Appendix 2) across all four countries reveal the extent to which positive and negative job characteristics tend to accumulate. Several patterns can be observed from Appendix 2. First, intrinsic quality of work variables tended to be significantly correlated with pay, employment quality, health and safety and work-life balance. In other words, higher autonomy, higher skill level of a job, more meaningful work and greater social support in the workplace tended to be associated with reports of better job quality on other dimensions. Second, higher pay was associated with higher employment quality but at the same time it was also indicative of poorer work-life balance. Third, lower exposure to health and safety risks tended to be associated with better work-life balance. Finally, the component of contract type tended to be significantly correlated with other job quality components. In particular, having a temporary contract (when compared to a permanent contract) is associated with lower pay, less training provided by the employer, lower career prospects, lower skill level of a job, less autonomy on the job, and greater exposure to physical and psychosocial risks in the workplace. This indicates that young workers in temporary jobs report on average lower quality jobs on multiple dimensions, when compared to those in permanent jobs.

#### Multivariate analysis

Following the descriptive analysis of job quality by country, hierarchical multiple regressions were employed to provide a more robust test of Hypothesis 1 (see Tables 11 and 12).

Hierarchical regression analyses using EWCS (2015) showed that, after the effects of all other predictors were held constant, country was a significant predictor of pay, intrinsic quality of work, employment quality, work-life balance and health and safety. In particular, in comparison to young workers in the UK: (1) young workers in Germany reported higher pay ( $\beta$ =.16, p < .001) and better work-life balance ( $\beta$ =.14, p < .001); (2) young workers in Denmark reported better intrinsic quality of work ( $\beta$ =.11, p < .001) and better work-life balance ( $\beta$ =.07, p < .05); (3) young workers in Spain ( $\beta$ =-.39, p < .001), Germany ( $\beta$ =-.13, p < .001) and Denmark ( $\beta$ =-.05, p < .05) reported poorer employment quality; and (4) young workers in Denmark ( $\beta$ =-.07, p < .05) and Spain ( $\beta$ =-.15, p < .001) reported poorer health and safety. These findings provided partial support for Hypothesis 1.

When considering the impact of different types of predictors, when taken together, the countrylevel predictors accounted for 13% of the variation in employment quality, ( $\Delta R^2 = .13$ ,  $\Delta F = 69.79$ , p < .001). For other dimensions of job quality, the country-level predictors had less impact and explained: (1) 3% of the variation in pay ( $\Delta R^2 = .03$ ,  $\Delta F = 13.34$ , p < .001); (2) 2% of the variation in work-life balance, ( $\Delta R^2 = .02$ ,  $\Delta F = 8.41$ , p < .001); (3) 3% of the variation in health and safety ( $\Delta R^2 = .03$ ,  $\Delta F = 12.5$ , p < .001); (4) 1% of the variation in the intrinsic quality of work, ( $\Delta R^2 = .01$ ,  $\Delta F = 7.01$ , p < .001). These findings show that, in comparison to other predictors (individual differences and job-related characteristics), country is the strongest predictor of employment quality (see Tables 11 and 12 for hierarchical regression analyses).

	Рау			Em	ployment Qu	ality	Work-life Balance		
	β1	β2	β3	β1	β2	β3	β1	β2	β3
Step 1									
Country <sup>a</sup>									
Spain	11**	10**	01	43***	43***	39***	.01	.02	.01
Germany	.09**	.15***	.16***	13***	11***	13***	.13***	0.15***	.14***
Denmark	.03	.03	.03	07*	07*	05*	.07*	.07*	.07*
Step 2									
Gender <sup>b</sup>		24***	18***		07**	05*		.11***	.06*
Age group <sup>c</sup>		.24***	.15***		.06*	03		07*	07*
Education <sup>d</sup>		.23***	.12***		.10***	.06*		.10**	.04
Marital status <sup>e</sup>		.17***	.11***		.10**	.04		01	01
Children <sup>f</sup>		.03	.06*		.03	.03		.06*	.08**

Table 11: Hierarchical regression - predictors of pay, employment quality and work-life balance

*Note* . Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to the UK (reference group); b - refers to female; c - refers to 25-34; d - refers to graduates; e - refers to married; f - refers to children (yes).

Table 11: Continued

	Рау			Em	Employment Quality			Work-life Balance		
	β1	β2	β3	β1	β2	β3	β1	β2	β3	
Step 3										
Occupation <sup>a</sup>										
LS blue collar			03			05*			11***	
HS white collar			.22***			.06*			02	
HS blue collar			.06*			.05			07*	
Sector <sup>b</sup>			.04			04			.03	
Industry <sup>c</sup>										
Professional			.11***			.11***			.05	
Public Service			03			.03			.16***	
Manufacturing			.09***			.02			.07*	
Construction			.07**			.01			.04	
Firm size <sup>d</sup>										
50-99			.08**			01			02	
100-249			.08**			.02			09**	
250 and over			.13***			.02			05	
Job tenure <sup>e</sup>										
1-2 years			.06*			.19***			03	
3-5 years			.17***			.34***			08*	
6 or more			.18***			.40***			07*	
ΔF	13.34***	74.95***	20.33***	67.79***	13.28***	21.15***	8.41***	7.67***	5.12***	
R square	.03	.29	.44	.13	.18	.34	.02	.04	.10	
∆R square		.25	.15		.04	.15		.02	.05	

Note. Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001. a - refers to LS white collar (reference group); b - refers to public; c - refers to Customer Service (reference group); d - refers to 1-49

workers (reference group); e - refers to Less than 1 year (reference group).

	Intri	nsic Quality of	Work	Health and Safety			
	β1	β2	β3	β1	β2	β3	
Step 1							
Occupation <sup>a</sup>							
LS blue collar	20***	20***	20***	12***	12***	11***	
HS white collar	.35***	.34***	.34***	.01	.01	.01	
HS blue collar	.10***	.11***	.10**	09**	09*	07*	
Sector <sup>b</sup>	01	01	02	05	05	05	
Industry <sup>c</sup>							
Professional Service	.09***	.09***	.10***	.13***	.13***	.11***	
Public Service	.15***	.14***	.14***	03	03	03	
Manufacturing	.03	.03	.03	.04	.04	.03	
Construction	.06*	.06*	.06*	.03	.03	.02	
Firm size <sup>d</sup>							
50-99	06**	06**	06**	09**	09**	09**	
100-249	04	04	03	01	02	03	
250 and over	01	01	01	.03	.03	.01	
Job tenure <sup>e</sup>							
1-2 years	.03	.03	.03	01	01	02	
3-5 years	01	01	01	05	05	06*	
6 years and over	.06*	.05	.06*	09**	09*	10**	

Table 12: Hierarchical regression - predictors of intrinsic quality of work and health and safety

Note. Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001;

a - refers to LS white collar (reference group); b - refers to public; c - refers to Customer Service (reference group);

d - refers to 1-49 workers (reference group); e - refers to Less than 1 year (reference group).

Table	12:	Continued

	Intrins	Intrinsic Quality of Work			Health and Safety		
	β1	β2	β3	β1	β2	β3	
Step 2							
Gender <sup>a</sup>		01	01		00	.00	
Age group <sup>b</sup>		00	00		02	00	
Education <sup>c</sup>		.05*	.04		.01	.03	
Marital status <sup>d</sup>		.03	.02		.01	.01	
Children <sup>e</sup>		.03	.03		.02	.01	
Step 3							
Country <sup>f</sup>							
Spain			.06			15***	
Germany			01			.03	
Denmark			.10***			07*	
ΔF	38.84***	1.65	7.01***	6.32***	0.28	12.46***	
R square	.30	.31	.32	.06	.06	.09	
∆R square		.005	.01		.001	.03	

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001. a - refers to female; b - refers to 25-34; c - refers to graduates; d - refers to married; e - refers to children (yes); f - refers to the UK (reference group).
6.2.2 Individual and job-related variations in job quality (H2, H3 and H4)

Hypothesis 2: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for lowskilled white collar occupations compared to other occupations; (b) for private compared to public sector workers; (c) for those with short job tenure (less than 1 year) compared to those with longer tenure; (d) for workers employed in small firms (1-49 workers) compared to those in medium or large firms; and (e) for those employed in the Customer Service industry compared to other industries.

Hypothesis 3: Occupation and industry will be stronger predictors of intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) and health and safety (in terms of physical and psychosocial risks) dimensions of job quality rather than wider institutional context.

Hypothesis 4: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for female compared to male workers; (b) for single compared to married workers; (c) for workers who have dependent children compared to those who do not have dependent children; (d) for younger (18-24) compared to older workers (25-34); and (e) for non-graduates compared to graduates.

The remaining three hypotheses of Research Objective 1 examined the impact of individual differences and job-related characteristics on the level of job quality among young workers. Using EWCS (2015), Hypotheses 2 and 4 aimed to examine the characteristics of organisations which offer the highest / lowest quality jobs and the groups of young individuals who get them. It was also expected that intrinsic quality of work and health and safety would be influenced more by the occupation and industry rather than wider institutional context (using country as a proxy) (H3). This section allowed for identifying the groups of young people who are particularly disadvantaged in contemporary labour markets, based on individual differences and job-related characteristics.

# Descriptive statistics

This section begins by presenting descriptive statistics (means and standard deviations) for dimensions of job quality across individual and job-related characteristics, which includes all four countries of interest (see Tables 13 and 14).

Table 13: Job quality across job-related characteristics

		Pay		Intrinsic	Quality	of Work			Empl	oyment	Quality		Healt	th and Sa	afety	Work	life Bal	ance
			Skills	Autonomy	Meaningfulness	Social Support	Total	Contract Type	Job Security	Training	Career Prospects	Total	Physical Risks	Psychosocial Risks	Total	Working Time	Work Intensity	Total
Occupation <sup>1</sup>	k		a,b,d,e,	a,b,c,d	a,b,c,	a,b,c,e,		a,c,d,e	a,b,c,	a,b,c,d	a,b,c,d	a,b,c,d,	a,b,c,d,	b,c,d,e,	b,c,d,e	a,c,d,e,	b,c,d,e	b,c,d,e
			T	e,f	e,f	T	e,f		d,e	e,f	e,f	e,f	e,f	T	t	T		
HS white	М	33.58	80.48	69.69	81.21	74.05	76.40	66.20	73.38	54.52	66.63	64.59	56.86	65.88	61.40	56.30	57.66	56.98
collar	SD	17.05	16.08	25.40	23.21	24.77	13.40	47.34	34.23	49.83	31.17	25.54	37.64	40.98	32.66	17.31	27.12	17.69
LS white	Μ	20.26	42.63	55.59	71.65	70.84	60.03	63.03	70.69	37.10	49.74	54.37	53.16	67.05	59.92	53.53	57.26	55.40
collar	SD	13.37	15.85	27.69	29.94	26.53	15.96	48.30	34.62	48.34	35.01	26.77	36.05	40.69	31.20	17.76	26.98	17.24
HS blue	Μ	30.44	48.63	61.79	81.44	73.75	66.35	62.01	69.91	41.17	60.74	58.22	27.21	77.11	51.57	50.90	51.10	51.00
collar	SD	12.64	14.34	25.92	25.79	24.96	13.80	48.65	36.15	49.34	32.36	27.30	28.81	35.44	25.51	14.33	26.56	15.67
LS blue	М	21.47	24.36	47.81	63.73	63.03	49.35	59.51	66.18	23.44	41.73	47.05	27.92	72.98	50.31	49.38	50.47	49.93
collar	SD	13.01	18.65	29.00	33.12	31.69	18.03	49.18	36.52	42.44	34.65	26.47	32.23	38.88	26.42	17.24	29.36	17.89
Sector		а	а	а	а		а	а		а	а	а	а	а	а	а	а	а
	Μ	24.84	49.32	57.57	73.74	71.28	62.84	64.03	70.58	37.20	53.26	55.70	47.20	71.08	58.97	52.36	54.06	53.21
private	SD	15.66	24.53	28.42	29.17	26.91	18.04	48.01	34.44	48.35	35.00	26.42	37.20	39.02	30.12	17.29	27.76	17.70
	М	30.72	71.57	67.31	77.44	71.78	71.93	61.57	70.08	56.93	64.71	62.53	50.66	60.50	55.61	57.55	59.57	58.56
public	SD	16.39	24.19	25.87	26.27	26.08	16.07	48.72	37.49	49.60	33.46	28.60	37.86	42.72	33.22	17.18	26.60	16.65

Note. Data source: EWCS (2015). Descriptives: (a-f) refer to significance of t-test (p < .05); M-mean; SD-standard deviation.

**Occupation**: a - LS white collar significantly different from HS white collar; b - LS white collar significantly different from HS blue collar; c - LS white collar significantly different from LS blue collar; d - HS white collar significantly different from HS blue collar; e - HS white collar significantly different from LS blue collar; f - HS blue collar; f - HS blue collar; f - HS blue collar significantly different from LS blue collar.

**Sector**: a - private significantly different from public. **k** - Occupation refers to ISCO-08 (2008) which was re-coded into four occupational categories: (1) high-skilled white collar (ISCO-08 codes 1-managers, 2-professionals and 3-technicians and associate professionals); (2) low-skilled white collar (ISCO-08 codes 4-clerical support workers and 5-service and sales workers); (3) high-skilled blue collar (ISCO-08 codes: 6-skilled agricultural, forestry and fishery workers and 7-craft and related trades workers); and (4) low-skilled blue collar workers (ISCO-08 codes 8-process, plant and machine operators and 9-elementary occupations).

#### Table 13: Continued

		Pay	I	ntrinsic	Quality	of Wor	k		Emplo	oyment	Quality		Healt	h and Sa	afety	Work	-life Bal	ance
			Skills	Autonomy	Meaningfulness	Social Support	Total	Contract Type	Job Security	Training	Career Prospects	Total	Physical Risks	Psychosocial Risks	Total	Working Time	Work Intensity	Total
Industry <sup>m</sup>		a,b,c,d,g, i,j	a,b,c,d,f, g,n,i	b,c,d,e,f ,g,h,i,j	b,c,d,e, f,g,h,i,j	a,b,c,d, e,f,g,i,j	b,c,d,e,f ,g,h,i	a,c,d,f, g,h,i,j	a,c,f,g, h,j	a,b,c,d,f ,g,h,i,j	a,b,c,d, e,f,g,h,j	a,b,c,d,f ,g,h,j	a,b,c,d,e f,g,h,i,j	a,b,c,d,e f,g,h,i,j	c,d,f,g, h,i,j	a,c,d,e, f,g,h,i,j	b,d,e,g, h,i,j	c,d,f,g, h,i,j
Manufacturing	М	31.94	51.84	56.90	70.65	66.27	61.16	65.19	72.03	39.76	55.59	57.88	35.41	78.93	56.87	54.18	53.79	53.98
Manulacturing	SD	16.39	24.56	28.90	29.96	28.36	18.46	47.73	34.17	49.04	32.02	27.56	36.71	35.13	28.52	17.16	27.78	18.02
Construction	М	32.05	52.84	62.45	80.53	75.29	67.74	64.29	71.76	41.97	61.16	59.18	31.88	82.53	57.20	51.51	50.52	51.02
Construction	SD	14.05	15.64	24.69	25.40	24.67	13.22	48.14	34.06	49.58	30.69	27.14	31.43	33.37	23.71	14.13	25.96	15.69
Customer	М	21.37	42.33	55.51	70.91	69.76	59.48	63.22	70.02	32.94	48.59	53.04	46.43	67.92	56.93	50.32	54.26	52.29
Service	SD	14.19	21.96	28.62	30.65	27.77	17.77	48.25	34.55	47.03	35.47	25.44	35.84	40.32	30.62	17.32	27.80	17.26
Professional	М	33.52	69.96	68.69	74.20	76.06	72.26	77.69	79.46	59.89	74.19	72.36	74.33	74.38	74.36	60.49	52.53	56.51
Service	SD	18.12	22.33	27.19	22.36	22.33	14.34	41.78	30.33	49.18	26.80	24.26	32.35	36.92	27.17	13.95	26.43	17.02
	М	27.41	71.62	66.05	83.73	73.42	73.70	61.23	70.22	55.66	61.41	61.36	50.46	56.20	53.45	57.62	61.10	59.36
Public Service	SD	14.90	23.51	24.79	23.53	24.98	14.51	48.77	36.49	49.73	33.29	27.57	37.44	42.61	33.40	17.38	26.51	17.37

Note. Data source: EWCS (2015); Descriptives: (a-j) refer to significance of t-test (p < .05); M-mean; SD-standard deviation.

**Industry**: a - Customer Service significantly different from Manufacturing; b - Customer Service significantly different from Construction; c - Customer Service significantly different from Public Service; e - Manufacturing significantly different from Construction; f -

Manufacturing significantly different from Professional Service; g - Manufacturing significantly different from Public Service; h - Construction significantly different from Professional Service; j - Professional Service; j - Professional Service significantly different from Public Service.

**m** - Industry refers to SIC (2007) which was re-coded into five industrial categories: (1) Customer Service (SIC codes: G-Wholesale and retail trade, repair of motor vehicles and motorcycles; I-Accommodation and food service activities; H-Transport and storage; N-Administrative and support service activities; S-Other service activities); (2) Professional Service (SIC codes: M-Professional, scientific and technical activities; K-Financial and insurance activities); (3) Public Service (SIC codes: O-Public administration and defence; compulsory social security; P-Education; Q-Human health and social work activities); (4) Manufacturing (SIC codes: C-Manufacturing); and (5) Construction (SIC codes: F-Construction).

#### Table 13: Continued

		Pay	l	ntrinsic	Quality	of Wor	k		Emple	oyment	Quality		Healt	th and S	afety	Work	-life Bal	ance
			Skills	Autonomy	Meaningfulness	Social Support	Total	Contract Type	Job Security	Training	Career Prospects	Total	Physical Risks	Psychosocial Risks	Total	Working Time	Work Intensity	Total
Firm size		a,b,c,e f	b,c,d,e f	a,b,c,d, e,f	b,c,d,e f	a,d,e,f	a,c,d,e f	a,b,c,e,f	a,c,d,e f	a,b,c, d,e,f	a,b,c,d, e,f	b,c,d,e f	a,b,c,d, e,f	a,c,d,e f	a,c,d,e,f	a,c,e,f	b,c,d,e	a,b,f
1-49	M	23.07	53.15	60.82	76.32	72.32	65.57	66.16	70.51	45.88	56.89	59.49	49.77	67.23	58.41	53.12	56.71	54.92
	SD	13.60	24.36	27.20	29.18	26.69	17.63	47.36	36.09	49.88	36.70	26.07	36.42	41.21	30.71	16.98	28.32	16.91
50-99	M	29.76	52.07	54.23	76.36	65.35	61.95	71.16	66.32	43.99	52.56	58.24	37.18	57.57	47.44	51.49	54.18	52.84
	SD	15.14	23.28	27.32	25.56	26.42	15.18	45.50	34.82	49.85	30.82	25.51	36.77	39.80	31.76	15.44	27.49	16.82
100-249	M	31.03	56.01	63.87	68.33	71.56	64.88	73.70	72.72	51.24	65.67	65.76	51.49	67.14	59.32	52.34	50.94	51.64
	SD	16.25	25.65	27.95	25.67	25.94	18.05	44.22	35.44	50.20	29.14	24.61	37.10	43.01	33.11	18.22	28.18	18.12
250 and over	M	33.83	63.05	68.80	73.99	73.01	69.70	75.05	79.13	58.46	69.18	69.67	54.39	71.89	63.15	56.06	51.01	53.54
	SD	18.70	27.62	26.91	26.61	26.24	17.65	43.38	31.03	49.40	31.22	24.64	37.71	39.89	32.95	17.36	26.87	17.52
Job tenure		a,b,c,d e,f	a,b,c,d,e	a,b,c,e, f	c,e,f	b,c,d,f	a,b,c,e, f	a,b,c,d, e,f	a,b,c,d e	a,b,c,d, e	a,b,c,e	a,b,c,d, e,f	b,c,d	b,c,d,e, f	b,c,d,e	е	a,b,c	b,c
Less than 1	M	19.28	48.96	56.10	73.43	73.91	62.90	31.96	54.51	31.62	52.95	41.33	50.16	69.93	59.95	53.50	59.13	56.31
year	SD	12.14	25.66	29.48	30.67	26.17	18.21	46.67	39.89	46.54	37.83	27.62	38.72	39.08	31.09	17.95	27.41	17.99
1-2 years	M	23.42	53.21	60.30	73.82	73.60	65.13	59.62	73.24	37.35	57.46	56.24	49.03	70.74	59.83	54.46	54.88	54.67
	SD	15.89	27.59	27.74	28.12	25.99	18.41	49.11	31.91	48.42	34.72	25.60	36.86	39.49	30.68	18.01	26.64	17.17
3-5 years	M	30.32	57.87	60.35	74.96	65.33	64.53	80.33	77.47	50.30	56.93	66.10	46.04	67.66	56.74	53.21	54.95	54.08
	SD	16.31	26.80	28.02	28.10	27.21	17.86	39.80	29.40	50.05	31.81	23.89	36.91	40.87	30.35	16.27	27.60	17.08
6 or over	M SD	33.21 15.20	57.17 22.61	64.15	77.98 26.71	71.89 26.50	67.70 16.60	89.79 30.31	79.96 31.57	50.84 50.05	55.72 33.48	69.03 20.64	47.20 36.59	64.39 41.61	55.46 31.16	53.06 16.51	54.15 28.12	53.61 17.47
Total	M SD	25.99	54.00 26.08	60.02 28.03	74.89 28.56	71.43 26.63	64.96 17.91	63.46 48.17	70.86 35.00	41.74 49.33	55.76 34.67	57.28 27.04	48.25 37.33	68.43 40.21	58.20 30.86	53.61 17.28	55.88 27.45	54.75 17.46

Note . Data source: EWCS (2015); Descriptives: (a-f) refer to significance of t-test (p < .05); M-mean; SD-standard deviation.

**Firm size**: a - 1-49 significantly different from 50-99; b - 1-49 significantly different from 100-249; c - 1-49 significantly different from 250 and over; d - 50-99 significantly different from 100-249; e - 50-99 significantly different from 250 and over; f - 100-249 significantly different from 250 and over.

**Job tenure**: a - Less than 1 year significantly different from 1-2 years; b - Less than 1 year significantly different from 3-5 years; c - Less than 1 year significantly different from 6 or more years; d - 1-2 years significantly different from 3-5 years; e - 1-2 years significantly different from 6 or more years; f - 3-5 years significantly different from 6 or more years.

Table 14: Job quality across individual differences

		Pay		Intrinsic	Quality	of Work			Emplo	yment C	Quality		Heal	th and S	afety	Work	<-life Bal	ance
			Skills	Autonomy	Meaningfulness	Social Support	Total	Contract Type	Job Security	Training	Career Prospects	Total	Physical Risks	Psychosocial Risks	Total	Working Time	Work Intensity	Total
Age		***	***	*	*	**	*	***	*	*	**	*		*		*	*	*
18-24	M	17.10	47.77	55.80	72.34	74.74	62.55	49.80	73.05	38.33	58.67	53.67	48.00	71.34	59.68	55.25	58.21	56.73
	SD	11.50	22.94	28.77	29.80	25.44	16.95	50.05	34.55	48.66	34.80	26.23	36.32	39.29	30.18	17.49	26.30	17.03
25-34	M	29.56	56.32	61.65	75.84	69.93	65.80	68.64	70.21	42.95	54.71	58.66	48.46	67.33	57.70	53.10	54.95	54.03
	SD	15.97	26.86	27.58	28.01	27.07	18.19	46.41	35.06	49.52	34.50	27.23	37.69	40.50	31.12	17.31	27.83	17.64
Gender		***	*		*	*				*	***	*	***	***		***	**	*
Male	M	28.37	52.74	60.50	73.98	70.34	64.29	63.56	71.98	40.92	58.37	58.12	44.44	72.97	58.53	51.68	54.49	53.09
	SD	15.86	25.74	27.94	28.09	27.25	17.83	48.15	33.93	49.19	33.89	26.66	37.01	38.67	29.43	16.97	27.18	17.35
Female	M	23.48	55.27	59.62	75.86	72.14	65.56	63.50	69.90	42.53	53.15	56.48	52.33	63.73	57.94	55.72	57.20	56.46
	SD	15.47	26.48	28.14	28.97	26.13	17.99	48.17	35.94	49.46	35.17	27.43	37.23	41.22	32.31	17.58	27.68	17.52
Education		***	***	***	*	*	***	***		***	***	**	***		***	*		
Non-	M	23.74	47.07	56.21	74.03	70.60	61.79	61.47	71.18	38.55	53.62	55.33	44.32	68.58	56.32	52.71	55.73	54.22
graduates	SD	14.59	23.38	27.89	29.71	27.14	17.68	48.68	34.95	48.69	34.71	26.91	36.65	40.09	30.20	17.08	27.74	17.29
Graduates	M	31.12	69.41	68.52	76.55	72.76	71.80	67.50	70.24	48.49	60.47	61.40	57.35	67.56	62.30	55.95	55.87	55.91
	SD	17.38	25.23	26.38	25.78	25.32	16.53	46.87	35.07	50.02	33.90	26.84	37.33	40.62	32.16	17.81	26.84	17.98
Marital status		***	***	***	*		**	***	**	***	*	***						
Married	M	30.71	57.03	63.44	76.30	70.03	66.55	73.67	73.77	46.49	56.70	62.21	48.48	68.66	58.47	53.47	55.96	54.72
	SD	16.51	25.91	27.01	27.77	27.18	17.92	44.07	33.45	49.90	33.49	25.88	37.72	40.30	30.64	17.08	27.73	17.18
Single	M	21.50	51.05	56.78	73.51	72.39	63.33	53.55	68.20	37.04	54.86	52.54	48.20	68.19	58.01	53.89	55.72	54.81
	SD	13.81	26.01	28.61	29.22	26.23	17.77	49.90	36.16	48.31	35.69	27.32	36.94	40.13	31.11	17.68	27.19	17.83
Children	02	***	*	*	*	**		***	*	**	**	***	**		• • • •	*		
Children	M	29.51	53.04	62.01	76.63	68.27	64.81	77.18	73.64	44.66	53.12	61.63	46.18	68.44	57.10	55.03	56.72	55.88
	SD	17.54	26.27	27.96	27.63	28.00	18.30	42.01	33.42	49.77	34.51	25.77	38.04	40.69	30.74	17.26	27.92	17.38
No children	M SD	24.89 15.14	54.28 26.08	59.46 28.03	74.35 28.80	72.14 26.26	64.95 17.80	59.28 49.15	70.14 35.37	40.79 49.16	56.58 34.62	55.97 27.30	49.00 37.08	68.42 40.07	58.59 30.92	53.27 17.41	55.57 27.31	54.42 17.54
Total	M	25.98	53.99	60.06	74.89	71.24	64.91	63.50	70.97	41.70	55.77	57.30	48.34	68.42	58.24	53.69	55.84	54.76
	SD	15.86	26.12	28.03	28.54	26.71	17.91	48.16	34.94	49.32	34.61	27.05	37.31	40.20	30.87	17.39	27.45	17.51

Note. Data source: EWCS (2015); N =1820 (UK, Denmark, Germany and Spain); \*\*\* p < .001, \*\* p < .01, \* p < .05 (significance of t-test); M-mean; SD-standard deviation.

#### Multivariate analysis

With the aim of investigating the effects of job-related (H2 and H3) and individual characteristics (H4) on job quality, this section presents the results of multivariate analysis (see Tables 11 and 12). Hierarchical regression analyses using EWCS (2015) showed that, after the effects of all other predictors were held constant: (1) female workers reported lower pay ( $\beta$ =-12, p < .001), lower employment quality ( $\beta$ =-.05, p < .05) but better work-life balance ( $\beta$ =.06, p < .05) when compared to male workers; (2) graduates reported higher pay ( $\beta$ =.12, p < .001), and higher employment quality ( $\beta$ =.06, p < .05) than non-graduates; (3) those in the 25-34 age group reported higher pay ( $\beta$ =.15, p < .001) but worse work-life balance ( $\beta$ =-.07, p < .001) when compared to those in the 18-24 age group; (4) married workers reported higher pay ( $\beta$ =.11, p < .001) than single workers; (5) workers who had dependent children reported higher pay ( $\beta$ =.06, p < .05) and better work-life balance ( $\beta$ =.08, p < .01) than workers who did not have dependent children. These findings provide partial support for Hypothesis 4.

When considering the impact of different types of predictors, when taken together, the individual characteristics were the strongest predictors of pay, and accounted for 25% of the variation in pay ( $\Delta R^2 = .25$ ,  $\Delta F = 20.33$ , p < .001). For other dimensions of job quality, the individual characteristics had less impact and explained: (1) 4% of the variation in employment quality ( $\Delta R^2 = .04$ ,  $\Delta F = 13.28$ , p < 0.001); (2) 2% of the variation in work-life balance, ( $\Delta R^2 = .02$ ,  $\Delta F = 7.67$ , p < 0.001). In the multivariate analysis, none of the individual-level characteristics were significant predictors of the intrinsic quality of work ( $\Delta R^2 = .00$ ,  $\Delta F = 1.65$ , p > .05) and health and safety ( $\Delta R^2 = .00$ ,  $\Delta F = 0.28$ , p > .05).

In relation to job-related characteristics, hierarchical regression analyses indicated that, after the effects of all other predictors were held constant: (1) in comparison to workers employed in low-skilled white collar occupations, (a) those in high-skilled white collar occupations reported higher pay ( $\beta$ =.22, p < .001), higher employment quality ( $\beta$ =.06, p < .05), and better intrinsic quality of work ( $\beta$ =.34, p < .001); (b) those in high-skilled blue collar occupations reported higher pay ( $\beta$ =.06, p < .05), better intrinsic quality of work ( $\beta$ =. 10, p < .001) but worse work-life balance ( $\beta$ =-.07, p < .05) and poorer health and safety ( $\beta$ =-.07, p < .05); (c) those in low-skilled blue collar occupations reported lower employment quality ( $\beta$ =-.05, p < .05), worse work-life balance ( $\beta$ =-.11, p < .001), poorer intrinsic quality of work ( $\beta$ =-.20, p < .001) and worse health and safety ( $\beta$ =-.11, p < .001);

(2) in comparison to workers employed in Customer Service industry, (a) those in Professional Service reported higher pay ( $\beta$ =.11, p < .001), higher employment quality ( $\beta$ =.11, p < .001), better intrinsic quality of work ( $\beta$ =.10, p < .001) and better health and safety ( $\beta$ =.11, p < .001); (b) those in Public Service reported better work-life balance ( $\beta$ =.16, p < .001) and better intrinsic quality of work ( $\beta$ =.14, p < .001); (c) those in Manufacturing reported higher pay ( $\beta$ =.09, p < .001) and better work-life balance ( $\beta$ =.07, p < .05); (d) those in Construction reported higher pay ( $\beta$ =.07, p < .01) and better intrinsic quality of work ( $\beta$ =.07, p < .05);

(3) in comparison to workers in small firms (1-49 workers), (a) those in medium-sized firms (50-99) reported higher pay ( $\beta$ =.08, p < .01) but poorer intrinsic quality of work ( $\beta$ =-..06, p < .01) and poorer health and safety ( $\beta$ =-.09, p < .01); (b) those in large firms (100-249) reported higher pay ( $\beta$ =..08, p < .01) but worse work-life balance ( $\beta$ =-.09, p < .01); (c) those in very large firms (250 and over) reported higher pay ( $\beta$ =.13, p < .001);

(4) in comparison to those with job tenure of less than 1 year, (a) those with job tenure (1-2 years) reported higher pay ( $\beta$ =.06, p < .05) and higher employment quality ( $\beta$ =.19, p < .001); (b) those with job tenure (3-5 years) reported higher pay ( $\beta$ =.17, p < .001) and higher employment quality ( $\beta$ =.34, p < .001) but worse work-life balance ( $\beta$ =-.08, p < .001) and poorer health and safety ( $\beta$ =-.06, p < .05); (c) those with job tenure (6 years and over) reported higher pay ( $\beta$ =.18, p < .001), higher employment quality ( $\beta$ =.40, p < .001) and better intrinsic quality of work ( $\beta$ =.06, p < .05) but worse work-life balance ( $\beta$ =-.07, p < .05) and poorer health and safety ( $\beta$ =-.10, p < .01). These findings provides partial support for Hypothesis 2;

(5) no significant differences in job quality were found for sector (private and public);

When considering the impact of different types of predictors, when taken together, the jobrelated predictors were the strongest predictors of the intrinsic quality of work, and accounted for 30.4% of variation in the intrinsic quality of work ( $\Delta R^2 = .30$ ,  $\Delta F = 38.84$ , p < 0.001) whereas the country predictors accounted for much less impact ( $\Delta R^2 = .01$ ,  $\Delta F = 7.01$ , p < 0.001), and the individual characteristics did not add a significant variation to the model ( $\Delta R^2 = .00$ ,  $\Delta F = 1.65$ , p > .05). Moreover, when taken together, the job related predictors were the strongest predictors of health and safety ( $\Delta R^2 = .06$ ,  $\Delta F = 6.32$ , p < 0.001) whereas the country predictors accounted for much less impact ( $\Delta R^2 = .03$ ,  $\Delta F = 12.46$ , p < 0.001), and the individual characteristics did not add a significant variation to the model ( $\Delta R^2 = .00$ ,  $\Delta F = 0.28$ , p > .05). Finally, the job-related predictors were the strongest predictors of the employment quality dimension and work-life balance dimension: when taken together they explained 15.8% of variation in employment quality ( $\Delta R^2 = .15$ ,  $\Delta F = 21.15$ , p < 0.001) and 5.2% of variation in work-life balance ( $\Delta R^2 = .05$ ,  $\Delta F = 5.12$ , p < 0.001).

This finding shows that, job-related characteristics have more impact on intrinsic quality of work and health and safety dimensions of job quality than individual differences and wider institutional context, which provides support for Hypothesis 3 (see Tables 11 and 12 for hierarchical regression analyses).

6.3 Research Objective 2: The role of social background (H5)

This section addresses Research Objective 2 which aimed "to examine the role of social background in affecting young workers' evaluations of job quality". One hypothesis was investigated in this section in relation to Research Objective 2 using data from ESS (2010).

Hypothesis 5: Young workers from less advantaged social background (using parental education and occupation as a proxy) will experience a lower level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), when compared to those from more advantaged social background.

#### **Descriptive statistics**

This section begins by presenting descriptive statistics (means and standard deviations) for the dimensions of job quality across social background (using highest parental education and occupation as a proxy) (see Table 15). Simple correlations between all variables included in this section are presented in Appendix 3.

		Highest parent	tal education	
	Primary and	Higher		
	lower	secondary and		
Job quality dimensions	secondary	post-secondary	Tertiary	Total
Рау	52.38 (29.60)	62.30 (29.35)	68.13 (29.44)	57.03 (30.38)
Intrinsic Quality of Work	57.75 (18.36)	63.70 (16.49)	65.78 (16.15)	60.51 (18.00)
Skills	45.92 (29.53)	57.98 (30.12)	66.16 (30.90)	51.97 (31.13)
Autonomy	47.63 (25.36)	49.62 (22.64)	51.46 (24.94)	48.49 (24.78)
Social support	73.60 (28.64)	79.11 (24.93)	79.27 (25.73)	76.23 (27.34)
Employment Quality	56.65 (21.76)	60.53 (22.14)	58.01 (21.75)	57.70 (21.91)
Contract type	70.77 (45.52)	76.32 (42.62)	66.82 (47.19)	71.14 (45.33)
Job secrity	58.44 (34.26)	62.40 (31.06)	63.36 (32.62)	60.62 (33.22)
Training	35.42 (46.74)	44.63 (47.92)	47.72 (47.89)	39.56 (47.48)
Career prospects	51.72 (27.41)	55.26 (27.43)	50.81 (28.80)	52.74 (27.80)
Health and Safety	68.80 (20.70)	65.85 (20.25)	67.25 (21.56)	67.96 (21.18)
Physical risks	77.80 (29.05)	77.09 (29.76)	79.44 (29.38)	77.77 (29.91)
Psychosocial risks	59.73 (27.23)	54.61 (26.13)	55.09 (26.42)	58.17 (26.85)
Work-life Balance	40.30 (17.60)	40.67 (15.76)	43.05 (15.06)	41.96 (15.78)
Working hours	45.70 (22.10)	44.63 (19.07)	45.31 (19.66)	45.38 (19.96)
Work intensiy	34.89 (20.92)	36.71 (21.67)	40.79 (19.97)	38.49 (20.50)
		Highest parent	al occupation	
	HS white	LS white	HS blue	LS blue
Job quality dimensions	collar	collar	collar	collar
Pay	70.14 (28.59)	58.72 (29.87)	56.96 (29.75)	51.23 (30.14)
Intrinsic Quality of Work	65.28 (17.75)	63.16 (16.72)	59.57 (17.61)	56.95 (19.21)
Skills	67.48 (24.25)	61.15 (23.54)	55.51 (22.97)	50.98 (22.71)
Autonomy	52.61 (26.54)	52.40 (23.58)	47.83 (24.47)	46.74 (23.74)
Social support	78.66 (24.44)	77.37 (25.86)	75.87 (28.22)	76.52 (27.71)
Employment Quality	58.13 (22.56)	58.22 (21.96)	58.69 (21.91)	56.38 (20.24)
Contract type	66.07 (47.55)	70.43 (45.72)	73.82 (44.01)	74.85 (43.51)
Job secrity	61.68 (31.47)	62.04 (32.95)	59.20 (33.32	61.54 (32.38)
Training	47.54 (48.27)	43.00 (47.95)	43.91 (48.10)	30.54 (45.12)
Career prospects	54.46 (28.31)	52.33 (28.28)	53.47 (26.73)	53.29 (26.68)
Health and Safety	67.78 (21.20)	68.35 (21.17)	66.50 (21.43)	70.64 (20.98)
Physical risks	81.63 (27.50)	78.25 (29.79)	75.97 (31.35)	75.34 (30.16)
Psychosocial risks	53.13 (27.49)	56.71 (24.92)	56.74 (26.84)	64.07 (27.51)
Work-life Balance	40.35 (17.72)	42.16 (15.52)	42.20 (15.84)	41.58 (14.16)
Working hours	46.83 (22.05)	45.78 (19.74)	44.70 (19.95)	43.43 (18.35)
Work intensiy	33.25 (21.65)	37.64 (19.59)	39.49 (20.34)	39.82 (18.79)

Table 15: Job quality across highest parental education and occupation

*Note.* Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain). Descriptives refer to: mean (st. deviation).

#### Multivariate analysis

Hierarchical multiple regressions were used to examine the impact of social background on five different dimensions of job quality, while controlling for country, individual differences and job-related characteristics. In Step 1, all control variables were entered: country, gender, age, education, marital status, children, occupation, sector, industry, job tenure and firm size. In Step 2, two variables measuring the impact of social background (in terms of highest parental education and highest parental occupation) were added. Job quality (pay, intrinsic quality of work, employment quality, health and safety and work-life balance) was entered as the dependent variable. This order of variable entry allowed for testing the impact of social background (H5) on job quality, while controlling for other important predictors of job quality (Field, 2013).

The results showed that, when the effects of all other predictors were held constant, there was a significant impact of parental education on the intrinsic quality of work (see Table 16). In comparison to young workers who had either of their parents in the primary education category, those who had either of their parents in the tertiary education category ( $\beta$ =.05, p < .05) or higher secondary and post-secondary education category ( $\beta$ =.08, p < .01) reported better intrinsic quality of work. The addition of social background variables to the model explained a significant amount of the variation in the model, an additional 2% ( $\Delta$ R<sup>2</sup> = .02,  $\Delta$ F = 3.95, p < .01).

The results also showed that, when the effects of all other predictors were held constant, there was a significant impact of social background on work-life balance (see Table 16). In comparison to young workers who had either of their parents in the primary education category, those who had either of their parents in the tertiary education category ( $\beta$ =.17, p < .001) reported better work-life balance. The addition of social background variables to the model explained a significant amount of the variation in the model, an additional 4% ( $\Delta R^2 = .04$ ,  $\Delta F = 7.53$ , p < .001).

Country-specific analyses showed that in Denmark the impact of social background was not significant. The addition of social background variables did not add a significant variation to the model explaining intrinsic quality of work ( $\Delta R^2 = .04$ ,  $\Delta F = 1.37$ , p > .05) and work-life balance ( $\Delta R^2 = .05$ ,  $\Delta F = 1.39$ , p > .05) (see Appendix 4).

These results showed that, when the effects of all other predictors were held constant, young workers from less advantaged social background (in terms of parental education) reported lower quality jobs in terms of intrinsic quality of work and work-life balance, which provided partial support for Hypothesis 5 (see Table 16 for hierarchical regression analyses testing the effect of social background on intrinsic quality of work and work-life balance).

	Intrinsic Qu	ality of Work	Work-life	Balance
	β1	β2	β1	β2
Step 1				
Country <sup>a</sup>				
Denmark	.06*	.07*	.01	.02
Germany	.01	.01	.13***	.13***
Spain	18***	18***	.07*	.07*
Gender <sup>b</sup>	09***	09***	.11***	.11***
Age group <sup>c</sup>	01	01	.02	.02
Education <sup>d</sup>	.13***	.13***	.10**	.10**
Marital status <sup>e</sup>	.00	.00	01	01
Children <sup>f</sup>	.04	.03	.02	.06*
Occupation <sup>g</sup>				
LS white collar	.02	.01	.00	.01
HS blue collar	.03	.00	.02	.02
LS blue collar	.01	.03	.03	.03
Sector <sup>h</sup>	.02	.02	.00	.00

Table 16: Hierarchical regression analyses testing the effect of social background on intrinsic quality of work and work-life balance

*Note* . Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to the UK (reference group); b - refers to female; c - refers to 25-34; d - refers to graduates; e - refers to married; f - refers to children (yes); g - refers to LS white collar workers (reference group); h - refers to public.

	Intrinsic Qu	ality of Work	Work-life	Balance
	β1	β2	β1	β2
Industry <sup>a</sup>				
Professional Service	.06*	.06*	.05*	.05*
Public Service	.08**	.08**	.04	.05
Manufacturing	.04	.03	.03	.03
Construction	.01	.01	.00	.00
Firm size <sup>b</sup>				
25-99 workers	01	02	04	04
100-499 workers	.02	.02	04	04
500 and over	.06	.05	01	01
Job tenure <sup>c</sup>				
1-2 years	21*	21*	26*	28**
3-5 years	21*	21*	46***	48***
6 years and over	13	13	42***	44***
Step 2				
Parental education <sup>d</sup>				
Secondary		.08**		.03
Tertiary		.05*		.17***
Parental occupation <sup>e</sup>				
LS white collar		04		.03
HS blue collar		.03		.02
LS blue collar		.06		.02
ΔF	57.67***	3.95**	54.71***	7.53***
R square	.31	.33	.33	.37
∆R square		.02*		.04*

Table 16: Continued

*Note.* Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001,

a - refers to Customer Service (reference group); b - refers to 1-24 workers (reference group); c - refers to less than 1 year (reference group); d - refers to primary education (reference group); e - refers to HS white collar workers (reference group).

6.4 Research Objective 3: The relationship between job quality and mental health

This section addresses Research Objective 3 which aimed "*to examine the relationship between job quality and mental health among young workers*". Using data from EWCS (2015), this section reports results from multiple hierarchical regression analyses, which examined the effect of psychosocial quality of work (H6), employment quality, skills and working hours (H7) on each aspect of mental health: (a) work-related exhaustion, (b) work-related stress, (c) fatigue, (d) anxiety, and (e) affective well-being, while controlling for the effects of wider institutional context (using country as a proxy), job-related characteristics and individual differences. This section begins by reporting a series of descriptive statistics for the five measures of mental health. It then presents hypothesis tests using multivariate analyses.

### **Descriptive statistics**

Means, standard deviations and frequencies for all mental health variables are shown in Table 17. Descriptive statistics for other measures included in this section was already presented in Tables 9, 13 and 14. Simple correlations between all variables included in this section are presented in Appendix 2.

Variable	м	SD	Min	Max	Items
1. Work-related stress <sup>1</sup>	3.11	1.13	1	5	1
2. Work-related exhaustion <sup>1</sup>	2.89	1.08	1	5	1
3. Affective well-being	4.57	1.03	1	6	4
	Frequency	%	Min	Мах	Items
4. Anxiety			0	1	1
Yes	236	11.80%			
No	1765	88.20%			
5. Fatigue			0	1	1
Yes	596	29.80%			
No	1403	70.20%			

Table 17: Means, standard deviations and frequencies for measures of mental health from EWCS (2015)

Note . Source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); M-mean; SD-standard deviation.

1 - reversed (higher scores represent better mental health (i.e. lower work-related stress and lower work-related exhaustion)).

6.4.1 Psychosocial quality of work and mental health (H6)

Hypothesis 6: Psychosocial quality of work for young people (in terms of skills, autonomy, social support, job security, psychosocial risks and work intensity) will be inversely related to (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and positively related to (e) affective well-being.

With the aim of investigating Hypothesis 6, multiple hierarchical regression analyses were run separately for each dependent variable: *(a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being* (depending on the level of measurement of the dependent variable, linear or logistic regressions were used). Three hierarchical linear regressions were run separately for each dependent variable: affective well-being, work-related exhaustion and work-related stress. Two hierarchical logistic regressions were run separately for each dependent variable: affective well-being work-related exhaustion and work-related stress. Two hierarchical logistic regressions were run separately for each dependent variable: anxiety and fatigue. For logistic regression analyses dependent variables (anxiety and fatigue) were coded as 1 (event occurred) and 0 (event did not occur) (Field, 2013; Pallant, 2010). This resulted in the following coding: 1 (anxiety or fatigue occurred) and 0 (anxiety or fatigue did not occur). For analyses in this section, the lower-level dimensions of job quality were entered separately into the regression model to enable testing of the effect of psychosocial quality of work on mental health. Contract type, training and psychosocial risks were dummy coded (see Table 5).

In each analysis, the independent variables were grouped and entered in blocks into the regression model. The first four blocks of independent variables contained control variables: country (Step 1), individual differences (Step 2) and job-related characteristics (Step 3). The next block (Step 4) included job quality control variables (other than the psychosocial quality of work variables): pay, meaningfulness, contract type, training, career prospects, physical risks and working time. The final block (Step 5) included all psychosocial quality of work variables: skills, autonomy, social support, job security, psychosocial risks and work intensity.

Each block of variables was entered separately to examine the amount of variance independently accounted for by different types of predictors (Field, 2013). This ordering of variables allowed to control for the effects of institutional context (using country as a proxy), individual differences, job-related characteristics and other aspects of job quality, when examining the relationship between psychosocial quality of work and each dimension of mental health.

# Work-related stress

Hierarchical regression analysis using EWCS (2015) showed that, after the effects of all other predictors were held constant, psychosocial quality of work explained an additional 12% of the variation in work-related stress ( $\Delta R^2 = .12$ ,  $\Delta F = 40.27$ , p < .001), with work intensity being the most important single predictor (see Table 18). In particular, higher work intensity ( $\beta$ =.40, p < .001) (in terms of working at high speed, working to tight deadlines, and not having enough time to get the job done) was indicative of greater work-related stress among young workers. Moreover, the exposure to one or more psychosocial risks (in terms of verbal abuse, threats, violence, bullying, and being in situations emotionally disturbing) ( $\beta$ =-.13, p < .001) was predictive of greater work-related stress of autonomy ( $\beta$ =-.13, p < .001).

Beyond the psychosocial quality of work, other aspects of job quality were also significant predictors of work-related stress and this included working time ( $\beta$ =.08, p < .01), physical risks ( $\beta$ =.07, p < .01) and meaningfulness ( $\beta$ =.07, p < .001). Regarding working time (which is a variable measuring the duration, scheduling and flexibility over one's working time), better quality of working time was associated with lower work-related stress. Moreover, lower

exposure to physical risks in the workplace was associated with lower work-related stress. Finally, more meaningful jobs were associated with lower work-related stress.

Regarding country differences, in comparison to young workers in the UK, those in Germany ( $\beta$ =-.17, p < .001) and Spain ( $\beta$ =-.10, p < .05) reported greater work-related stress. In terms of job-related characteristics, only job tenure remained significant in the multivariate analysis: in comparison to young workers with short job tenure (less than 1 year), those with job tenures of 1-2 years ( $\beta$ =-.07, p < .05) and 3-5 years ( $\beta$ =-.07, p < .05) reported greater work-related stress. In terms of individual factors, the results showed that female workers ( $\beta$ =-.07, p < .05), those in the older age group (25-34) ( $\beta$ =-.08, p < .05) and graduates ( $\beta$ =-.07, p < .05) reported greater work-related stress, when compared to male workers, those in the younger age group (18-24) and non-graduates.

When considering the impact of different types of predictors, job quality control variables explained an additional 12% of the variation in work-related stress ( $\Delta R^2 = .12$ ,  $\Delta F = 19.99$ , p < .001) whereas the individual differences and job-related characteristics accounted for an additional 3% ( $\Delta R^2 = .03$ ,  $\Delta F = 6.01$ , p < .001) and 3% ( $\Delta R^2 = .03$ ,  $\Delta F = 2.81$ , p < .001), respectively, of the variation in work-related stress.

Consistent with Hypothesis 6, higher psychosocial quality of work was associated with lower work-related stress, but this was only true for the variables of work intensity and psychosocial risks. In relation to autonomy, in contrast to what was predicted, higher levels of autonomy were associated with greater (not lower) work-related stress. These findings provided partial support for Hypothesis 6 in relation to work-related stress as the dependent variable.

#### Work-related exhaustion

Hierarchical regression analysis using EWCS (2015) showed that, after the effects of all other predictors were held constant, psychosocial quality of work explained an additional 7% of the variation in work-related exhaustion ( $\Delta R^2 = .07$ ,  $\Delta F = 13.86$ , p < .001), with work intensity being the most important single predictor (see Table 18). In particular, higher work intensity ( $\beta$ =.23, p < .001) and the exposure to at least one psychosocial risk in the workplace ( $\beta$ =-.11, p < .001) were associated with greater work-related exhaustion. Higher social support ( $\beta$ =.08, p < .05) was associated with lower work-related exhaustion.

Beyond the psychosocial quality of work, the measure of physical risks was the only job quality control variable that was a significant predictor of work-related exhaustion. The results showed that greater exposure to physical risks in the workplace is associated with higher work-related exhaustion ( $\beta$ =.14, p < .001). None of the country variables and job-related characteristics remained significant in the multivariate analysis. Among individual characteristics, being in the older age group (18-24) ( $\beta$ =-.11, p < .01) was associated with greater work-related exhaustion and having dependent children ( $\beta$ =.07, p < .05) was associated with lower work-related exhaustion.

When considering the impact of different types of predictors, when taken together, the job quality control variables (in terms of pay, meaningfulness, contract type, training, career prospects, physical risks and working time) accounted for 9% of the variation in work-related exhaustion ( $\Delta R^2 = .09$ ,  $\Delta F = 13.69$ , p < .001) whereas the psychosocial quality of work explained an additional 7% of the variation in work-related exhaustion ( $\Delta R^2 = .07$ ,  $\Delta F = 13.86$ , p < .001). Other types of predictors had much less impact: individual characteristics accounted for 2% of the variance ( $\Delta R^2 = .02$ ,  $\Delta F = 3.73$ , p < .05), and country accounted for 1% of the variation in work-related exhaustion ( $\Delta R^2 = .01$ ,  $\Delta F = 5.39$ , p < .05).

The above findings provided partial support for Hypothesis 6, which stated that higher psychosocial quality of work would be associated with lower work-related exhaustion. Some aspects of the psychosocial quality of work were significantly associated with work-related exhaustion and these include work intensity, psychosocial risks and social support. However, when taken together, other aspects of job quality explained more of the variation in work-related exhaustion than psychosocial quality of work.

### Anxiety

The hierarchical logistic regression analysis using EWCS (2015) showed that, after the effects of all other predictors were held constant, psychosocial quality of work was a significant predictor of whether a young worker reported anxiety (or not),  $\chi^2$  Change (6) = 29.91, p < .001 (see Table 19). In logistic regression, chi-square statistic shows whether the model has improved significantly by adding different blocks of predictors. The z-statistic (Wald statistic) was used to determine whether a variable is a significant predictor of the outcome (Field, 2013; Pallant, 2010). Among psychosocial quality of work variables, only psychosocial risks (B= .76,

p < .01) and work intensity (B= -.05, p < .01) were significant predictors. The odds ratio is important to the interpretation of logistic regression and is "an indicator of the change in odds resulting from a unit change in the predictor" (Field, 2013, p. 767). The odds of an event occurring can be defined as the probability of an event occurring divided by the probability of that event not occurring (Pallant, 2010). The odds ratio for psychosocial risks was 2.15, which means that those reporting an exposure to at least one psychosocial risk were 2.15 times more likely to report anxiety, when compared to those who did not report an exposure to psychosocial risks. The odds ratio for work intensity is 0.71, which means that as work intensity increases, the odds of reporting anxiety decrease by approximately 29%.

Beyond the psychosocial quality of work, other job quality variables were also significant predictors of anxiety. This included: meaningfulness (B = -.03, p < .05), training (B = .61, p < .05) and career prospects (B = -.04, p < .05). The odds ratio for meaningfulness was 0.75, which means that as meaningfulness increases the odds of reporting anxiety decrease by 25%. The odds ratio for training was 1.84, which means that young workers reporting a lack of training provided by the employer were 1.84 times more likely to report anxiety, when compared to those who received training in the workplace in the last 12 months. The odds ratio for career prospects was 0.73, which means that as career prospects increase, the odds of reporting anxiety decrease by 27%.

Among country, job-related and individual characteristics, only country (B = 2.04, p < .001) and gender (B = -.65, p < .01) were significant predictors of anxiety. The odds ratio for country (dummy variable for Germany) was 7.74, which means that young workers in Germany were 7.74 times more likely to report anxiety when compared to young workers in the UK (which was the reference category). The odds ratio for gender was 0.52 which means that women were approximately 48% less likely to report anxiety when compared to men.

When considering the impact of different types of predictors, the examination of changes in model chi-square (resulting from the inclusion of different blocks of predictors) showed that the addition of job-related characteristics (Model 3) was not associated with a significant increase in model chi-square,  $\chi^2$  Change (11) = 8.33, p > .05. The addition of job quality control variables (Model 4) resulted in a larger increase in model chi-square,  $\chi^2$  Change (7) = 46.44, p < .001, than the addition of psychosocial quality of work variables (Model 5),  $\chi^2$  Change (6) =

29.91, p < .001. The final regression model explained 25% of the variance in anxiety, based on Nagelkerke R-square (Pallant, 2010).

These findings provided partial support for Hypothesis 6 in relation to anxiety as the dependent variable. Among psychosocial quality of work variables, only work intensity and psychosocial risks were significant predictors and, when taken together, other aspects of job quality were stronger predictors of anxiety than the psychosocial quality of work.

### Fatigue

Hierarchical logistic regression analysis using EWCS (2015) showed that, after the effects of all other predictors were held constant, psychosocial quality of work was a significant predictor of fatigue,  $\chi^2$  Change (6) = 45.86, p < .001. Among psychosocial quality of work variables, social support (B= -.06, p < .01), psychosocial risks (B= .43, p < .01), and work intensity (B= -.03, p < .01) were all significant predictors. The odds ratio for social support was 0.69, which means that as social support increases, the odds of reporting fatigue decrease by approximately 31%. The odds ratio for psychosocial risks was 1.54 which means that young workers who reported an exposure to at least one psychosocial risk were 1.54 times more likely to report fatigue, when compared to those who did not report an exposure to psychosocial risks. The odds ratio for work intensity was 0.76, which means that as work intensity increases, the odds of reporting fatigue decrease by approximately 24%.

Beyond the psychosocial quality of work, only training (B = .34, p < .05) was a significant predictor of whether a young worker reported fatigue (or not). The odds ratio for training was 1.41, which means that workers who reported a lack of training provided by the employer were 1.41 times more likely to report fatigue, when compared to those who received training in the workplace.

Among country, job-related characteristics and individual differences, country was a significant predictor of whether a young worker reported fatigue (or not). When compared to the UK, young workers in Spain (B = -.54, p < .05) and those in Denmark (B = -1.25, p < .001) were 43% and 72% less likely to report fatigue (the odds ratio were 0.57 for Spain and 0.28 for Denmark). In contrast, young workers in Germany (B = .83, p < .05) were 2.29 times more likely to report fatigue, when compared to the UK (the odds ratio was 2.29 for Germany).

Gender was also a significant predictor (B = -.56, p < .01). Women were approximately 43% less likely to report fatigue (the odds ratio was 0.57), when compared to men.

When considering the impact of different types of predictors, the examination of changes in model chi-square (resulting from the inclusion of different blocks of predictors) showed that the addition of job-related characteristics (Model 3) was not associated with a significant increase in model chi-square,  $\chi^2$  Change (11) = 18.60, p > .05. The addition of psychosocial quality of work variables (Model 5) resulted in a larger increase in model chi-square,  $\chi^2$  Change (6) = 45.86, p < .001 than the addition of job quality control variables (Model 4),  $\chi^2$  Change (7) = 31.26, p < .001. These findings provided partial support for Hypothesis 6 in relation to fatigue as the dependent variable. Among psychosocial quality of work variables, social support, psychosocial risks and work intensity were significant predictors and, when taken together, the psychosocial quality of work variables.

## Affective well-being

Hierarchical regression analysis using EWCS (2015) showed that, after the effects of all other predictors were held constant, psychosocial quality of work explained an additional 4% of the variation in affective well-being ( $\Delta R^2 = .04$ ,  $\Delta F = 9.62$ , p < .001) (see Table 18). In particular, young workers who reported greater social support ( $\beta$ =.16, p < .001), lower work intensity  $(\beta=.07, p < .05)$  and higher job security  $(\beta=.08, p < .01)$  experienced higher affective wellbeing. The findings also showed that those exposed to at least one psychosocial risk in the workplace reported lower affective well-being ( $\beta$ =-.08, p < .01). Finally, higher skills (in terms of skill level of a job) was predictive of lower affective well-being ( $\beta$ =-.08, p < .05). The examination of the individual components of skills showed that workers in jobs at skill level 1 (unskilled jobs) and skill level 4 (high-skilled jobs) reported lower affective well-being, M=4.53 (SD=1.08) and M=4.47 (SD=1.06), respectively, when compared to those in jobs at skill level 2 and skill level 3, M=4.60 (SD=1.04) and M=4.64 (SD=0.94), respectively. What is more, workers who reported an exposure to monotonous tasks (M=4.50, SD=1.05) and complex tasks (M=4.55, SD=1.04) also reported lower affective well-being, when compared to those who did not report an exposure to monotonous (M=4.70, SD=0.93) and complex tasks (M=4.62, SD=1.02).

Beyond the psychosocial quality of work, other aspects of job quality were also significant predictors of affective well-being and this included pay ( $\beta$ =.08, p < .05), training ( $\beta$ =-.08, p < .01), career prospects ( $\beta$ =.14, p < .001) and meaningfulness ( $\beta$ =.25, p < .001), with meaningfulness being the strongest single predictor. Higher pay, better career prospects and more meaningful work were associated with higher affective well-being among young workers. In contrast, young workers who reported lack of training provided by the employer in the last 12 months reported lower affective well-being, when compared to those who reported the provision of training provided by the employer.

Moreover, three dummy variables measuring the impact of institutional context explained an additional 5% of the variation in affective well-being. In comparison to young workers in the UK, those living in Spain ( $\beta$ =.27, p < .001) and Germany ( $\beta$ =.15, p < .001) reported higher affective well-being. Regarding individual differences, female workers ( $\beta$ =-.06, p < .05) and those in the older age group (25-34) ( $\beta$ =-.14, p < .001) reported lower affective well-being when compared to male workers and those in the younger age group (18-24). Job tenure was the only job-related characteristic which remained significant in multivariate analysis: in comparison to those with short job tenure (less than 1 year), those with longer job tenure (1-2 years) reported higher affective well-being ( $\beta$ =.08, p < .05). The impact of individual and job-related predictors accounted for the least amount of the variation in affective well-being, 2% and 2%, respectively.

When considering the impact of different types of predictors on affective well-being, when taken together, the job quality control variables (in terms of pay, meaningfulness, contract type, training, career prospects, physical risks and working time) accounted for 17% of the variation in affective well-being, ( $\Delta R^2 = .17$ ,  $\Delta F = 29.12$ , p < .001), with meaningfulness being the strongest predictor ( $\beta$ =.25, p < .001) whereas the psychosocial quality of work (in terms of skills, autonomy, social support, psychosocial risks, job security, and work intensity) explained an additional 4% of the variance, with social support being the most important single predictor ( $\beta$ =.16, p < .001).

The above findings provided partial support for Hypothesis 6 in relation to affective well-being as the dependent variable. Among the psychosocial quality of work variables, only autonomy was found to be a non-significant predictor of affective well-being ( $\beta$ =.01, p > .05). Also, in

contrast to what was predicted, both low- and high-skilled jobs (at skill level 1 and 4) as well as complex tasks were associated with lower affective well-being. These findings showed that, when taken together, job quality control variables explained more variation in affective wellbeing than the psychosocial quality of work. Overall, these findings show an important role for work intensity, psychosocial risks, meaningfulness, social support and training in explaining young workers' mental health. Table 18: Hierarchical regression analyses testing the effect of psychosocial quality of work on affective well-being, work-related stress and exhaustion

		Affect	ive well	-being			Work-	related	l stress			Work-re	ated ex	haustio	n
	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5
<b>Step 1</b> Country <sup>a</sup>															
Spain	.26***	.30***	.32***	.26***	.27***	05	04	07	07	10*	10*	07	05	04	06
Germany	.16***	.19***	.20***	.11**	.15***	07*	08*	09*	14***	17***	.05	.08*	.08*	.04	.03
Denmark	.02	.02	.01	05	05	.02	.01	00	04	01	04	04	05	06	04
Step 2															
Gender <sup>b</sup>		09**	10**	08**	06*		04	06	12***	07*		02	03	08*	05
Age group <sup>c</sup>		14***	16***	15***	14***		15***	13**	10**	08*		13***	14***	12**	11**
Education <sup>d</sup>		.05	.02	01	.00		07*	09**	10**	07*		.06	.04	.02	.03
Marital status <sup>e</sup>		.03	.02	01	01		.01	.02	.02	00		04	04	04	06
Children <sup>f</sup>		.02	.04	.01	.01		.03	.04	.03	.00		.08*	.09*	.09*	.07*
Step 3															
Sector <sup>g</sup>			.01	.03	.05			.00	.03	.04			.02	.03	.03
Industry <sup>h</sup>															
Professional			.05	02	01			.04	.01	.04			.11*	.05	.06
Service			.05	02	01			.04	.01	.04					
Public Service			.07	01	01			.09*	.06	.02			.04	.01	01
Manufacturing			.00	01	01			.01	.04	.02			.04	.06	.04
Construction			.05	.02	.00			.04	.06*	.05			01	00	02

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to the UK (reference group); b - refers to female; c - refers to 25-34 age group; d - refers to graduates; e - refers to married; f - refers to children (yes); g - refers to public; h - refers to Customer Service (reference group).

		Affect	tive well	-being			Work	-related	stress		١	Nork-re	lated ex	haustio	n
	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5
Occupation <sup>a</sup>															
LS blue collar			.02	.02	.00			.04	.05*	.03			01	00	01
HS white collar			.05	01	01			.02	.01	.04			.12*	.03	.04
HS blue collar			.04	01	01			.06*	.06	.02			.04	.01	01
Firm size <sup>b</sup>															
50-99			02	02	01			04	01	01			05	02	02
100-249			04	05	03			05	03	01			03	03	02
250 and over			.01	.00	.02			05	03	01			02	02	.00
Job tenure <sup>c</sup>															
1-2 years			.10**	.09*	.08*			09*	10*	07*			.02	.02	.03
3-5 years			.01	.02	.03			15***	11**	07*			07	03	01
6 years and			.02	.02	.02			13**	10*	07			.01	.04	.05
over															

Table 18: Continued

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to LS white collar (reference group); b - refers to 1-49 workers (reference group); c - refers to Less than 1 year (reference group).

		Affect	tive we	ll-being			Wo	r <mark>k-re</mark> late	d stress			Work-r	elated e	xhaustion	1
	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5	β1	β2	β3	β4	β5
Step 4															
Pay				.02	.08*				15***	01				10*	02
Meaningfulness				.32***	.25***				.15***	.07*				.08*	.01
Contract type <sup>a</sup>				.01	.04				07*	04				.00	.01
Training <sup>b</sup>				09**	08**				.10**	.01				.00	02
Career prospects				.16***	.14***				00	.01				.06	.04
Physical risks <sup>r</sup>				.15***	.04				.25***	.07*				.26***	.14***
Working time				.06	.03				.12**	.08**				.07*	.04
Step 5															
Skills					08*					05					5
Autonomy					.01					13**					02
Social support					.16***					.06					.08*
Psychosocial risks <sup>c</sup>					08**					13***					11***
Work intensity <sup>r</sup>					.07*					.40***					.23***
Job security					.08**					.02					.01
ΔF	18.45**	* 4.93***	1.90*	29.12***	9.62***	2.27	6.01***	2.81**	19.99***	40.27***	5.39*	3.73*	1.97*	13.69***	13.86***
R square	.05	.08	.10	.27	.32	.00	.04	.07	.20	.32	.01	.03	.06	.15	22
ΔR square		.02***	.02*	.17***	.04*		.03***	.03***	.12***	.12***		.02**	.02*	.09***	.07***

Table 18: Continued

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to temporary; b - refers to training (no); c - refers to at least one psychosocial risk; r - inverted (higher values reprent higher job quality).

			Anxiety		_			Fatigue		
	B1	B2	В3	B4	B5	B1	B2	В3	B4	В5
Step 1										
Country <sup>a</sup>										
Spain	18	04	03	19	.01	61**	51**	42*	65**	54*
Germany	1.95***	2.05***	2.07***	1.90***	2.04***	.84**	.93***	.96***	.71*	.83**
Denmark	.36	.37	0.32	.09	.19	92***	93***	99***	-1.19***	-1.25***
Step 2										
Gender <sup>b</sup>		74***	73**	68**	65		48**	49**	56**	56**
Age group <sup>c</sup>		54*	52*	43	36		43*	42*	33	24
Education <sup>d</sup>		.06	.03	.00	14		.08	05	05	04
Marital status <sup>e</sup>		.26	.27	.22	.08		.14	.16	.19	.11
Children <sup>f</sup>		.36	.41	.41	.34		.14	.23	.22	.16
Step 3										
Sector <sup>g</sup>			.05	.20	.12			07	.02	.07
Industry <sup>h</sup>										
Professional Service			.16	19	22			.54	.44	.54
Public Service			.22	05	18			.38	.24	.17
Manufacturing			14	16	38			.09	.13	.06
Construction			1.39	1.10	.86			.47	.50	.34

Table 19: Hierarchical logistic regression analyses testing the effect of psychosocial quality of work on anxiety and fatigue

*Note* . Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to the UK (reference group); b - refers to female; c - refers to 25-34 age group; d - refers to graduates; e - refers to married; f - refers to children (yes); g - refers to public; h - refers to Customer Service (reference group).

## Table 19: Continued

	Anxiety				Fatigue					
	B1	B2	B3	B4	B5	B1	B2	B3	B4	В5
Occupation <sup>a</sup>										
LS blue collar			11	21	09			.06	.12	.07
HS white collar			.16	19	12			.21	.22	.13
HS blue collar			.06	05	11			.23	.12	.18
Firm size <sup>b</sup>										
50-99			12	09	.01			27	19	.09
100-249			06	01	.03			31	21	18
250 and over			09	14	10			30	.34	.32
Job tenure <sup>c</sup>										
1-2 years			.23	.25	.27			.33	.34	.21
3-5 years			01	.02	.01			02	.09	.09
6 years and over			17	13	06			18	09	10

*Note*. Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001. a - refers to LS white collar (reference group); b - refers to 1-49 workers; (reference group); c - refers to Less than 1 year (reference group).

Table 19:	Continued
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		Anxiety				Fatigue				
	B1	B2	В3	B4	В5	B1	B2	В3	B4	В5
Step 4										
Рау				.00	01				.00	.00
Meaningfulness				01***	03*				01**	00
Contract type <sup>a</sup>				.12	.05				.13	03
Training <sup>b</sup>				.63**	.61*				.39*	.34*
Career prospects				01***	04**				00	.00
Physical risks <sup>r</sup>				.73**	.23				.53**	.15
Working time				.00	.01				00	01
Step 5										
Skills					.00					.00
Autonomy					.01					.00
Social support					.02					06**
Psychosocial risks <sup>c</sup>					.76**					.43*
Work intensity <sup>r</sup>					05**					03**
Job security					01					01
R Square (Nagelkerke)	.07	.11	.12	.20	.25	.09	.11	.14	.18	.24
Chi-square Model	40.10***	58.24***	66.57***	113.01***	142.92***	64.00***	78.72***	97.32***	128.59***	174.45***
Chi-square Block	40.10***	19.14**	8.33	46.44***	29.91***	64.00***	14.72*	18.6	31.26***	45.86***

*Note*. Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001. a - refers to temporary; b - refers to training (no); c - refers to at least one psychosocial risk; r - inverted (higher values reprent higher job quality). 6.4.2 Employment quality, skills, working hours and mental health (H7)

Hypothesis 7: Employment quality (in terms of contract type, job security, training and career prospects) and skills and working hours will be more strongly associated with (a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being among young workers, when compared to other dimensions of job quality.

This section examines the impact of job security, contract type, training, career prospects, skills and working hours on mental health among young workers. It was expected that these aspects of job quality would be the most important predictors of young workers' mental health, when compared to other aspects of job quality (H7).

To examine the importance of the above aspects of job quality in relation to mental health, multiple hierarchical regressions were conducted separately for each dependent variable: affective well-being, work-related stress, work-related exhaustion, anxiety and fatigue. In each analysis, the independent variables were grouped together and entered in blocks into the regression model. The first four blocks contained control variables: country (Step 1), individual characteristics (Step 2), job-related characteristics (Step 3) and job quality control variables (Step 4): pay, autonomy, meaningfulness, social support, physical risks, psychosocial risks and work intensity. The final block (Step 5) included the six job quality variables, which were expected to be the strongest predictors of mental health (Step 5): contract type, job security, training, career prospects, skills and working hours. Entering different sets of variables in blocks into the regression model allowed for testing Hypothesis 7 (Field, 2013; Pallant, 2010). From Table 20, it can be observed which groups of predictors explained the largest amount of variation in affective well-being, work-related stress and work-related exhaustion based on significant increments in variance (i.e.  $\Delta R^2$ ). For logistic regression changes in chi-square statistic were examined. The chi-square statistic for each block of variable entry (chi-square Block) tells us whether the model has improved by adding new block of predictors (Field, 2013).

For work-related stress, the final regression model explained 38% of the variance and is the strongest of the five models in terms of the amount of the variation explained. The job quality

control variables (Model 4) explained the largest amount of variation: a total of 28% ( $\Delta R^2 =$  .28,  $\Delta F = 54.8$ , p < .001). In contrast, the inclusion of contract type, job security, training, career prospects, skills and working hours (Model 5) explained an additional 2% of the variation in work-related stress ( $\Delta R^2 = .02$ ,  $\Delta F = 4.46$ , p < .01). This finding did not support Hypothesis 7a (for work-related stress as the dependent variable).

For work-related exhaustion, the final regression model explained 23% of the variance. In terms of different types of predictors, Table 20 shows that the inclusion of contract type, job security, training, career prospects, skills and working hours (Model 5) did not add a significant amount of the variation to the model, ( $\Delta R^2 = .00$ ,  $\Delta F = .80$ , p > .05) whereas the job quality control variables (Model 4) explained the largest amount of variation in work-related exhaustion: a total of 16%, ( $\Delta R^2 = .16$ ,  $\Delta F = 26.13$ , p < .001). This finding did not support Hypothesis 7b (for work-related exhaustion as the dependent variable).

For anxiety, the final regression model was significant,  $\chi^2 (32) = 132.39$ , p < .01, and the R square (Nagelkerke) was .25. The examination of changes in model chi-square resulting from the inclusion of different blocks of predictors showed that the addition of job quality control variables (Model 4) was associated with a larger increase in block chi-square,  $\chi^2$  Change (7) = 43.42, p < .001, than the addition of contract type, job security, training, career prospects, skills and working hours (Model 5),  $\chi^2$  Change (6) = 19.66, p < .01. This finding did not support Hypothesis 7c (in relation to anxiety as the dependent variable).

For fatigue, the final regression model was significant,  $\chi^2 (32) = 168.46$ , p < .001, and the R square (Nagelkerke) was .24. The examination of changes in model chi-square resulting from the inclusion of different blocks of predictors showed that the addition of job quality control variables (Model 4) was associated with a significant increase in block chi-square,  $\chi^2$  Change (7) = 57.81, p < .001. The addition of contract type, job security, training, career prospects, skills and working hours (Model 5) was not associated with a significant increase in block chi-square,  $\chi^2$  Change (6) = 9.73, p > .05. This indicated that the addition of contract type, job security, training, career prospects, skills and working hours had no effect on the fit of the data (Field, 2013). This finding did not support Hypothesis 7d (in relation to fatigue as the dependent variable).

For affective well-being, the final regression model (Model 5) explained 32% of the variance. When considering the impact of different types of predictors, the job quality control variables (Model 4), when taken collectively, accounted for an additional 19% of the variation in affective well-being ( $\Delta R^2 = .19$ ,  $\Delta F = 32.72$ , p < .001), and therefore explained the largest amount of variance in affective well-being. When contract type, job security, training, career prospects, skills and working hours were added (Model 5), the model explained an additional 3% of the variance in affective well-being ( $\Delta R^2 = .03$ ,  $\Delta F = 6.10$ , p < .01). This finding did not support Hypothesis 7e (in relation to affective well-being as the dependent variable).

The above results did not support Hypothesis 7, which stated that contract type, job security, training, career prospects, skills and working hours would be the most important predictors of mental health among young workers. However, while when taken collectively these aspects of job quality do not explain much variation in the model, some are significant predictors of mental health (as examined in the previous section: Section 6.4.1). These include career prospects (for affective well-being), skills, working time and training (for work-related stress).

Table 20: Hierarchical regression - the relative effect of employment quality, skills and working hours on affective well-being, work-related exhaustion, work-related stress, anxiety and fatigue

Model		Change Statistics				
	R Square	∆R square	ΔF	df1	р	
1	0.06	0.06	18.45	3	<.001	
2	0.08	0.03	4.93	5	<.001	
3	0.11	0.02	1.91	11	.03	
4	0.29	0.19	32.73	7	.00	
5	0.32	0.03	6.10	6	.00	

## Hierarchical linear regression: Model Summary for affective well-being

Hierarchical linear regressio	n: Model Summan	/ for work-related exhaustion
nierarchical linear regressio	n. Model Summary	TO WORK-related exhaustion

		Change Statistics				
Model	R Square	ΔR square	ΔF	df1	р	
1	0.02	0.02	5.40	3	<.001	
2	0.04	0.02	3.74	5	<.001	
3	0.06	0.02	1.97	11	<.001	
4	0.22	0.16	26.13	7	<.001	
5	0.23	0.00	0.80	6	.57	

# Hierarchical linear regression: Model Summary for work-related stress

		Change Statistics				
Model	R Square	∆R square	ΔF	df1	р	
1	0.01	0.01	2.27	3	.08	
2	0.04	0.03	6.01	5	<.001	
3	0.07	0.03	2.81	11	<.001	
4	0.36	0.28	54.80	7	<.001	
5	0.38	0.02	4.46	6	<.001	

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain). <u>Model 1</u>: country; <u>Model 2</u>: gender, age, education, marital status, children; <u>Model 3</u>: sector, industry, firm size, job tenure; <u>Model 4</u>: pay, autonomy, meaningfulness, social support, physical risks, psychosocial risks, work intensity; <u>Model 5</u>: skills, contract type, job security, training, career prospects, and working hours.

#### Table 20: Continued.

					Change Statistics			
	Nagelkerke			Chi-square				
Model	R Square	Chi-square	df	р	Change	df	р	
1	.07	34.51	3	<.001	34.51	3	<.001	
2	.11	55.34	8	<.001	20.82	5	<.01	
3	.12	64.30	19	<.001	8.96	11	.62	
4	.21	112.73	26	<.001	48.42	7	<.001	
5	.25	132.39	32	<.001	19.66	6	<.01	

# Hierarchical logistic regression: Model Summary for anxiety

# Hierarchical logistic regression: Model Summary for fatigue

					Change Statistics				
	Nagelkerke		Chi-square						
Model	R Square	Chi-square	df	р	Change	df	р		
1	.09	59.72	3	<.001	59.72	3	<.001		
2	.11	74.54	8	<.001	14.81	5	.01		
3	.15	100.91	19	<.001	26.37	11	.01		
4	.23	158.72	26	<.001	57.81	7	<.001		
5	.24	168.46	32	<.001	9.73	6	.13		

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain). <u>Model 1</u>: country; <u>Model 2</u>: gender, age, education, marital status, children; <u>Model 3</u>: sector, industry, firm size, job tenure; <u>Model 4</u>: pay, autonomy, meaningfulness, social support, physical risks, psychosocial risks, work intensity; <u>Model 5</u>: skills, contract type, job security, training, career prospects, and working hours.

6.5 Research Objective 4: The relationship between person-job fit, mental health and perceived employability

This section addresses Research Objective 4 which aimed "to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability".

Three hypotheses were investigated in this section in relation to Research Objective 4, using data from EWCS (2015) and the UK LFS (2017). This section reports results from multiple hierarchical regression analyses, which examined the effect of person-job fit (H8) and

perceived employability (H9) on each aspect of mental health (depending on the survey, different aspects of mental health were included). It also examined the moderating effect of perceived employability on the relationship between person-job fit and mental health (H10). In all analyses, the effects of individual factors, job-related characteristics and job quality (pay, intrinsic quality of work, employment quality, health and safety and work-life balance) were controlled for. All hypothesis tests in this section focus on the UK only.

Hypothesis 8 was examined with the use of both the UK LFS (2017) and the EWCS (2015) whereas the remaining two hypotheses (H9 and H10) were examined with the use of the EWCS (2015). The decision to use different surveys was made due to the fact that one dimension of person-job fit, specifically person-job fit in terms of contract type, was not available in EWCS (2015). As a result, the impact of person-job fit (in terms of contract type) on mental health (H8) was examined with the use of the UK LFS (2017).

This section begins by reporting a series of descriptive statistics, which is done separately for EWCS (2015) and the UK LFS (2017). It then presents hypothesis tests based on multivariate analyses.

#### **Descriptive statistics**

Means, standard deviations and frequencies for main study measures are shown in Tables 21 and 22. Table 21 shows the proportion of young workers in the UK who experience fatigue and anxiety, and mean values for work-related exhaustion, work-related stress, affective wellbeing, perceived employability and job quality control variables based on EWCS (2015). Table 22 shows the proportion of young workers in the UK who experience stress, depression or anxiety and job quality control variables based on the UK LFS (2017). Both tables also show the proportion of young workers who experience high and low person-job fit (in terms of skills, working hours and contract type). Bivariate correlations between all variables included in this section are included in Appendix 5 (for the EWCS) and in Appendix 6 (for LFS).

In relation to person-job fit in terms of skills (Table 21), 53% of individuals in the UK reported that their skills corresponded well with their duties (i.e. high person-job fit), whereas 47% of young workers indicated low person-job fit, with vast majority (38%) stating 'I have the skills to cope with more demanding duties', which shows that over-skilling is a key issue for young workers in the UK. Regarding person-job fit in terms of working hours (Table 21), 49% of
young workers indicated that, if they were to choose their working hours, they would 'work the same number of hours as currently' (i.e. high person-job fit) whereas 51% stated they would 'prefer to work different number of hours to what they work currently' (i.e. low person job fit). Among those who reported low person-job fit in terms of working hours, the majority (28%) stated that they 'would prefer to work less hours', which shows that having too many hours of work is more common among young workers in the UK than not having enough hours of work (28% vs. 20%, respectively).

In relation to person-job fit in terms of contract type (Table 22) which measured the extent to which young workers were in temporary employment voluntarily, 6% of young individuals reported low person-job fit (i.e. being in temporary employment involuntarily). The results also showed that among temporary workers, only 21% of young adults were in temporary employment voluntarily. However, due to a small number of young workers (7.6%) employed on temporary basis in LFS (2017), these results must be evaluated with caution.

Variable	М	SD
Work-related stress <sup>1</sup>	3.02	1.21
Work-related exhaustion <sup>1</sup>	2.76	1.09
Affective well-being	4.19	1.15
Perceived employability	3.44	1.3
Рау	28.13	12.1
Intrinsic Quality of Work	65.5	17.88
Employment Quality	68.8	22.98
Health and Safety	64.45	30.44
Work-life Balance	53.33	16.62
	Frequency	%
Anxiety		
Yes	65	17.10%
No	316	82.70%
Fatigue		
Yes	102	26.80%
No	278	73.20%
P-J Fit Skills		
High P-J Fit	201	53.00%
Low P-J Fit	178	47.00%
P-J Fit Working Hours		
High P-J Fit	187	49.00%
Low P-J Fit	189	51.00%

Table 21: EWCS (2015) - Means, standard deviations and frequencies for main study measures

*Note* . Source: EWCS (2015); N=382 (UK); 1 - reversed (higher scores represent higher mental health (i.e. lower work-related stress and lower work-related exhaustion). Descriptives refer to mean (M) and standard deviation (SD).

Variable	Frequency	%
Stress, depression or anxiety		
Yes	811	7.80%
No	10464	92.20%
P-J Fit Contract Type		
High P-J Fit	10603	93.90%
Low P-J Fit	672	6.01%
Contract type		
Permanent	10403	92.40%
Temporary	850	7.60%
	М	SD
Pay	1181.14	652.00
Working hours	32.59	15.46

Table 22: LFS (2017) - Means, standard deviations and frequencies for main study measures

*Note.* Source: LFS(2017); N=11275 (UK). Descriptives refer to mean (M) and standard deviation (SD).

6.5.1 The impact of person-job fit and perceived employability on mental health (H8 and H9)

Hypothesis 8: Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.

Hypothesis 9: Perceived employability will be positively related to the mental health of young workers such that those with higher perceived employability will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.

To examine the impact of person-job fit (in terms of skills and working hours) (H8), and the impact of perceived employability (H9) on mental health, the EWCS (2015) was used. Hierarchical regression models (five in total) were built separately for each dependent variable:

work-related stress, work-related exhaustion, anxiety, fatigue and affective well-being. In each regression model the same procedure of variable entry was followed. In Step 1, all control variables were entered: individual factors and job-related characteristics, which included: gender, age, education, marital status, children, occupation, sector, industry, firm size and job tenure. In Step 2, job quality control variables were entered: pay, intrinsic quality of work, employment quality, health and safety and work-life balance. In Step 3, perceived employability and person-job fit variables were added. For analyses based on EWCS (2015), Step 3 included two measures of person-job fit (person-job fit in terms of skills and person-job fit in terms of working hours). For analyses based on the UK LFS (2017), Step 2 included pay, contract type and working hours, and Step 3 included one measure of person-job fit (person-job fit in terms of contract type). The hierarchical entry of variables allowed for examining the relative effects of different types of predictors (Field, 2013). Based on Hypothesis 8 and Hypothesis 9, it was expected that person-job fit variables and perceived employability would be positively associated with mental health outcomes.

Based on EWCS (2015), the results showed that person-job fit in terms of skills and person-job fit in terms of working hours were significant predictors of work-related exhaustion and work-related stress whereas perceived employability was found to be a significant predictor of work-related stress, affective well-being, anxiety and fatigue (see Tables 23 and 24).

Regarding affective well-being, occupation ( $\beta$ =.13, p < .05), intrinsic quality of work ( $\beta$ =.26, p < .01), work-life balance ( $\beta$ =.15, p < .05), and perceived employability ( $\beta$ =.18, p < .05) were significant predictors when the effects of all other variables were controlled for (see Table 23). Having higher levels of perceived employability, higher intrinsic quality of work and better work-life balance was predictive of higher affective well-being among young workers. The final regression model explained 26% of the variation in affective well-being.

For work-related exhaustion and stress, in line with Hypothesis 8, in comparison to those who reported low person-job fit in terms of skills, young workers who reported high person-job fit in terms of skills showed lower work-related exhaustion ( $\beta$ =.28, p < .05) and lower work-related stress ( $\beta$ =.16, p < .05) (see Table 23). Similar to this, young workers who reported high person-job fit in terms of working hours reported lower work-related exhaustion ( $\beta$ =.14, p < .05) and lower work-related stress ( $\beta$ =.17, p < .01) than those who reported low person-job fit.

Also, in line with Hypothesis 9, the results showed that when perceived employability increases, work-related stress decreases ( $\beta$ =.16, p < .05). Regarding control variables, education ( $\beta$ =.13, p < .05), job tenure ( $\beta$ =.18, p < .05) and health and safety were all significant predictors of work-related exhaustion. Graduates, those with job tenure of 6 years and over reported lower work-related exhaustion when compared to non-graduates and those with job tenure of less than 1 year. Better quality jobs in terms of health and safety were associated with lower work-related exhaustion. For work-related stress, occupation ( $\beta$ =.21, p < .05) and work-life balance ( $\beta$ =.43, p < .001) were significant predictors. In comparison to low-skilled white collar workers, high-skilled blue collar work-related stress.

For anxiety and fatigue, logistic regressions were conducted (see Table 24). In relation to anxiety, based on Wald statistic (Field, 2013), perceived employability (B = -.12, p < 0.05) and work-life balance (B = -.06, p < .05) were significant predictors. Among individual and job-related characteristics, only firm size was a significant predictor (B = 1.28, p < .05). The exponential of B (the odds ratio) is an indicator of the change in odds resulting from a unit change in the independent variable (Field, 2013). The odds ratio for perceived employability is 0.21 which means that as perceived employability increases, the odds of a young worker reporting anxiety decrease by approximately 79%. The odds for work-life balance is 0.78 which means as work-life balance increases, the odds of a young worker reporting anxiety approximately 22%. The odds ratio for firm size (50-99 workers) is 3.6 which means that the odds of a worker who is employed in larger firm (50-99 workers) reporting anxiety are 3.6 times higher than those of a worker who is employed in a small firm (1-49 workers) (Howitt & Cramer, 2008).

For fatigue, based on Wald statistic, perceived employability (B = -.09, p < 0.05), the intrinsic quality of work (B = -.05, p < .05), health and safety (B = -.04, p < .05) and work-life balance (B = -.06, p < .05) were all significant predictors (see Table 24). Among individual and job-related factors, only industry (B = 1.04, p < .05) was a significant predictor. The odds ratio for perceived employability is 0.25 which means that as perceived employability increases, the odds of a young worker reporting fatigue decrease by approximately 75%. The odds ratio for the intrinsic quality of work is 0.71 which means that as intrinsic quality of work increases the odds of a young worker reporting fatigue decrease by approximately 29%. The odds ratio for

health and safety is 0.75 which means that as health and safety increases the odds of a young worker reporting fatigue decrease by approximately 25%. The odds ratio for work-life balance is 0.68 which means that as work-life balance decreases the odds of a young worker reporting fatigue decrease by approximately 32%. Overall, these findings provided partial support for Hypotheses 8 and 9.

Table 23 shows significant explanatory variables of work-related exhaustion, work-related stress and affective well-being, based on hierarchical linear regressions. Table 24 shows significant explanatory variables of anxiety and fatigue, based on hierarchical logistic regressions.

Table 23: Hierarchical logistic regression testing the effects of perceived employability and person-job fit on affective well-being, work-related exhaustion and work-related stress

	Affective well-being Work-related exhaustion			Affective well-being Work-relate		Woi	Work-related stress		
	β1	β2	β3	β1	β2	β3	β1	β2	β3
Step 1									
Gender <sup>a</sup>	01	.01	.00	03	06	.00	01	.05	.03
Age group <sup>b</sup>	11	12	10	.16*	.12	.09	12	14*	09
Education <sup>c</sup>	.06	.07	.06	.14	.11	.13*	.08	.05	.03
Marital Status <sup>d</sup>	.00	.01	01	08	09	07	03	04	07
Children <sup>e</sup>	.11	.12	.12	.03	.04	.08	.07	.07	.08
Occupation <sup>f</sup>									
HS white collar	.04	.11	.11	07	05	07	.04	.07	.07
LS blue collar	06	.12	.13*	.05	.11	.05	0.16*	.09	.11
HS blue collar	02	.14*	.10	09	.02	.01	0.18*	.24**	.21*
Sector <sup>g</sup>	.04	.03	.05	.01	.02	.01	.02	.03	.05
Industry <sup>h</sup>									
Professional Service	.11	.00	02	.13	.05	.06	.02	03	09
Public Service	05	15	12	08	03	05	01	09	06
Manufacturing	.10	.00	.00	.10	.08	.08	.09	03	02
Construction	.03	05	06	.12	.08	.09	.01	05	03
Firm size <sup>i</sup>									

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to female; b - refers to 25-34 age group; c - refers to graduates; d - refers to married; e - refers to children (yes); f - LS white collar (reference group); g - refers to public; h - Customer Service (reference group); i - 1-49 workers (reference group).

## Table 23: Continued

	Aff	Affective well-being Work-r		related exha	austion	Work-related stress			
	β1	β2	β3	β1	β2	β3	β1	β2	β3
50-99	.08	.06	.03	.14*	.05	.05	.03	.03	.02
100-249	13	11	12	10	10	08	12	08	08
250 and over	.03	.04	.02	03	06	05	12	10	10
Job tenure <sup>a</sup>									
1-2 years	.06	.10	.09	.08	.08	.13	.02	.03	06
3-5 years	07	04	04	12	03	.02	.07	.03	.01
6 years and over	02	.01	.03	01	.07	.18*	.00	.06	01
Step 2									
Рау		.12	.11		08	.06		.10	.08
Intrinsic quality of work		.29**	.26**		.10	.02		01	02
Employment quality		.07	.07		05	08		.04	.06
Health and safety		.08	10		.40***	.28***		07	07
Work-life balance		.23**	.15*		.00	.01		.54***	.43***
Step 3									
Perceived employability			.18*			.02			.16*
P-J Fit Skills <sup>b</sup>			.02			.28*			.16*
P-J Fit Working Hours <sup>c</sup>			.03			.14*			.17**
ΔF	.89	8.09 ***	1.39	1.79*	9.88***	5.29***	1.15	15.48***	3.78**
R square	.08	.23	.26	.14	.31	.39	.09	.34	.40
ΔR square	.08	.15	.03	.14	.17	.08	.09	.25	.06

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - Less than 1 year (reference group); b - refers to High P-J Fit Skills; c - refers to High P-J Fit Working Hours.

	Anxiety			Fatigue			
	B1	B2	В3	B1	B2	B3	
Step 1							
Gender <sup>a</sup>	.57	.52	.56	.22	.23	.14	
Age group <sup>b</sup>	08	02	05	.03	03	02	
Education <sup>c</sup>	.53	.68	.69	.19	.48	.19	
Marital Status <sup>d</sup>	32	21	15	.40	.68	.50	
Children <sup>e</sup>	.23	.12	.03	46	64	53	
Occupation <sup>f</sup>							
HS white collar	-1.32	-1.49	-1.26	18	11	-1.06	
LS blue collar	.37	.37	.34	.20	.28	55	
HS blue collar	71	-1.21	-1.30	26*	21	21	
Sector <sup>g</sup>	17	25	20	25	41	50	
Industry <sup>h</sup>							
Professional Service	-1.14	71	69	85	31	17	
Public Service	.22	.44	.31	.69	.92	1.04*	
Manufacturing	.82	1.39*	.67	34	.09	.50	
Construction	-1.59	-1.87	-1.70	27	.40	.99	
Firm size <sup>i</sup>							
50-99	.97	1.10	1.28*	.03	.39	.54	
100-249	.43	.38	.33	.17	.25	.27	
250 and over	.42	.39	.40	61	61	58	

Table 24: Hierarchical logistic regression analyses testing the effects of perceived employability and person-job fit on anxiety and fatigue

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to female; b - refers to 25-34 age group; c - refers to graduates; d - refers to married; e - refers to children (yes); f - LS white collar (reference group); g - refers to public; h - Customer Service (reference group); i - 1-49 workers (reference group).

## Table 24: Continued

		Anxiety		Fatigue			
	B1	B2	B3	B1	B2	В3	
Job tenure <sup>a</sup>							
1-2 years	18	26	26	02	02	05	
3-5 years	03	17	31	.04	09	17	
6 years and over	.16	06	30	09	33	35	
Step 2							
Рау		01	01		01	01	
Intrinsic quality of work		01	01		01	05*	
Employment quality		03	02		01	.00	
Health and safety		01	01		04**	04**	
Work-life balance		07*	06*		08*	06*	
Step 3							
Perceived employability			12*			09*	
P-J Fit Skills <sup>b</sup>			.22			.11	
P-J Fit Working Hours <sup>c</sup>			.15			.49	
R square (Nagelkerke)	.15	.23	.26	.35	.28	.31	
Chi-square Model	23.38	36.83*	4.46	20.65	50.41**	58.09***	
Chi-square Block	23.38	13.45*	41.30	20.65	29.76***	7.68*	

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - 1-49 workers (reference group); b - Less than 1 year (reference group); c - refers to High P-J Fit Skills; d - refers to High P-J Fit Working Hours.

To examine the impact of person-job fit in terms of contract type on mental health (H8), the UK LFS (2017) was used. Due to limited number of variables to measure mental health, only one indicator was used, which measured the presence (or absence) of stress, depression or anxiety among young workers (see Section 5.5.3 for the overview of survey measures selected from the UK LFS (2017)). In Step 1, all control variables were entered: individual and job-related characteristics, which included: gender, age group, education, marital status, having dependent children, occupation, sector, industry, firm size, and job tenure. In Step 2, job quality control variables were entered: pay, working hours and contract type. In Step 3, person-job fit (in terms of contract type) was added.

Based on the UK LFS (2017), the results of hierarchical logistic regression showed that personjob fit in terms of contract type was not a significant predictor of stress, depression and anxiety, (B = -.03, p > .05) (see Table 25). Among individual characteristics, based on Wald statistic (Field, 2013), only gender (B = .49, p < .05) and having dependent children (B = -.53, p < .05) were significant predictors of mental health. The odds of reporting stress, depression or anxiety were 1.6 times higher for female workers (the odds ratio was 1.6) when compared to male workers, and 40% lower for those with dependent children (the odds ratio was 0.6) when compared to those without dependent children. Regarding job-related characteristics, only industry (B = .47, p < .05 for Public Service; B = -.42, p < .05 for Manufacturing) was a significant predictor of mental health outcomes: when compared to young workers employed in Customer Service industry, the odds of reporting stress, depression or anxiety were 1.8 times higher for those employed in Public Service (the odds ratio was 1.8), and 70% lower for those employed in Manufacturing (the odds ratio was 0.3). These findings did not provide support for Hypothesis 8 in relation to contract type, which stated that young workers who reported high person-job fit (in terms of contract type) would experience better mental health, when compared to those who reported low person-job fit (see Table 25).

	Stress,	Stress, depression or anxiet			
	B1	B2	B3		
Step 1					
Age group <sup>a</sup>	.23	.24	.23		
Gender <sup>b</sup>	.50*	.47*	.49*		
Education <sup>c</sup>	06	04	05		
Marital status <sup>d</sup>	17	20	19		
Children <sup>e</sup>	54*	49*	53*		
Occupation <sup>f</sup>					
LS blue collar	.05	.02	.03		
HS white collar	34	34	32		
HS blue collar	27	20	21		
Industry <sup>g</sup>					
Professional Service	.11	.12	.10		
Public Service	.49*	.47*	.47*		
Manufacturing	41	30	42*		
Construction	08	03	01		
Sector <sup>h</sup>	.29	.17	.15		
Firm size <sup>i</sup>					
50-99	.30	.21	.11		
100-249	16	11	09		
250 and over	24	11	08		
Job tenure <sup>j</sup>					
1-2 years	.21	.11	.15		
3-5 years	31	19	25		
6 or more	.11	.12	.11		
Step 2					
Pay		01	01		
Working hours		.02	.01		
Contract type <sup>k</sup>		03	03		
Step 3					
Person-job fit (contract type) <sup>i</sup>			10		
R square (Nagelkerke)	.04	.05	.05		
Chi-square Model	53.40*	57.70***	57.71***		
Chi-square Block	53.40*	4.29	.01		

Table 25: Hierarchical logistic regression analysis testing the effects of person-job fit on stress, depression or anxiety

*Note* . Data source: UK LFS (2017); N=11275 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to 25-34 age group; b - refers to female; c - refers to graduates; d - refers to married; e - refers to children (yes); f -refers to LS white collar (reference group); g - refers to Customer Service (reference group); h - refers to public; i - refers to 1-49 workers (reference group); j refers to less than 1 year (reference group); k - refers to temporary; i - refers to High P-J Fit.

#### 6.5.2. The moderating effect of perceived employability (H10)

Hypothesis 10: Perceived employability moderates the relationship between personjob fit (in terms of skills, contract type and working hours) and mental health among young workers such that those with higher perceived employability and low person-job fit will demonstrate lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.

This section investigates Hypothesis 10, which stated that the effect of person-job fit on mental health depends on the level of perceived employability. The moderator model examines whether a prediction of the dependent variable, from an independent variable, varies across different levels of a third variable (Baron & Kenny, 1986; Field, 2013; Tabachnick & Fidell, 2014).

The moderating effect was tested using multiple hierarchical regression analyses (depending on the level of measurement of the dependent variable, the linear or logistic regressions were conducted). In Step 1, all control variables were entered: individual differences and job-related characteristics, which included: gender, age, education, marital status, children, occupation, sector, industry, firm size and job tenure. In Step 2, job quality control variables were entered: pay, intrinsic quality of work, employment quality, health and safety and work-life balance. In Step 3, the main effects of person-job fit and perceived employability were added. In Step 4, the interaction between person-job fit and perceived employability was introduced (person-job fit multiplied by perceived employability). According to Baron and Kenny (1986), significant interaction term shows significant moderator effects. The regression models were run separately for five dimensions of mental health (work-related stress, work-related exhaustion, fatigue, anxiety and affective well-being). Due to data unavailability (the UK LFS does not include a measure of perceived employability), the moderating effect of perceived employability on the relationship between person job fit (in terms of contract type) and mental health was not tested as part of Hypothesis 10.

Prior to testing for the moderating effects, all control variables, predictor and moderator were transformed following the recommendations by Aiken and West (1991). In particular,

categorical variables were dummy coded and interval variables (perceived employability) were transformed using grand mean centring. This was done by taking the score of each variable and subtracting from it the overall mean of all scores for that particular variable. These techniques were performed to reduce multicollinearity between the predictor and the moderating variable and to improve the interpretation of the regression coefficients (Aiken & West, 1991; Field, 2013). Finally, the interaction effect of two variables (predictor and moderator), which was entered into the regression model in Step 3, was created by multiplying the scores for both variables: person-job fit (separately for person-job fit in terms of skills and person-job fit in terms of working hours) and perceived employability (Aiken & West, 1991). In total, 15 separate regression models were constructed to investigate whether perceived employability moderated the effects of person job fit (in terms of skills and working hours) on mental health (work-related stress, work-related exhaustion, anxiety, fatigue and affective well-being). Significant interactions between perceived employability and person-job fit were found for fatigue and anxiety (see Tables 26 and 27).

	Fatigue			
	B1	B2	B3	B4
Step 1				
Gender <sup>a</sup>	.30	.41	.42	.15
Age group <sup>b</sup>	.04	03	03	.00
Education <sup>c</sup>	.32	.60	.61	.21
Marital Status <sup>d</sup>	.46	.67*	.66*	.49
Children <sup>e</sup>	46	62	58	49
Occupation <sup>f</sup>				
HS white collar	30	30	24	24
LS blue collar	.16	.20	.15	.15
HS blue collar	18	30	63	64*
Sector <sup>g</sup>	02	07	12	45
Industry <sup>h</sup>				
Professional Service	-1.03	53	49	19
Public Service	32	10	21	17
Manufacturing	51	21	12	.52
Construction	71	71	90	1.12*
Firm size <sup>i</sup>				
50-99	.12	.57	.52	.57
100-249	.20	.27	.25	.27
250 and over	62	61	66	63

Table 26: Moderated logistic regression - the impact of perceived employability on the relationship between P-J Fit Skills and Fatigue and P-J Fit Working Hours and Fatigue

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to female; b - refers to 25-34 age group; c - refers to graduates; d - refers to married; e - refers to children (yes); f - LS white collar (reference group); g - refers to public; h - Customer Service (reference group); i - 1-49 workers (reference group).

## Table 26: Continued

	Fatigue					
	B1	B2	B3	B4		
Job tenure <sup>a</sup>						
1-2 years	06	10	12	06		
3-5 years	.07	13	04	11		
6 years and over	11	49	49	38		
Step 2						
Рау		.00	.00	01		
Intrinsic quality of work		01	01	06*		
Employment quality		.00	.00	.00		
Health and safety		09**	08**	08**		
Work-life balance		09*	07*	06*		
Step 3						
Perceived employability			.02	.02		
P-J Fit Skills <sup>b</sup>			.13	.01		
P-J Fit Working Hours <sup>c</sup>			20	21		
Step 4						
Perceived employability X P-J Fit Skills				-1.06*		
Perceived employability X P-J Fit Working hours				-1.80*		
R square (Nagelkerke)	.13	.28	.29	.33		
Chi-square Model	21.82	49.96**	51.60**	60.67**		
Chi-square Block	21.82	28.13***	1.64	9.07*		

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - Less than 1 year (reference group); b - refers to High P-J Fit Skills; c - refers to High P-J Fit Working Hours.

		Anxiety				
	B1	B2	B3	B4		
Step 1						
Gender <sup>a</sup>	.57	.52	.56	.68		
Age group <sup>b</sup>	08	02	05	05		
Education <sup>c</sup>	.53	.68	.69	.73		
Marital Status <sup>d</sup>	32	21	15	18		
Children <sup>e</sup>	.23	.12	.03	.01		
Occupation <sup>f</sup>						
HS white collar	-1.23	-1.23	-1.26*	-1.29*		
LS blue collar	.37	.37	.34	.40		
HS blue collar	71	-1.21*	-1.30*	-1.11		
Sector <sup>g</sup>	17	25	20	20		
Industry <sup>h</sup>						
Professional Service	-1.14	71	69	89		
Public Service	.22	.44	.31	.32		
Manufacturing	.82	1.39*	1.19	1.36*		
Construction	-1.59	-1.87*	-1.70*	-1.67*		
Firm size <sup>i</sup>						
50-99	.97	1.10	1.28	1.39*		
100-249	.43	.38	.33	.33		
250 and over	.42	.39	.40	.34		

Table 27: Moderated logistic regression - the impact of perceived employability on the relationship between P-J Fit Working Hours and Anxiety

*Note.* Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - refers to female; b - refers to 25-34 age group; c - refers to graduates; d - refers to married; e - refers to children (yes); f - LS white collar (reference group); g - refers to public;

h - Customer Service (reference group); i - 1-49 workers (reference group).

Table 27: Continued

6 years and over .160 <b>Step 2</b> Pay .0 Intrinsic quality of work .0 Employment quality0	Anxiety				
1-2 years1833-5 years0376 years and over.160Step 2.16.0Pay.16.0Intrinsic quality of work.0Employment quality0Health and safety.0Work-life balance0Step 3.0Perceived employability0P-J Fit Skills.0Step 4.0Perceived employability X P-J Fit Skills.0	В	33	B4		
3-5 years03 6 years and over .160 Step 2 Pay .0 Intrinsic quality of work .0 Employment quality0 Health and safety .0 Work-life balance0 Step 3 Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4 Perceived employability X P-J Fit Skills					
6 years and over .160 Step 2 Pay .0 Intrinsic quality of work .0 Employment quality0 Health and safety .0 Work-life balance0 Step 3 Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4 Perceived employability X P-J Fit Skills	<u>2</u> 6 -	26	33		
Step 2    Pay  .(    Intrinsic quality of work  .(    Employment quality (    Health and safety  .(    Work-life balance  .(    Step 3  .(    Perceived employability 0    Step 3     P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4     Perceived employability X P-J Fit Skills	I7 ·	31	21		
Pay .( Intrinsic quality of work .( Employment quality( Health and safety .( Work-life balance .0 <b>Step 3</b> Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> <b>Step 4</b> Perceived employability X P-J Fit Skills	)6 -	30	45*		
Intrinsic quality of work					
Employment quality( Health and safety .( Work-life balance0 Step 3 Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4 Perceived employability X P-J Fit Skills	00	.00	01		
Health and safety .( Work-life balance0 Step 3 Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4 Perceived employability X P-J Fit Skills	00	.00	.00		
Work-life balance0Step 3Perceived employabilityP-J Fit Skills bP-J Fit Working Hours cStep 4Perceived employability X P-J Fit Skills	)1 -	01	01		
Step 3 Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> Step 4 Perceived employability X P-J Fit Skills	. 00	01	01		
Perceived employability P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> <b>Step 4</b> Perceived employability X P-J Fit Skills	8*	.08*	07*		
P-J Fit Skills <sup>b</sup> P-J Fit Working Hours <sup>c</sup> <b>Step 4</b> Perceived employability X P-J Fit Skills					
P-J Fit Working Hours <sup>c</sup> <b>Step 4</b> Perceived employability X P-J Fit Skills		.05*	02		
Step 4 Perceived employability X P-J Fit Skills	-	31	30		
Step 4 Perceived employability X P-J Fit Skills	-	05	.36		
Perceived employability X P-J Fit Working Hours			.07		
			-1.19*		
R square (Nagelkerke) .23	.2	26	.30		
Chi-square Model 36.8	3* 41	.3*	48.17*		
Chi-square Block 13.4	5* 4.	46	6.87*		

*Note*. Data source: EWCS (2015); N=382 (UK); \* p < .05; \*\* p < .01; \*\*\* p < .001.

a - Less than 1 year (reference group); b - refers to High P-J Fit Skills; c - refers to High P-J Fit Working Hours.

Considering fatigue, the results showed that the interaction between perceived employability and person-job fit in terms of skills, and the interaction between perceived employability and person-job fit in terms of working hours (see Table 26) were both significant predictors of whether a young worker reported a fatigue (or not), B = -1.06, p < .05, B = -1.80, p < .05, respectively. Considering anxiety, the interaction between perceived employability and personjob fit in terms of working hours was a significant predictor of whether a young worker reported an anxiety (or not), B = -1.19, p < .05 (see Table 27).

To identify the nature of these interactions, stacked column charts of significant person-job fit X perceived employability interactions were created for representative perceived employability groups. The perceived employability groups were chosen at high (mean -1 SD), average (mean value) and low (mean +1 SD) levels of perceived employability (as recommended by Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003). This resulted in 25% of young workers in high perceived employability group, 49% in average perceived employability group, and 26% in low perceived employability group. Figures 5, 6 and 7 show stacked column charts of significant interactions between person-job fit and perceived employability.



Figure 5: Significant Person-Job Fit (Skills) X Perceived Employability Interaction for Fatigue

Note. Data source: EWCS (2015); N=382 (UK).

From Figure 5, it can be seen that the highest percentage of young workers who reported fatigue (36%) were in the low person-job fit and low perceived employability categories. Among workers who were in the low person-job fit group, an interesting pattern of findings emerged: as the level of perceived employability increased, the percentage of young workers reporting fatigue decreased (from 36% for young workers in low perceived employability category to 14% for young workers in high perceived employability category).

In contrast, the level of perceived employability did not have an impact on the frequency of reported fatigue among young workers who were in high person-job fit category: individuals in high person job-fit group reported similar frequency of fatigue (between 19% and 22%), regardless of their level of perceived employability. Figure 6 shows stacked column chart of significant person-job fit working hours X perceived employability interaction with fatigue as the outcome variable.



Figure 6: Significant Person-Job Fit (Working Hours) X Perceived Employability Interaction for Fatigue

Note. Data source: EWCS (2015); N=382 (UK).

From Figure 6 it is noticeable that, in general, young workers in the high person-job fit category reported lower frequency of fatigue (ranging from 9% to 12%) than young workers in low person-job fit group (ranging from 25% to 35%). However, at the same time, the results also showed that fatigue was most frequent (35%) among young workers who reported low person-job fit combined with a low level of perceived employability. What is more, among young workers in the low person-job fit category, higher levels of perceived employability were predictive of lower frequency of fatigue. In particular, young workers who reported both average and high levels of perceived employability were less likely to report fatigue (at 25% and 25.6%, respectively), when compared to young workers who reported low levels of perceived employability (at 35.2%). This finding suggests that both average and high levels of perceived employability were equally effective in alleviating the negative effect of low person-job fit on mental health. Figure 7 shows stacked column chart of significant person-job fit working hours X perceived employability interaction with anxiety as the outcome variable.



# Figure 7: Significant Person-Job Fit (Working Hours) X Perceived Employability Interaction for Anxiety

Note. Data source: EWCS (2015); N=382 (UK).

From Figure 7, it can be seen that anxiety was most common (at 25%) among young workers who reported low person-job fit combined with a low level of perceived employability. Also, among young workers in the low person-job fit category, reporting higher levels of perceived employability (which included both average and high levels) was associated with lower frequency of anxiety (which equalled 12% for both average and high perceived employability groups). The findings also suggested that individuals reporting high person-job fit did not seem to benefit from higher levels of perceived employability: reporting higher level of perceived employability was not predictive of lower anxiety.

Overall, these findings provided partial support for Hypothesis 10, which stated that perceived employability would alleviate the negative impact of low person-job fit on mental health outcomes. This was true for fatigue and anxiety as the dependent variables. The findings also showed that young workers in the low person-job fit group benefited more from having higher levels of perceived employability.

## 6.6 Chapter summary

This chapter presented the findings from the analysis of secondary survey data which was carried out to address this study's research objectives and hypotheses. Three large social surveys were included in the data analysis: EWCS (2015), ESS (2010) and the UK LFS (2017).

Research Objective 1 was addressed with the use of EWCS (2015). Hypothesis 1 was partially supported in relation to pay and work-life balance and indicated that, in comparison to young workers in the UK, those in Denmark and Germany reported higher levels of job quality. In relation to job-related characteristics, young workers in low-skilled white collar occupations and those employed in Customer Service industry tended to experience lower quality jobs on multiple dimensions, which provided partial support for Hypothesis 2. Hypothesis 3 was supported, and the findings showed that occupation and industry were the key predictors of intrinsic quality of work and health and safety and, when taken together, job-related characteristics (which included occupation and industry) explained more variance in job quality than wider institutional context. Individual differences explained much less variation in job quality, their disadvantage did not extend to all aspects of job quality, and the findings were also mixed in relation to age, marital status and having dependent children, which provided partial support for Hypothesis 4.

Research Objective 2 was addressed with the use of ESS (2010). Hypothesis 5 was partially supported, and the findings showed that having at least one parent in the higher educational category (higher secondary and post-secondary or tertiary education) was associated with better intrinsic quality of work and better work-life balance among young people, when compared to having both parents in the lower educational category (primary education). No associations between parental occupation and job quality were found and these findings provided partial support for Hypothesis 5. Overall, the results in relation to Research Objective 1 and Research Objective 2 indicated that contextual factors (in terms of institutional context

and job-related characteristics) explain more variation in young workers' job quality than individual-level factors (in terms of individual differences and social background).

Research Objective 3 was addressed with the use of EWCS (2015). The findings showed that all aspects of psychosocial quality of work were associated to a greater or a lesser extent with mental health outcomes, and this provided partial support for Hypothesis 6. Hypothesis 7 was not supported, and the results showed that, when taken together, employment quality, skills and working hours did not explain much variation in mental health outcomes. Overall, the findings showed that in the youth context it is important to go beyond the role of psychosocial quality of work when examining the relationship between job quality and mental health. The key predictors of mental health among young people were work intensity, psychosocial risks, meaningfulness, social support and training.

Research Objective 4 was addressed with the use of EWCS (2015) and the UK LFS (2017). The findings showed that person-job fit in terms of skills and person-job fit in terms of working hours were significant predictors of work-related stress and work-related exhaustion and these findings provided partial support for Hypothesis 8. Having higher levels of perceived employability was predictive of higher affective well-being among young workers, lower work-related stress and lower likelihood of reporting fatigue and anxiety, which provided partial support for Hypothesis 9. Finally, Hypothesis 10 was partially supported, and the results showed that perceived employability moderated the relationship between person-job fit and mental health, such that among those in the low person-job fit group, those with higher perceived employability were less likely to report anxiety and fatigue, when compared to those with lower perceived employability. Overall, the findings in relation to Research Objectives 3 and 4 showed that it is important to take into account intrinsic quality of work, the match between an individual and a job, and the role of personal resources when examining the impact of job quality on mental health in the youth context. Table 28 shows the summary of research objectives and hypotheses. The next chapter discusses these findings in relation to past research and this study's conceptual framework.

## Table 28: Summary of data analysis

Research Objectives	Hypotheses	Confirmed / Not Confirmed
<b>RO1</b> : to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account	H1: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will differ between countries. In comparison to the UK, job quality will be higher in Denmark and Germany and lower in Spain, particularly in relation to pay, employment quality and work-life balance.	Partially Confirmed
the role of individual differences, job- related characteristics and wider institutional context	H2: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for low-skilled white collar occupations compared to other occupations; (b) for private compared to public sector workers; (c) for those with short job tenure (less than 1 year) compared to those with longer tenure; (d) for workers employed in small firms (1-49 workers) compared to those in medium or large firms; and (e) for those employed in the Customer Service industry compared to other industries.	Partially Confirmed
	<b>H3</b> : Occupation and industry will be stronger predictors of intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) and health and safety (in terms of physical and psychosocial risks) dimensions of job quality rather than wider institutional context.	Confirmed
	H4: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for female compared to male workers; (b) for single compared to married workers; (c) for workers who have dependent children compared to those who do not have dependent children; (d) for younger (18-24) compared to older workers (25- 34); and (e) for non-graduates compared to graduates.	Partially Confirmed
<b>RO2</b> : to examine the role of social background in affecting young workers' evaluations of job quality	<b>H5</b> : Young workers from less advantaged social background (using parental education and occupation as a proxy) will experience a lower level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), when compared to those from more advantaged social background.	Partially Confirmed

Research Objectives	Hypotheses	Confirmed / Not Confirmed
<b>RO3</b> : to examine the relationship between job quality and mental health among young workers	<b>H6</b> : Psychosocial quality of work for young people (in terms of skills, autonomy, social support, job security, psychosocial risks and work intensity) will be inversely related to (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and positively related to (e) affective well- being.	Partially Confirmed
	<b>H7</b> : Employment quality (in terms of contract type, job security, training and career prospects) and skills and working hours will be more strongly associated with (a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being among young workers, when compared to other dimensions of job quality.	Not Confirmed
RO4: to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with	<b>H8:</b> Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.	Partially Confirmed
mental health among young workers and the moderating effect of perceived employability	H9: Perceived employability will be positively related to the mental health of young workers such that those with higher perceived employability will experience lower (a) work-related stress, (b) work- related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.	Partially Confirmed
	<b>H10</b> : Perceived employability moderates the relationship between person-job fit (in terms of skills, contract type and working hours) and mental health among young workers such that those with higher perceived employability and low person-job fit will demonstrate lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.	Partially Confirmed

Table 28: Continued

## Chapter 7: Discussion

#### 7.1 Introduction

This chapter discusses the implications of the findings in relation to previous literature (reviewed in Chapters 2 to 4) and the proposed conceptual framework (Figure 1, Chapter 4). Previous literature and large-scale European studies suggest that young workers (18-34) in the UK and other developed countries may be particularly disadvantaged in terms of job quality. However, despite this evidence, to date little is known on how young people fare in paid work in contemporary labour markets, what factors affect their labour market experiences, and how the current state of employment and working conditions may impact on their mental health.

While studies on unemployment, marginal employment, underemployment, generational research and the career literature have made an important contribution to our understanding of youth employment, they are only part of the story of what makes a given job good or bad (Burchell et al., 2013; Green, 2006; Knox & Warhurst, 2015; De Bustillo et al., 2011). In general, to date there has been no attempt in the previous literature to integrate different disciplinary approaches to youth employment and as a result little attention has been given to the intrinsic aspects of work (such as skills, autonomy, meaningfulness and social support) and the role of person-job fit (i.e. the extent to which young workers are matched to their jobs in terms of their abilities and needs) when interpreting young workers' job quality.

In addition to the limited understanding of youth employment, little is known about the outcomes of job quality for young workers. In particular, there is a lack of consensus in relation to the extent to which young workers have been affected by the changing nature of careers, involvement in lower quality jobs and more insecure and individualised working lives (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010; Scherer, 2004). The rise of non-standard working arrangements (such as temporary work and / or part-time

work) and the decrease of permanent jobs have recently been viewed as determinants of poor psychological well-being among working-age populations (Cottini & Lucifora, 2013; Robone, Jones, & Rice, 2011). What is more, the uncertainty and insecurity of employment in contemporary labour markets, combined with increased individual responsibility in securing jobs and developing careers (O'Reilly et al., 2015; Sweet & Meiksins, 2013) could have put young adults' mental health at greater risk. The outcomes of job quality in terms of mental health emerged as the second important area in this study which required further investigation.

Furthermore, most studies to date have focused on young workers themselves (e.g. in terms of their individual differences and preferences) when interpreting the determinants of their job quality. Lack of skills, lack of work experience or lower education are considered the primary determinants of job quality among young people (e.g. De Grip & Wolbers, 2006; European Youth Forum, 2014; O'Reilly et al., 2015; Sweet & Meiksins, 2013). This focus on individual factors is reflected in policies that target young people, which in the UK are either focused on bringing more young adults into paid employment, or on increasing their skills and education, with little attention to the wider context in which work takes place (Sutherland, 2013; Warhurst, 2008). The concept of employability which is often expressed in skills, work experience and career self-management has emerged as an important determinant of youth labour market trajectories in both research and policy contexts. Today young people are made to believe that continuously developing their employability (i.e. skills and work experience) is the key factor affecting the extent to which they can secure high quality jobs (Tomlinson, 2012).

Moreover, given greater focus on individual responsibility in securing jobs and developing careers, social background emerged as an important individual-level factor that may affect youth labour market outcomes. Recent studies suggest that those from more advantaged social backgrounds may have more resources (in terms of economic, social and human capital) to manage and develop careers in contemporary labour markets (Bukodi & Goldthrope, 2011; Furlong & Cartel, 2005; Heath & Calvert, 2013), pointing to the importance of accounting for the role of social background when investigating job quality in the youth context.

However, in the context of contemporary labour markets, young workers may be constrained by a wide range of contextual factors, such as job-related characteristics (e.g. occupation or industry) or national-level institutions, stressing the importance of structural factors that may constrain personal agency (Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2012). Some recent studies among working-age populations have pointed to the importance of these structural factors (e.g. Gallie, 2013; Holman, 2013; Olsen et al., 2012; Smith et al., 2008) but studies in the youth context have primarily focused on a limited number of individual factors (such as education) when interpreting young workers' job quality (Scarpetta et al., 2010; Sutherland, 2013).

This study aimed to integrate previous literature on youth employment by taking a multidimensional approach to the interpretation of young workers' job quality, while considering the role of contextual and individual factors, and the outcomes of job quality for young people, to provide a more holistic understanding of youth employment in contemporary labour markets. This study responds to recent calls for more research on young adults and their work experience (Deal et al., 2010), as well as for more attention to be given to contextual factors in job quality and mental health studies (Burgard & Lin, 2013; Cottini & Lucifora, 2013). The overarching aim of this thesis was to examine job quality, its determinants and mental health outcomes among young workers in contemporary labour markets, while considering the role of individual and contextual factors. To address this overarching aim, four research objectives were investigated in this study, which were as follows: (1) to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context; (2) to examine the role of social background in affecting young workers' evaluations of job quality; (3) to examine the relationship between job quality and mental health among young workers; and (4) to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability.

This chapter is structured thematically, and by doing so it highlights theoretical and empirical contributions of this study. Section 7.2 provides the summary of the findings, based on research objectives and hypotheses. Section 7.3 focuses on determinants of job quality in the youth context. This section draws on Research Objectives 1 and 2 while pointing to the relative importance of individual and contextual factors in explaining young workers' job quality. Section 7.4 focuses on the relationship between job quality and young workers' mental health, while controlling for individual and contextual factors. This section draws on Research Objectives 3 and 4 and highlights key aspects of job quality that contribute to better or poorer mental health among young people, as well as the role of a match between an individual and a

job and perceived employability for young people's mental health. Section 7.5 provides an overall summary of the chapter.

## 7.2 Summary of findings

Research Objective 1 aimed to examine young workers' employment issues from a job quality perspective and to uncover the most important predictors of job quality in the youth context: the groups of young people who experience the best / worst job quality based on individual differences, job-related characteristics and institutional context (Hypotheses 1 to 4). To my knowledge, this is the first study to provide a comprehensive account on how young workers in the UK fare in terms of job quality, when compared to three other European countries with different institutional configurations (Denmark, Germany and Spain). Job quality in this study was conceptualised as consisting of five dimensions: (1) pay; (2) intrinsic quality of work; (3) employment quality; (4) health and safety; and (5) work-life balance, based on job quality framework adopted from De Bustillo and colleagues (2011).

The analysis of the EWCS (2015), which included young workers (18-34) in the UK, Denmark, Germany and Spain, showed that young people in the UK experienced low-quality work on multiple dimensions. In addition, across all countries, simple bivariate correlations across job quality dimensions revealed that jobs which were poor on one dimension also tended to score lower on other dimensions, suggesting an accumulation of negative job attributes among young workers. The results (Chapter 6, Section 6.2) of the multivariate analyses showed that the UK differs from Denmark, Germany and Spain in terms of job quality and scores particularly low in relation to pay, intrinsic quality of work and work-life balance. A clear division between countries was found in relation to pay and work-life balance (Hypothesis 1), whereas the occupation and industry were the key predictors of intrinsic quality of work and health and safety (Hypotheses 2 and 3). In multivariate analyses, individual differences explained much less variation in job quality than expected (Hypothesis 4) and none of the individual differences remained significant predictors of intrinsic quality of work and health and safety.

Research Objective 2 aimed to examine the role of social background in affecting young workers' evaluations of job quality. Based on the analysis of the ESS (ESS, 2010), which included young workers (18-34) in the UK, Denmark, Germany and Spain, the findings of the

multivariate analyses (Chapter 6, Section 6.3) pointed to the importance of social background in determining the extent to which young workers are able to secure high quality jobs. The findings showed that, after the effects of all other predictors were controlled for (individual differences, job-related characteristics and institutional context), social background (in terms of parental education) was a significant predictor of two key dimensions of job quality: intrinsic quality of work and work-life balance, and this finding provided partial support for Hypothesis 6. At the same time, country-specific analyses showed that the impact of social background was significant in every country but Denmark, pointing to the role of institutional context in affecting the relationship between social background and job quality.

Research Objective 3 aimed to examine the relationship between job quality and young workers' mental health, while controlling for the effects of individual differences, job-related characteristics and wider institutional context (Hypotheses 7 and 8). Based on the analysis of the EWCS (2015), which included young workers (18-34) in the UK, Denmark, Germany and Spain, the results (Chapter 6, Section 6.4) showed that, except for contract type, all aspects of job quality were associated, to a greater or a lesser extent, with mental health outcomes in terms of both work-related and context-free dimensions of mental health. The findings pointed to the particular importance of work intensity and psychosocial risks as well as meaningfulness for mental health and suggested that it is important to go beyond the role of psychosocial quality of work when examining the relationship between job quality and mental health in the youth context.

Finally, Research Objective 4 aimed to examine the extent to which a match between an individual and a job (in terms of skills, contract type, and working hours) is associated with mental health among young workers, while taking into account the role of perceived employability, which in this study was considered a personal resource (Hypotheses 8 to 10). Based on the analysis of the EWCS (2015) and the UK LFS (2017), which included young workers (18-34) in the UK, the results showed that high person-job fit (in terms of skills and working hours) (Hypothesis 8) and higher levels of perceived employability (Hypothesis 9) were associated with better mental health outcomes, and that perceived employability played a role as a personal resource that buffered the relationship between person-job fit and mental health (Hypothesis 10). In other words, higher levels of perceived employability helped to alleviate the impact of low person-job fit and produce more positive mental health outcomes than lower levels of perceived employability. This was true for fatigue and anxiety as the

outcome variables. No associations between person-job fit (in terms of contract type) and mental health were found. Table 29 presents a summary of research findings, based on research objectives and hypotheses. This chapter next discusses the determinants of job quality in the youth context.

## Table 29: Summary of Findings

RO1: to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context

**H1:** The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will differ between countries. In comparison to the UK, job quality will be higher in Denmark and Germany and lower in Spain, particularly in relation to pay, employment quality and work-life balance.

•According to descriptive analysis, young workers in the UK evaluated pay, intrinsic quality of work and work-life balance relatively lower than employment quality and health and safety. In comparison to other countries included in this study, young workers in the UK were particularly disadvantaged in terms of work-life balance: they reported relatively longer working hours and higher work intensity. In terms of intrinsic quality of work, meaningfulness was significantly lower in the UK than in Denmark, Germany and Spain and skills (in terms of skill level of a job) were significantly lower in the UK than in Denmark.

•Across all countries, higher values on intrinsic quality of work (skills, autonomy, meaningfulness and social support) were associated with higher level of job quality on other dimensions and showed that negative job characteristics tend to accumulate. Higher work-life balance was associated with lower exposure to health and safety risks in the workplace. Higher pay was associated with better employment quality but at the same time it was also indicative of worse work-life balance. Having a temporary contract was associated with poorer job quality in terms of pay, skills, the provision of training in the workplace and career prospects when compared to having a permanent contract.

•In the multivariate analysis, a clear division between different countries was found in relation to pay and work-life balance. In comparison with the UK, Denmark and Germany scored significantly higher on both dimensions than the UK, and Spain scored significantly lower. In relation to other dimensions of job quality, the pattern of findings was less consistent across countries. Intrinsic quality of work was significantly higher in Denmark than in the other countries of interest. Employment quality was significantly higher in Denmark and the UK than in Germany and Spain. Young workers in the UK reported significantly lower exposure to health and safety risks than young people in Denmark and Spain.

•The country which really stood out from the rest was Denmark, which tended to have the highest levels of job quality across its multiple aspects in the multivariate analysis.

•Overall, country was the strongest predictor of employment quality and accounted for 13% of the variation in employment quality. For other dimensions, it explained: 3% of the variation in pay, 2% of the variation in health and safety, 2% of the variation in work-life balance, and 1% of the variation in intrinsic quality of work.

•These findings provided partial support for Hypothesis 1.

## Table 29: Continued

H2: The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for low-skilled white collar occupations compared to other occupations; (b) for private compared to public sector workers; (c) for those with short job tenure (less than 1 year) compared to those with longer tenure; (d) for workers employed in small firms (1-49 workers) compared to those in medium or large firms; and (e) for those employed in the Customer Service industry compared to other industries.

•When the effects of all other predictors were held constant, young workers in low-skilled white-collar occupations reported: (1) lower pay and lower intrinsic quality of work than those in high-skilled white collar and high-skilled blue collar occupations; (2) lower employment quality than those in high-skilled white collar occupations. On the positive side, young workers in low-skilled white-collar occupations reported: (1) better work-life balance and health and safety than those in high-skilled blue collar and low-skilled blue collar occupations; (2) better employment quality and intrinsic quality of work than those in low-skilled blue collar occupations.

•Young workers with short job tenure (less than 1 year) reported: (1) lower pay and lower employment quality than young workers with longer tenures (1-2 years, 3-5 years and 6 years and over); (2) lower intrinsic quality of work than young workers with very long job tenure (6 years and over). On a positive side, young workers with short job tenure (less than 1 year) benefited from better work-life balance and health and safety when compared to those with longer job tenures (3-5 years and 6 years and over).

•Young workers in small firms (1-49 workers) reported lower pay than those in larger firms (50-99 workers, 100-249 workers, and 250 workers and over) but better intrinsic quality of work and health and safety than those in medium firms (50-99 workers) and better work-life balance than those in large firms (100-249 workers).

•Young workers in the Customer Service industry reported: (1) lower pay than those in all other industries; (2) lower intrinsic quality of work than those in Professional Service, Public Service and Construction; (2) lower employment quality and health and safety than those in Professional Service; (3) lower work-life balance than those in Public Service and Manufacturing.

•No significant differences in job quality were found between private and public sector employment.

•When taken together, job-related characteristics were the strongest predictors of the intrinsic quality of work and accounted for 30.4% of variation. For other dimensions of job quality, job-related characteristics explained: 15% of the variation in employment quality, 6% of the variation in health and safety and 5% of the variation in work-life balance.

•These findings provided partial support for Hypothesis 2.

Table 29: Continued

**H3:** Occupation and industry will be stronger predictors of intrinsic quality of work (in terms of skills, autonomy, meaningfulness and social support) and health and safety (in terms of physical and psychosocial risks) dimensions of job quality rather than wider institutional context.

•When the effects of all other predictors were held constant, occupation and industry were the key predictors of intrinsic quality of work, followed by country, firm size and job tenure. Industry, country and occupation were the key predictors of health and safety, followed by firm size and job tenure.

•Overall, when taken together job-related characteristics (which included occupation, industry, sector, firm size and job tenure) were the strongest predictors of intrinsic quality of work and health and safety and explained 30% and 6% of the variation, respectively.

•These findings provided support for Hypothesis 3.

**H4:** The level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance) will be lower: (a) for female compared to male workers; (b) for single compared to married workers; (c) for workers who have dependent children compared to those who do not have dependent children; (d) for younger (18-24) compared to older workers (25-34); and (e) for non-graduates compared to graduates.

•When the effects of all other predictors were held constant, female workers reported lower pay and poorer employment quality (in terms of training and career prospects) but better work-life balance and greater job security, when compared to male workers.

•Single workers reported lower pay than married workers.

•Workers who had dependent children reported higher pay and better work-life balance than those who did not have dependent children.

•Workers in younger age group (18-24) reported lower pay but better work-life balance than those in older age group (25-34).

•Graduates reported higher pay and better employment quality (in terms of better contract type and career prospects and greater likelihood of receiving training provided by the employer) but lower job security than non-graduates. No differences across educational status were found for other dimensions of job quality.

•Overall, when taken together, individual differences were the strongest predictors of pay, and accounted for 25% of the variation in pay. For other aspects of job quality they had less impact and accounted for 4% of the variation in employment quality and for 2% of the variation in work-life balance.

•In the multivariate analysis, none of the individual-level characteristics were significant predictors of the intrinsic quality of work and health and safety.

•These findings provided partial support for Hypothesis 4.

## Table 29: Continued

## RO2: to examine the role of social background in affecting young workers' evaluations of job quality

**H5:** Young workers from less advantaged social background (using parental education and occupation as a proxy) will experience a lower level of job quality (in terms of pay, intrinsic quality of work, employment quality, health and safety and work-life balance), when compared to those from more advantaged social background.

•The results showed that, when the effects of all other predictors were held constant, there was a significant impact of parental education on the intrinsic quality of work and work-life balance.

•In comparison to young workers who had either of their parents in the primary education category, those who had either of their parents in the tertiary education or higher secondary and post-secondary education categories reported better intrinsic quality of work.

•In comparison to young workers who had either of their parents in the primary education category, those who had either of their parents in the tertiary education category reported better work-life balance.

•Country-specific analyses showed that in Denmark the impact of social background was not significant.

•These findings provided partial support for Hypothesis 5.
Table 29: Continued

### RO3: to examine the relationship between job quality and mental health among young workers

**H6:** Psychosocial quality of work for young people (in terms of skills, autonomy, social support, job security, psychosocial risks and work intensity) will be inversely related to (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and positively related to (e) affective well-being.

•After the effects of all other predictors were held constant, psychosocial quality of work was the key predictor of fatigue and work-related stress. However, in relation to other aspects of mental health examined in this study, job quality control variables (in terms of pay, meaningfulness, contract type, training, career prospects, physical risks and working time), when taken together, were stronger predictors of affective well-being, anxiety and work-related exhaustion.

•Work intensity and psychosocial risks remained significant predictors of all aspects of mental health. Higher work intensity was associated with greater work-related stress and exhaustion, lower odds of reporting fatigue and anxiety, and lower affective well-being. Those reporting an exposure to at least one psychosocial risk showed lower affective well-being, greater work-related stress and exhaustion, and were more likely to report anxiety and fatigue, when compared to those who did not report an exposure to psychosocial risks. Work intensity was the strongest predictor of both work-related stress and exhaustion whereas psychosocial risks were the key predictors of anxiety and fatigue.

Higher social support in the workplace was associated with higher affective well-being, lower likelihood of reporting fatigue and lower work-related exhaustion. Other aspects of psychosocial quality of work had less impact. Higher autonomy was associated with greater work-related stress. Higher skills (in terms of skill level of a job) was associated with lover affective well-being. Higher job security was associated with higher affective well-being.
Beyond psychosocial quality of work, having the feeling of doing meaningful work was associated with higher affective well-being, lower likelihood of

reporting anxiety and lower work-related stress. Meaningfulness was the strongest predictor of affective well-being.

•Young workers who reported the provision of training provided by the employer and higher career prospects reported higher affective well-being and lower likelihood of reporting anxiety. The provision of training was also associated with lower likelihood of reporting fatigue.

•Other aspects of job quality showed weaker associations with mental health. The level of work-related stress and exhaustion increased with the number and intensity of physical risks as the quality of working time decreased. Higher pay was associated with higher affective well-being. Contract type showed no significant associations with mental health.

•These findings provided partial support for Hypothesis 6.

Table 29: Continued

**H7:** Employment quality (in terms of contract type, job security, training and career prospects) and skills and working hours will be more strongly associated with (a) work-related stress, (b) work-related exhaustion, (c) anxiety, (d) fatigue, and (e) affective well-being among young workers, when compared to other dimensions of job quality.

•When taken together, employment quality, skills and working hours did not explain much variation in mental health outcomes: when compared to other predictors of job quality, the strength of their association with mental health was lower.

•These findings did not provide support for Hypothesis 7.

RO4: to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability

**H8:** Young workers who perceive high person-job fit (in terms of skills, contract type and working hours) will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to young workers who perceive low person-job fit.

•The extent of person-job fit in the UK. In relation to person-job fit in terms of skills, approximately one in two young workers reported low person-job fit, with the vast majority (four in five) stating that they had skills to cope with more demanding duties. In relation to person-job fit in terms of working hours, approximately one in two young workers reported low person-job fit, with the majority (three in five) stating that they would prefer to work less hours to what they work currently. Regarding person-job fit in terms of contract type, the majority of young workers reported high person-job fit (94%). Graduates were more likely to report low person-job fit in terms of skills, when compared to non-graduates.

•Young workers who reported low person-job fit in terms of skills and low person-job fit in terms of working hours showed greater work-related exhaustion and greater work-related stress, when compared to those who were in high person-job fit categories.

•Person-job fit in terms of contract type was not a significant predictor of stress, depression or anxiety.

•These findings provided partial support for Hypothesis 8.

**H9:** Perceived employability will be positively related to the mental health of young workers such that those with higher perceived employability will experience lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.

•Perceived employability was a significant predictor of work-related stress, anxiety, fatigue and affective well-being.

•Having higher level of perceived employability was predictive of higher affective well-being among young workers and lower work-related stress. Also, as perceived employability increased, the odds of a young worker reporting anxiety and fatigue decreased.

•These findings provided partial support for Hypothesis 9.

Table 29: Continued

**H10:** Perceived employability moderates the relationship between person-job fit (in terms of skills, contract type and working hours) and mental health among young workers such that those with higher perceived employability and low person-job fit will demonstrate lower (a) work-related stress, (b) work-related exhaustion, (c) anxiety and (d) fatigue, and higher (e) affective well-being, when compared to those with lower perceived employability.

•Significant interactions between perceived employability and person-job fit were found for fatigue and anxiety.

•Considering fatigue, the interaction between perceived employability and person-job fit in terms of skills, and the interaction between perceived employability and person-job fit in terms of working hours were both significant predictors of whether a young worker reported fatigue (or not). Considering anxiety, the interaction between perceived employability and person-job fit in terms of working hours was a significant predictor of whether a young worker reported anxiety (or not).

•Anxiety and fatigue were most frequent among young workers who reported low person-job fit combined with a low level of perceived employability. Also, among young workers who were in the low person-job fit groups, an interesting pattern of findings emerged: as the level of perceived employability increased, the percentage of young workers reporting anxiety and fatigue also decreased. In contrast, the individuals in the high person job-fit groups reported similar frequency of anxiety and fatigue, regardless of their level of perceived employability. Also, the level of perceived employability did not have to be high, before its moderating impact on young workers' mental health could be detected. In this study young workers who reported both high and average levels of perceived employability benefited from its positive effects.

•These findings provided partial support for Hypothesis 10.

# 7.3 Understanding the determinants of job quality in the youth context

This study provides a novel account on how young workers fare in paid work in contemporary labour markets. While there is a broad body of knowledge about different issues related to the quality of working life among young adults, this study proposes a framework for reviewing that knowledge. The framework of job quality (adopted from De Bustillo et al., 2011) is used in this study to structure and integrate various strands of the literature examined to date in relation to young workers' employment issues. This study claims that it is necessary to focus on job quality and the role of individual differences and contextual factors in order to have a more holistic understanding of youth employment in contemporary labour markets.

The framework of job quality (which comprises pay, intrinsic quality of work, employment quality, health and safety and work-life balance) is used to highlight the critical areas of work which are important to young workers, and also the areas where research to date has been limited. This multidimensional approach to youth employment has several advantages – it is comprehensive, it considers different disciplinary approaches to defining job quality and it acknowledges the importance of intrinsic aspects of work. By focusing on job quality, this study integrates previous strands of the literature which tended to be fragmented, providing new insights into youth employment and, to my knowledge, the first comprehensive account of how young workers in the UK fare in terms of job quality, when compared to young workers in countries with different institutional configurations.

Based on the analysis of the EWCS (2015), the findings of this study revealed that young workers in the UK evaluated their pay, intrinsic quality of work and work-life balance relatively lower than the other dimensions of job quality (i.e. employment quality and health and safety). In addition, across all countries examined in this study, negative job characteristics tended to accumulate. Particularly, those employed in jobs of lower intrinsic quality also tended to have poorer pay, lower employment quality and worse work-life balance. Similarly, having a temporary contract was associated with poorer job quality in terms of pay, skills, the provision of training in the workplace and career prospects, when compared to having a permanent contract (see Table 29 for the summary of findings). This finding suggests that those in non-permanent jobs are in a more disadvantaged position, when compared to permanent workers (Eurofound, 2012; Kalleberg, 2011; Virtanen et al., 2005). This finding accords with the

argument that young workers' engagement in non-standard employment (such as temporary employment) is a career trap, with little or no possibilities for career progression (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010; Scherer, 2004). Overall, this study suggests that lower quality work, due to multiple disadvantages, is less likely to be a 'stepping stone' to a better quality work (Scherer, 2004). In examining job quality among young workers, this study accounted for the role of individual and contextual factors. This section next discusses the role of individual factors.

### The role of individual factors

This study considered the role of individual factors (in terms of gender, education, age, marital status, dependent children and social background) when interpreting the levels of job quality among young people (Hypotheses 4 and 5). Based on EWCS (2015) and ESS (2010), the results of multivariate analyses, which controlled for the effects of contextual predictors (in terms of job-related characteristics and wider institutional context using country as a proxy), pointed to the limited role of individual factors in affecting job quality in the youth context, and therefore Hypotheses 4 and 5 were only partially confirmed (see Table 29 for the summary of the findings).

The results showed that gender is a significant predictor of pay, employment quality and worklife balance. Men reported higher pay, their jobs offered better career prospects and higher provision of training provided by the employer when compared to women. At the same time, women in this study benefited from higher job security and better work-life balance than men. Previous studies among working-age populations showed that male workers have on average higher earnings and enjoy more training and development opportunities whereas women tend to enjoy better work-life balance (e.g. Blau et al., 2006; Boccuzzo & Gianecchini, 2015; Eurofound, 2012; Munoz de Bustillo et al., 2011; Stier & Yaish, 2014). However, in contrast to previous studies (Stier & Yaish, 2014; Eurofound, 2012), the involvement in temporary employment did not differ across gender and women in this study benefited from higher job security. Therefore, while women lagged behind men on some important aspects of job quality, their disadvantage was not visible in all aspects of employment, as suggested in some of the previous literature among working-age populations (e.g. Blau et al., 2006; Stier & Yaish, 2014; Eurofound, 2012). Education was a significant predictor of pay and employment quality. Graduates benefited from higher earnings, were more likely to hold a permanent employment contract, and their jobs offered more training provided by the employer and better career prospects, when compared to non-graduates. At the same time, graduates also reported lower job security than non-graduates and no differences across educational status were found for other aspects of job quality. Therefore, while as expected, having a higher education degree was associated with higher job quality in terms of pay and employment quality, and this finding is in line with previous studies (Dooley et al., 2000; Eurofound, 2012; Smith et al., 2008), the advantage of higher education did not extend to all aspects of job quality.

Moreover, the analysis of the European Social Survey (2010) showed that social background is a salient factor affecting two critical aspects of young people's job quality: the intrinsic quality of work and their work-life balance. The advantages that young people from higher social backgrounds have in terms of job quality may be due to a variety of mechanisms. This study suggest that parents' educational status may serve as one such mechanism which may benefit young people in relation to their employment outcomes. Although not empirically tested in this study, the importance of parental education may suggest higher human, social and cultural capital, which can be gained or improved by having well-educated parents (Bynner & Parsons, 2002; Hyggen, 2006; Kauppinen et al., 2015). Higher educated parents tend to pay more attention to their children's education, can help their adult children to make more informed educational choices, and following the completion of their education, activate their own social networks to assist their adult children to get higher quality jobs (Brown & Hesketh, 2004). Given that, in the context of contemporary labour markets, young workers tend to experience high job instability and career progression often occurs in the external labour market (Sweet & Meiksins, 2013), social capital in the form of large social networks may be particularly important. Well-educated parents also tend to invest more in their children human capital (Schwartz et al., 2017) and, as has been documented in other research, enhancing one's employability through investments in off-the-job skills development and training is particularly important for young adults' career success (Tomlinson, 2012). In addition to this, parental education is among the key factors that help in the formation of soft skills, and today employers increasingly require young workers to have such skills, alongside education and work experience (O'Reilly et al., 2015; Sweet & Meiksins, 2013). Studies suggest that individuals from higher social backgrounds are often considered as 'better equipped' in soft skills: they are viewed as more presentable, more confident and better communicators (Archer & Davison,

2008), and as a result may have greater access to higher quality jobs. Therefore, the findings of this study suggest that well-educated parents may assist their young children in developing their human capital, finding jobs, changing jobs, or progressing in their careers, which could explain the relevance of parental education to young workers' job quality.

On the other hand, the fact that young workers from less advantaged social backgrounds tended to have lower quality jobs in terms of two key aspects of job quality suggest that social background continues to shape youth labour market trajectories, which are not only individualised (Chung et al., 2012), but still occur in the context of social inequality (Goldthorpe & Jackson, 2007; Kauppinen et al., 2015; Teese, 2000). Social inequality can be defined as "the condition where people have unequal access to valued resources, services, and positions in the society" (Kerbo, 2003, p. 11). This study shows that those who come from less advantaged social backgrounds may be at a disadvantage in terms of job quality. At the same time, the country-specific analyses showed that in Denmark the impact of social background is never significant, suggesting that institutional factors may modify the association between social background and young workers' job quality. Nordic countries have been classified as 'universalistic transition regimes', where there is a comprehensive schooling system and social assistance linked to citizenship status, regardless of family situation (Walther, 2006). This suggests that in Denmark the role of the family may be less important, and as a result young people may rely less strongly on their social background to improve their labour market prospects. Overall, the findings of this study suggest that social background has a potential to contribute to inequality among young people as young workers from more advantaged social backgrounds may have greater access to high-quality jobs, and this is especially true in countries such as the UK, where there is limited state support for young people.

In relation to other individual factors, pay was higher among workers in the older age group (25-34), married individuals and workers with dependent children. Having dependent children and being in the younger age group (18-24) was also associated with better work-life balance. Previous studies found a positive association between age (Eurofound, 2014), marital status (Boccuzzo & Gianecchini, 2015), having dependent children (Cottini & Lucifora, 2013) and job quality. However, the mixed impact of age group on job quality found in this study suggests that job quality does not necessarily improve with age, and the employment disparity exists not only for workers aged 18-24 but also for those aged 25-34 (Scarpetta et al., 2010). This points to the importance of monitoring job quality among those over 24, who to date have not been

given much attention in policy (Scarpetta et al., 2010; Sutherland, 2013), as well as including broader age groups of young people in job quality studies (Arnett, 2007; Settersten et al., 2005).

While individual factors explained the level of pay, employment quality and work-life balance among young workers, none of the individual characteristics (except for social background) remained significant predictors of intrinsic quality of work and health and safety in multivariate analyses. What is more, except for pay, individual factors have not explained much variance in job quality. This suggests that the role of individual factors in affecting youth labour market trajectories might have been overestimated in previous research and policy (Nyhagen & Cebulla, 2011; Tomlinson, 2012; Wilton, 2014). While the role of individual factors is important, and this study found that certain groups of young people may be at disadvantage, the findings also highlight the need to go beyond the role of individual-level predictors when examining factors affecting the extent to which young workers are able to secure high-quality jobs. This takes us to a discussion of the role of contextual factors in affecting young people's evaluations of job quality.

# The role of contextual factors

The effects of job-related characteristics (occupation, sector, job tenure, firm size and industry) and wider institutional context (using country as a proxy) were considered to examine the role of contextual factors in affecting young workers' evaluations of job quality (Hypotheses 1 to 3). Based on the analysis of EWCS (2015), this study found industry, occupation and institutional context to be the key predictors of job quality in the youth context.

Occupation and sector were the key predictors of intrinsic quality of work and health and safety, whereas a clear division between countries was found in relation to pay and work-life balance. In general, the results of this study showed that in contemporary labour markets young workers are constrained by a wide range of contextual factors, which may limit personal agency and the role of individual factors discussed earlier (Chung et al., 2012; Lundahl, 2011; O'Reilly et al., 2012).

In particular, the findings of this study revealed that, after the effects of all other predictors were held constant, young workers in low-skilled white collar occupations (which comprised service and sales occupations and clerical support workers and included 41% of all respondents), and those employed in Customer Service industry (which comprised wholesale

and retail trade, transportation and storage, and accommodation and food service activities, and included 48% of all respondents) reported on average the lowest levels of job quality across multiple dimensions when compared to other occupations and industries, and this finding provided partial support for Hypothesis 2 (see Table 29 for the summary of research findings). Occupation and industry were the only factors that remained significant predictors of all job quality dimensions in multivariate analyses, highlighting the diversity prevalent across occupations and sectors in Europe in terms of young workers' job quality. This study is in line with previous literature among working-age populations that found service-oriented industries to offer the lowest quality jobs across multiple dimensions (Eurofound, 2014; OECD, 2012; Olsen et al., 2012). However, the fact that almost half of young workers in this study are employed in occupations and industries that offer the lowest quality jobs warrants attention and points towards potentially important workforce divisions in relation to occupation and industry (Gallie, 2009).

The findings of this thesis are in line with Eurofound (2015), which showed that young people in the 18-24 age group are often employed in occupations with 'multiple disadvantages.' In addition, this study also adds to the previous literature by highlighting that it is not only young school leavers who are at disadvantage, but also those young adults in the 25-34 age group who experience difficulties in paid work and have not been given much attention in previous research and policy debates.

The results also showed that, when the effects of all other predictors were controlled for, jobrelated characteristics (which included occupation and industry) were the strongest predictors of intrinsic quality of work and health and safety, which provided support for Hypothesis 4. This suggests that every occupation and industry has its own set of risks factors, and some job characteristics, particularly those related to intrinsic aspects of work and health and safety, are more prevalent in certain occupational groups and industries (Bakker & Demerouti, 2007; Eurofound, 2007; Handel, 2005; Olsen et al., 2012; Smith et al., 2008). Autonomy, the opportunity for learning new things and complex tasks are more prevalent in high-skilled occupations and professional industries but occur rarely in low-skilled jobs and customer service-oriented industries (Smith et al., 2008). Similarly, physical and psychosocial risks are likely to reflect occupational and industrial structure rather than institutional setting (Olsen et al., 2010; Smith et al., 2008). Other job-related characteristics explained less variation in job quality (see Table 29). Young workers with short job tenures (of less than one year) reported lower pay and poorer employment quality than those with longer job tenures, which is likely to reflect their lower seniority in the labour market (Stier & Yaish, 214). On a positive note, those with short job tenure benefitted from better health and safety and better work-life balance when compared to those with longer job tenure, suggesting that job quality does not necessarily improve with the length of employment. Job tenure allows for testing the stepping stone hypothesis (Ferrie, 2001; Virtanen et al., 2005). If lower quality employment is a stepping stone for young workers, job quality should improve with job tenure. Therefore, mixed findings in relation to job tenure found in this study suggest that the stepping stone argument is less likely in the youth context but given the cross-sectional nature of this study, this assumption is only tentative. In terms of firm size, small firms (below 50 workers) offered lower pay than larger firms but better intrinsic quality of work and health and safety than medium-sized firms (50-99 workers), and better work-life balance than large firms (100-249 workers). Previous literature showed conflicting findings in relation to the impact of firm size on job quality. Some studies found a positive relationship between job quality and firm size (Wagner, 1997), while other studies found that small firms offered higher quality jobs than larger firms (Storey et al., 2010). This study shows that larger organisations' ability to pay is likely to be higher, but work-life balance seems to be better in smaller firms (Buccuzzo & Gianecchini, 2015).

Moreover, the findings showed that the wider institutional context may explain some of the country differences in young workers' job quality. This study used countries (UK, Denmark, Germany and Spain) as proxies for four employment regimes proposed by Amable (2003). Comparing job quality in the UK to three other developed countries allowed this study to examine the role of institutional context in shaping young adults' working lives. A clear division between countries was found in relation to pay and work-life balance, which provided support for the employment regime theory (Amable, 2003) and suggested that the key factors shaping these aspects of job quality are employment policies and the relative capacity of organised labour (Gallie, 2009; Holman, 2013; Olsen et al., 2010). However, this study also showed that institutional features cannot explain variations on many of the intrinsic aspects of work and results were also mixed in relation to employment quality and health and safety. This study did not find better employment quality (in terms of contract type, job security, training and career prospects) and lower exposure to health and safety risks in Denmark and Germany when compared to the UK, which one would expect based on the employment regime theory

(Amable, 2003). An important contribution of this study is that it applies the employment regime theory to a new population and as a result helps to establish the relevance of institutional setting to young workers' job quality.

The comparison of job quality in the UK to three other European countries (Denmark, Germany and Spain) showed that young workers in this regime type are disadvantaged in terms of two critical aspects of job quality: pay and work-life balance. In comparison to the UK, Denmark and Germany scored significantly higher on both dimensions than the UK, and Spain scored significantly lower (Table 29). In addition to cross-country differences on the total measure of work-life balance (which comprised working hours and job intensity), the analysis of the EWCS (2015) showed that young workers in the UK were particularly disadvantaged in relation to this dimension of job quality. In particular, young workers in the UK reported working longer hours and they also reported greater work intensity, suggesting an accumulation of negative job attributes among young workers in the UK. In contrast, in Denmark, Germany and Spain these two aspects of work-life balance tended to go in the opposite direction at the country level, suggesting a compensation mechanism (rather than an accumulation) between different job characteristics (De Bustillo et al. 2011). These findings provided partial support for Hypothesis 1.

It is well-known that the UK has one of the most lightly regulated labour markets in Europe (OECD, 2015b) and in the Liberal regimes the employment relationship is characterised by being dominated by employers (Gallie, 2007), with minimal state intervention. While some regulations are in place in the UK, the National Minimum Wage (NMW) is age-dependent and does little to tackle low pay among workers (CIPD, 2015). In contrast, in Denmark and Germany there is no statutory national minimum wage and the minimum wage is set by collective agreements at sectoral level (Eurofound, 2018). Minimum wages have a strong influence on country-level wage structure and national wage dispersion, especially in countries with weak collective bargaining systems (such as the UK), where they set a trend for the overall wage developments (ETUI, 2012). It has been argued that pay inequalities have arisen as a consequence of the application of minimum wage rates (Eurofound, 2017). While the National Living Wage (NLW) was introduced in the UK in 2016 as a more robust response to the low pay problem, it is only accessible to those aged 25 and over (Eurofound, 2018), and therefore does not include all young workers, which may explain the high incidence of low-paid work among young people in the UK. This study is in line with previous literature which showed

that there is a relatively high proportion of low-paid workers in the UK (Lloyd et al., 2008; Green, 2013).

Similar to this, the law that protects workers against long working hours is weak in the UK (TUC, 2013). Long working hours in the UK are often claimed to be a consequence of the 'optout' from the European Working Time Directive (Green, 2013), especially in relation to young people who tend to be under higher pressure to sign the 'opt-out', when compared to older workers (Eurofound, 2012). Chung and Tijdens (2013) found that, in comparison to Germany and Nordic countries (such as Denmark), working time arrangements in the UK are more employer-centred and designed to facilitate employers' rather than workers' needs.

The importance of workers' power for earnings and work intensity has also been highlighted. Higher levels of unionisation and collective bargaining enable workers to improve their working conditions (Green, 2002; Korpi, 2006). In Denmark, union density is one of the highest in the OECD countries (covering around 67% of the workforce), and collective bargaining coverage is at approximately 85% of the workforce (Hayter & Stoevska, 2011; OECD, 2016). In the UK, union density and collective bargaining are very low, at 23% and 27% respectively (ONS, 2017), and a recent report by TUC (2018) showed that the current generation of young workers in the UK is less likely to participate in labour unions, when compared to prime-aged workers. Stronger unions in the Social Democratic and Continental regimes are more likely to be able to resist work intensification (Olsen et al., 2011), control pay differentials and increase the pay of low-paid workers (Gallie, 2000; Gallie, 2009; Kristensen & Lilja, 2010).

In contrast to Denmark and Germany, where collective agreements at industry or enterprise level shape pay and working conditions, in the UK these are mainly determined through employment contracts at firm level (Anxo et al., 2013), and therefore employees in the UK are left without any state support and have to 'cope on their own' (Brannen, 2005). It would seem, therefore, that the institutional context in Denmark and Germany may have a positive impact on pay and work-life balance reported by young workers in this study.

In relation to other dimensions of job quality, the findings were less consistent across countries. The analysis of the employment quality dimension revealed that the overall scores on this dimension of job quality placed the UK slightly behind Denmark and in front of Germany. In contrast to what was expected, young workers in the UK were less likely to have a temporary employment contract than those in Denmark and Germany, however at the same time, they also reported lower job security. This finding shows that having a permanent employment contract does not translate into higher job security among young people in the UK and is open to several interpretations.

Previous literature among working-age populations suggests that job security reflects government legislation restricting the ability to fire workers, and that the stronger the sanctions put on employers regarding hiring and firing, the higher the level of perceived job security among workers (Anderson & Pontusson, 2007). Other studies also suggested the need for employment protection to be complemented with unemployment benefits or active labour market policies (Kalleberg, 2009). Denmark and Germany are both known for relatively strict employment protection legislation (Esser & Olsen, 2011), which is expected to provide young workers with security to retain their jobs. While the Danish flexicurity model offers lower employment protection to those on temporary employment contracts, at the same time, generous income support benefits are available to provide a safety net and to prevent economic hardships in case of a job loss. In Denmark, the provision of active labour market policies is one of the highest in the OECD countries, which ensures young people have access to employability enhancing interventions and this also helps displaced workers to get back into work (OECD, 2016). Therefore, the presence of generous social security systems may improve young people's perceptions of job security (Clark & Postel-Vinay, 2009). In contrast, the UK is known for low provision of social protection and active labour market policies. In fact, for unemployment benefits and employment protection, the Liberal countries (such as the UK) stand out with the lowest levels (Gallie, 2007). Therefore, low levels of job security in the UK may be linked to low levels of social protection and minimal provision of active labour market policies (Esser & Olsen, 2011; Holman, 2013). In addition, perceived job security may also reflect the current economic situation within the country (Adascalitei & Vegetti, 2010; Esser & Olsen, 2011). The level of youth unemployment is higher in the UK (11.8%) than in Germany (6.4%) and Denmark (9.8%) (OECD, 2018), and a country's unemployment level was also found to be predictive of workers' perceptions of job security (Green et al., 2000). This finding highlights the importance of employment policies and the wider socio-economic context for young workers' evaluations of job security (Cooke, Donaghey, & Zeytinoglu, 2013; De Bustillo et al., 2011).

On a positive note, the UK offered the highest quality jobs in terms of health and safety, especially in relation to psychosocial risks, where young workers reported the lowest levels of exposure, when compared to Denmark, Germany and Spain. This is the only dimension of job quality where young workers in the UK reported the highest quality jobs when compared to the other countries of interest. While some forms of the UK's employment regulation system seem very lightly controlled, there remain strong anti-discrimination laws and a very comprehensive system of health and safety regulations (Holman, 2013; Olsen et al., 2010). Therefore, one would expect that different forms of regulation in the UK have considerably different effects on job quality (Green, 2013). The low position of Denmark on this dimension of job quality is particularly surprising and is in line with Smith et al. (2008), who has also found evidence of increased exposure to physical risks in some parts of Scandinavia.

Overall, job quality was significantly higher in Denmark than in the UK and other countries of interest, especially in relation to the intrinsic quality of work, pay and work-life balance. In relation to the intrinsic quality of work, young workers in Denmark reported better quality jobs when compared to the UK, Germany and Spain whereas all other country comparisons were not significant. Denmark has a specific institutional setup (Gallie, 2009), which combines generous social security with well-developed vocational training system and high provision of active labour market programmes for young people (Amable, 2003; Bambra, 2007; Kristensen & Lilja, 2010). This institutional 'mixture' thus appears to support higher quality jobs for young adults. In general, the findings of this study support the idea of the distinctiveness of the Nordic states in terms of the quality of working life (e.g. Gallie, 2003; Olsen et al., 2011).

This thesis contributes to knowledge by showing that occupation, industry and institutions at national level have an important role to play in enhancing job quality among young adults, therefore pointing to the importance of contextual factors. Previous research on the youth context has prioritized the role of individual responsibility and personal agency in developing careers and securing high quality jobs and, as a result, it has mainly focused on young people themselves when trying to explain their labour market difficulties (e.g. De Hauw & De Vos, 2010; Dries et al., 2008; Tomlinson, 2007). For example, issues such as a lack of work readiness among young people (O'Reilly et al., 2015), changing preferences (Smola & Sutton, 2002), or long transitions from school to work (Pavlova, Lee, & Maclean, 2017) are the dominant themes in the area of youth employment.

This thesis casts doubts over the extent to which young people have power to influence their labour market outcomes and suggests that the individual responsibility for managing careers and securing high quality jobs might have been over-estimated. The limited impact of individual differences found in this study points to the importance of focusing on the wider context in which work takes place, and potentially the discrimination on the demand side of the labour market, as suggested by Brown et al. (2010). The findings suggest that, in contemporary labour markets young workers are constrained by a wide range of contextual factors, which have more impact on the quality of their jobs than individual differences and are often beyond their personal control. This study has wider theoretical implications – in terms of the salience of job quality in the youth context, and the relative importance of contextual and individual factors when interpreting job quality in this population. The importance of job quality in terms of mental health which is discussed next.

# 7.4 The relationship between job quality and young workers' mental health

Job quality is only important if it produces important outcomes for individuals, organisations and society (Munoz de Bustillo et al., 2011). To date, there are mixed findings in relation to the outcomes of youth employment issues in contemporary labour markets. While the proponents of the 'career trap' argument suggest a negative impact of underemployment and marginal employment on earnings and career progression among young workers (e.g. Scarpetta et al., 2010; Scherer, 2004), other outcomes are less known. The growing insecurity and instability of youth employment (Chung et al., 2012; O'Reilly et al., 2015), and increasing emphasis on individual responsibility in managing careers and securing high-quality work (e.g., Bauman, 2000; Grytnes, 2011) suggested that the way young workers experience today's labour market may undermine their basic psychological needs for control, security and autonomy (Ryan & Deci, 2000; Sheldon et al., 2001). This provided a rationale for this thesis to investigate mental health as an important outcome of job quality in the youth context.

To date studies on job quality and mental health have tended to remain within their disciplinary boundaries and often focused on a specific aspect (or a set of aspects) of job quality (such as contract type or skills), studying its impact on mental health in isolation (e.g. Ek et al., 2014; Elovainio et al., 2006). This study took a comprehensive approach to job quality when

examining its impact on young workers' mental health, while focusing not only on workrelated factors which are detrimental to mental health, but also on positive aspects of work that could be linked to better psychological well-being among young people. In that way, this study responds to calls for more research on work factors enhancing mental health (Burgard & Lin, 2013; Furlan et al., 2012). The framework of job quality adopted from De Bustillo et al. (2011) was used in this study to examine the relationship between job quality and young workers' mental health while controlling for individual and contextual factors. In addition, this study addressed the role of a match between an individual and a job and perceived employability, which in previous research emerged as important factors affecting youth labour market trajectories and potentially their mental health (see Sections 2.4.3 and 2.4.4). This section first discusses the key predictors of mental health in the youth context, and then it focuses on the role of person-job fit and perceived employability.

## Key predictors of mental health in the youth context

The findings showed that, after the effects of all other predictors were held constant (individual and contextual factors), job quality was associated with all different types of mental health outcomes, as categorised by Warr (1990, 2013). More specifically, job quality was associated with both work-related (work-related stress and work-related exhaustion) and context-free mental health (anxiety, fatigue and affective well-being), as well as both positive and negative dimensions of mental health. This suggests that job quality may have a spillover effect (Danna & Griffin, 1999) from work-related context to life in general. The findings showed that work intensity, psychosocial risks and meaningfulness were the strongest predictors of mental health for young people, although the specific pattern of findings varied for different outcome measures. Overall, the key finding of this study is that the association between job quality and mental health is already evident in young adulthood. In addition, this association may change across the lifespan as one accumulates exposures to poor working conditions at work (Karmakar & Breslin, 2008). Given an aging population, young people can expect to have longer working lives than previous generations and therefore need good work ability over many years (Ilmarinen, 2009), which highlights the importance of maximizing high quality of working life in the youth context.

The findings showed that all aspects of psychosocial quality of work (in terms of skills, autonomy, social support, psychosocial risks, work intensity and job security) were associated

to a greater or a lesser extent with mental health outcomes (see Table 29). The psychosocial quality of work was the key predictor of work-related stress and fatigue. However, in relation to other aspects of mental health examined in this study, job quality control variables (in terms of pay, meaningfulness, contract type, training, career prospects, physical risks and working time), when taken together, were stronger predictors of affective well-being, anxiety and work-related exhaustion. This finding provided partial support for Hypothesis 6 and suggests that in the youth context there is a need to go beyond the psychosocial quality of work when examining the impact of job quality on mental health. The results also showed that, when taken together, employment quality, skills and working hours were not the strongest predictors of mental health outcomes: when compared to other predictors of job quality, the strength of their association with mental health (as measured by changes in R square and chi-square) was low (Field, 2013). Therefore, Hypothesis 7 was not supported.

Among the aspects of the psychosocial quality of work, work intensity and psychosocial risks remained significant predictors of all aspects of mental health examined in this study. Higher work intensity in terms of working at high speed, to tight deadlines and not having enough time to get the job done, as well as being exposed to at least one psychosocial risk in the workplace, was associated with poorer mental health among young workers.

Work intensity was the strongest predictor of both work-related stress and work-related exhaustion, suggesting its particular relevance to work-related mental health. This study is in line with previous literature among working-age populations which found work intensity to be a strong predictor of mental health, irrespective of the type of measure used to assess psychological well-being (e.g. Boxall & Macky, 2014; Burchell et al., 2001; Cottini & Lucifora, 2013; Niedhammer et al., 2015; Stansfeld & Candy, 2006). Given a sharp increase in perceived work intensity during the past decades across European countries and particularly in the UK (Burchell et al., 2001; Eurofound, 2007; Gallie et al., 2014; Olsen et al., 2010), this finding highlights the importance of this aspect of job quality for young workers' mental health status.

Psychosocial risks (in terms verbal abuse, threats, violence, bullying, and being in emotionally disturbing situations) were the key predictors of anxiety and fatigue, indicating the particular relevance of emotional demands and anti-social behaviours at work to context-free mental health. This finding may reflect the occupational segregation of young workers in this study -

the high proportion of young people employed in the Customer Service industry, that is characterised by frequent customer interaction and thus high exposure to emotional demands (Eurofound, 2012). In line with this study, emotional demands were linked to greater stress and poorer mental health status among adult workers (Rugulies et al., 2006; Mann & Cowburn, 2005). Previous studies also found the experience of anti-social behaviours at work, such as bullying and harassment, to be associated with anxiety (Niedhammer et al., 2015), work-related stress (Eurofound, 2007; Vartia, 2001) and other common mental health problems such as depression (Hansen et al., 2006). However, psychosocial risks have only recently been given more attention and are still largely understudied factors in mental health studies (Niedhammer et al., 2015), especially in the youth context, even though they represent emerging health and safety risks in contemporary workplaces (EU-OSHA, 2014).

Social support, which was measured in terms of receiving help and support from colleagues and managers, was associated with higher affective well-being, lower likelihood of reporting fatigue and lower work-related exhaustion among young workers. Thus, similar to the effects of work intensity and psychosocial risks, social support was related to both work-related and context-free mental health. Social support is considered to be a valuable individual resource, which can fulfil a basic human need for belongingness (Baumeister & Leary, 1995). In the context of working life, the importance of different types of social support for mental health has been firmly established (e.g. De Lange et al., 2003; Marchand et al., 2010; Ostberg & Lennartsson, 2007; Rydstedt et al., 2012; Shields, 2006; Virtanen et al., 2008). Given the high involvement of young workers in the Customer Service industry, co-worker support may be particularly beneficial (Thoits, 1986). Peer support is particularly important in jobs that involve working with customers, because colleagues who share similar experiences can understand each other's sources of stress better and thus can offer both practical and emotional support (Ng & Sorensen, 2008).

Beyond psychosocial quality of work, the results pointed to the importance of meaningfulness for mental health outcomes. Having the feeling of doing meaningful work was associated with higher affective well-being, lower likelihood of reporting anxiety and lower work-related stress. Meaningfulness was the strongest predictor of affective well-being among young workers. However, this aspect of job quality appears to be the least investigated in the previous literature on mental health, even though some studies suggest that today workers are interested more than ever in finding purpose and meaning in what they are doing (Steger, Dik, & Duffy, 2012). Generational literature points to the importance of meaningful work in the youth context (Dries et al., 2008; Twenge, 2010). Perceiving one's job to be meaningful may be an important source of security for young workers in the context of contemporary labour markets (Wrzesniewski et al., 1997), where it is often difficult to build a stable career within a single organisation or employer (Baruch, 2004; Sweet & Meiksins, 2013).

Training and career prospects were important predictors of affective well-being and the likelihood of reporting anxiety. Young workers who reported greater provision of training provided by the employer and higher prospects for career advancement showed higher affective well-being and a lower likelihood of reporting anxiety. In addition, the provision of training was also associated with a lower likelihood of reporting fatigue. Therefore, it seems that in the youth context, development opportunities in the workplace matter more for context-free mental health. The importance of training is not surprising, given large decreases in the provision of training provided by employers over the last two decades, especially for young workers (Green et al., 2016), and the fact that today young people are increasingly expected to take control of their own training and skills development (Lain et al., 2014). Studies suggest that young people consider training and having opportunities for career development as extremely important when assessing the quality of their job (James et al., 2011). While this study did not examine pathways through which training may affect mental health, the association of training with context-free mental health suggests that its importance goes beyond the boundaries of a single job, and may be attributed to the fact that it enables young workers to acquire new skills and knowledge (Karthikeyan et al., 2010) and as a result it enhances one's employability (Tomlinson, 2012), which allows young people to remain attractive in the context of contemporary careers (Loughlin & Barling, 2001). There is good evidence to show that employer-provided training has a positive impact on employability (Ananiadou et al., 2004; Field, 2009; Vignoles et al., 2004), which is likely to be accompanied by a greater sense of control over one's career, and this feeling, in turn, contributes to better mental health (Fugate et al., 2004; Marler et al., 2002). In addition, training may also be a new form of security for young people, in the same way as meaningful work has been proposed as a new form of security in earlier studies (Wrzesniewski et al., 1997).

Other aspects of job quality showed weaker associations with mental health (see Table 29 for the summary of findings). Greater exposure to physical risks in the workplace was associated with higher work-related stress and exhaustion among young workers, which suggests that physical risks may matter more for work-related psychological well-being, as suggested by Schokkaert et al. (2010). The aspect of skills was a significant predictor of affective well-being, but the picture of its association with psychological well-being was more complex: while being in an unskilled job and exposure to monotonous tasks are harmful to young workers' mental health, jobs that are highly skilled and tasks that are too complex are equally detrimental to mental health. Previous literature typically supports a linear relationship between these variables (O'Driscoll & Brough, 2010). The findings of this study may be due to higher-skilled jobs being more demanding and anxiety-inducing (Green, 2006). Finally, pay and working time explained little variation in mental health status among young people, when the effects of all other predictors were held constant. This finding highlights the significance of job quality for mental health in the youth context and emphasise that it is crucial to go beyond pay and employment status when investigating how young workers fare in paid work.

The association of job security with mental health was rather weak, when compared to other aspects of job quality. This finding is unexpected, given that much of the burden of job insecurity is currently falling on young workers, due to their high involvement in temporary forms of employment (Scarpetta et al., 2012). This finding is inconsistent with previous research among working-age populations, which pointed to the negative effects of perceived job insecurity on psychological health (Burchell et al., 2001; D'Souza et al., 2003; Eurofound, 2012; Ferrie et al., 2005; Rugulies et al., 2006; Quinlan & Bohle, 2015). One possible explanation for this pattern of findings is that young people may be relying less on job security in contemporary labour markets, which are characterised by greater job and organisational mobility (Fenton & Dermott, 2006; Sweet & Meiksins, 2013), and a shift away from the traditional career model based on security and stability in employment (Forrier et al., 2009). As a result of less stable career patterns, low job security may reflect a new reality in young adults' working lives. Some earlier studies suggested that in the twenty-first century workplace it may become necessary for workers to look for other sources of security in employment (Wrzesniewski et al., 1997). As showed earlier in this study, meaningfulness and training may potentially provide new sources of security for young workers.

Unexpectedly, contract type was the only aspect of job quality which was not a significant predictor of any mental health outcomes in the multivariate analysis. Thus, in contrast to previous studies, the analysis did not reveal a negative relationship between mental health and having a temporary contract (when compared to having a permanent contract). Non-permanent

employment has traditionally been considered as disadvantageous to mental health and several studies of adult workers confirmed this traditional assumption (e.g. Martens et al., 1999; Silla et. al., 2005; Virtanen et al., 2005). Given the high involvement of young workers in non-standard forms of employment (Scarpetta et al., 2012), this finding is unexpected and is in line with recent studies among working-age populations which found no associations between temporary employment and psychological health outcomes (Bardasi & Francesconi, 2004; Cottini, 2012). One explanation for this pattern of findings may be that temporary employment is only detrimental to young adults' mental health under certain circumstances, specifically when it is not voluntary (Artazcoz et al., 2005; Price & Bulgard, 2006; Silla et al., 2005). Today many young workers are increasingly choosing non-standard work because they have no other choice (Anderson et al., 2011) and non-standard working arrangements are becoming an obligation rather than an option for young adults (Scarpetta et al., 2010). Scurry and Blenkinsopp (2011) highlighted the importance of assessing young people's preferences in relation to job quality. The role of preferences in relation to contract type was examined as part of the Research Objective 4 and is further discussed in the next section.

Alternatively, this finding may also reflect changing attitudes and / or lowered expectations among young people in relation to contractual stability, as suggested by generational studies. Some studies showed that young people's attitudes to work depend on the current socioeconomic context in which the employment takes place (De Huw & De Vos, 2010) and in poor economic times young individuals may lower their expectations in relation to job quality (Deal et al., 2010). As showed in Chapter 2, today young people experience many difficulties in paid work, and given that temporary employment is becoming inevitable in the youth context (Scarpetta et al., 2010), young people might have lowered their expectations in relation to this aspect of job quality and as a result temporary work may not appear as threatening, which would help to explain its weak association with mental health. This argument may also explain the previous finding of this study that pointed to weak association between job security and mental health among young people. Specifically, since contract type and job security are highly related (De Bustillo et al., 2011), and previous studies proposed job security as one of the key mechanisms linking temporary employment to mental health (Eurofound, 2012; Scarpetta et al., 2010), weak associations between job security and mental health may also reflect changing attitudes and / or lowered expectations among young workers in relation to job security as a result of increasingly demanding labour markets. These findings contribute to generational

literature by highlighting the importance of the wider context for young people's attitudes and expectations in relation to job quality (De Huw & De Vos, 2010).

At the same time, if young workers lowered their expectations in relation to job quality, this issue is potentially problematic because it implies that they may accept less than ideal job roles and they may have lower demands for high quality jobs in future (Ng et al., 2010). As a result, low quality work may become a new 'norm' in the youth context. This may create social and economic problems such as greater incidence of unemployment, widespread poor quality jobs and a loss of confidence among young workers (ILO, 2015c).

Overall, the findings showed that, except for contract type, all aspects of job quality were associated to a greater or a lesser extent with different measures of mental health included in this study, suggesting that studies in the youth context that use one aspect of job quality and exclude the other may not be able to explain important parts of variance in mental health outcomes. This section moves to discussing the importance of a match between an individual and a job for psychological well-being.

## Importance of person-job fit for mental health outcomes

This study highlights the need to consider the role of person-job fit when examining the impact of job quality on mental health for young people. Person-job fit refers to the extent to which young workers' needs and preferences are satisfied in relation to their jobs (Edwards, 1991).

Young individuals in this study were classified as having either 'high person-job fit' or 'low person-job fit'. Three types of person-job fit were investigated in this study: (1) person-job fit in terms of skills, (2) person-job fit in terms of working hours, and (3) person-job fit in terms of contract type. The findings (Chapter 6, Section 6.5) indicated that a large proportion of young workers in the UK were poorly matched to their jobs in terms of their abilities and needs. This section first discusses the extent of person-job fit in the UK, and then the importance of a match between an individual and a job for mental health outcomes.

In relation to person-job fit in terms of skills, which referred to the extent to which young worker's skills were matched to the skill requirements of their jobs, almost half of young workers in the UK indicated low person-job fit, with the vast majority (four in five) reporting

that they had the skills to cope with more demanding duties, indicating that over-skilling or skills under-utilisation is a key issue for young UK workers. While graduates were more likely to report low person-job fit in terms of skills, skills mismatch was also an issue for two in five non-graduates. This suggests the changing nature of graduate employment, where graduates are increasingly involved in poorer quality work for which a higher education degree is not necessarily required (e.g. James et al., 2013; Okay-Somerville & Scholarios, 2013; Sutherland, 2013). The findings of this study show how policy-driven increases in HE participation rates have been poorly aligned to the demand for highly skilled labour in the UK (O'Reilly et al. 2015; Sutherland, 2013), and point to limitations of human capital theory to explain the quality of youth employment (Becker, 1976, 1993). Therefore, while up-skilling of individuals is a crucial supply-side policy for enhancing employability, ensuring that there is demand for utilising these skills is equally essential (Keep et al., 2010), as well as considering a more holistic approach to youth employment which takes into account the quality of jobs into which young people enter (e.g., Dobbins et al., 2014; Bryson, 2010; Keep et al., 2010). The involvement of graduates in lower-skilled work may have further consequences for nongraduates, who are often left to compete with graduates for non-graduate jobs (D'Arcy & Finch, 2016). For non-graduates, low-person job fit in terms of skills may also reflect the general trend of increasing job polarization in the UK, where due to disappearance of middleskilled jobs, low-skilled work is less likely to offer career progression (D'Arcy & Finch, 2016; O'Reilly et al., 2015) and is instead a 'dead end' (Sissons, 2011).

Regarding person-job fit in terms of working hours, which referred to the extent to which young workers' needs in relation to working hours were satisfied, over half of young workers in this study indicated that they would prefer to work a different number of hours to what they work currently. Therefore, the extent of working hours mismatch among young workers in the UK is extensive, which is in line with previous studies among working-age populations which pointed to increasing work hours constraints in recent decades (Bell, et al., 2012; Kalleberg, 2011; Wooden et al., 2009), as well as high levels of working hours mismatch among younger workers in the UK (Bell & Blanchflower, 2011). This study also show that among young workers who reported low person-job fit in relation to their working hours, there was a polarization between those who would prefer to work fewer hours, and those who would prefer to work more hours, suggesting that both underemployment (working too few hours) as well as over-employment (working too many hours) are problematic in the youth context. This finding may reflect a general trend toward diversification of weekly working time schedules in

contemporary labour markets, where workers are less likely to work a traditional 40-hour workweek and are more likely to work either relatively short workweeks (less than 30 hours per week) or relatively long workweeks (over 40 hours per week) (Green, 2006; Wooden et al., 2009). In addition, the UK labour market is considered as one with the longest working week in Europe (Eurostat, 2018b), which may explain why young workers in this study reported stronger preference for working fewer hours than they currently do. While education was correlated with skills mismatch, there was no such correlation with person-job fit in terms of working hours, suggesting that working hours mismatch is widespread among young people, regardless of the educational level.

In relation to person-job fit in terms of contract type, which referred to the extent to which young workers' needs in relation to contract type were satisfied, the findings showed that among temporary workers, around three in four workers reported being in temporary employment involuntarily, because they could not find a permanent job. This finding suggests that for a large proportion of young people in the UK, temporary employment may be becoming an obligation rather than an option (Eurofound, 2014; European Youth Forum, 2013). These findings are quite worrying, given that young workers' insecurity in employment not only affects access to credit, financial and residential independence, but also inhibits long-term commitments such as having a family. What is more, insecurity in employment may also lead to subjective insecurities (Chung et al., 2012).

To date, most research in the youth context has focused on the incidence of mismatch among graduates (e.g. Green & Zhu, 2009; McGuinness & Sloane, 2011; O'Reilly et al., 2015; Scurry & Blenkinsopp, 2011), with the majority of studies focusing on over-education and overskilling as the key indicators of mismatch. One contribution of this study is therefore a more comprehensive investigation of the extent of mismatch among young workers in the UK which encompasses all educational levels. This study showed that it is not only graduates who experience mismatch in their jobs: low person-job fit is widespread among young workers, regardless of their educational status. It is important, therefore, not to associate underemployment exclusively with graduates (e.g. Baert et al., 2013; McGuinness & Sloane, 2011; Scurry & Blenkinsopp, 2011; Sutherland, 2013; Verbruggen et al., 2015). This study suggests that non-graduates are also in a difficult labour market position and more attention needs to be given to this group of young people in both research and policy. No differences across age and job tenure were found for three different types of person-job fit, suggesting that mismatch may not be a temporary phenomenon as argued by the supporters of the 'stepping stone' argument (e.g. Booth et al., 2002; Ferrie, 2001; Virtanen et al., 2005). This finding also casts doubts over career mobility theory which states that inadequate employment is compensated by better career prospects, and that job tenure leads to better quality jobs in future (Sicherman & Galor, 1990; Sicherman, 1991). Longer job tenure was associated with a slightly higher occurrence of working hours mismatch which further strengthens the argument that low person-job fit may be a difficult state to exit (Dolton & Vignoles, 2000; McGuinness, 2003; McGuiness & Sloane, 2011), as suggested by the supporters of the 'entrapment hypothesis' (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010). However, due to the cross-sectional nature of this study, more longitudinal research is needed to confirm these suggestions.

In line with person-job fit theory (Edwards, 1991), the findings showed that low person-job fit in terms of skills and working hours is predictive of poorer mental health outcomes among young people in the UK, when compared to high person-job fit. This was true for work-related mental health (work-related stress and work-related exhaustion). Therefore, the conclusion is that person-job fit in terms of skills and working hours can influence young workers' mental health, but this influence is particularly relevant for work-related mental health. These findings provided partial support for Hypothesis 8.

In contrast to what was expected, the association between person-job fit in terms of contract type and mental health was not significant. In other words, young workers who were in temporary jobs involuntarily did not report poorer mental health, when compared to those in permanent jobs and those who were in temporary jobs voluntarily. However, due to a small proportion of young workers employed on temporary basis in the UK LFS (2017) (7.8%), this finding must be evaluated with caution. It also possible that the impact of person-job fit in terms of contract type on mental health depends on the level of perceived employability (Hypothesis 10). However, this could not be examined in this study due to the lack of data to measure perceived employability in the UK LFS (2017). This area would certainly benefit from more research in future.

By applying the person-job fit theory to the population of young workers and the study of job quality, this thesis contributes to theory in two ways: by providing a new context in which

person-job fit theory can be applied, and secondly by pointing to two critical aspects of job quality that contribute to negative outcomes in terms of mental health as a result of mismatch. These findings have more wide-ranging theoretical implications and point to the importance of individual variations when conceptualising young workers' job quality. The negative impact of low person-job fit on mental health found in this study highlights the significance of a good fit between an individual and a job, in addition to the need for work to be of good quality in terms of more universal aspects (such as high social support, for instance). Therefore, it is not the skill level of a job and / or the number of working hours that seems to matter most, but whether there is a fit between these aspects of job quality and young workers' abilities and needs.

At the same time, involvement in lower quality work (such as low person-job fit) may be less detrimental to mental health if young workers have resources to cope with the situation of being in undesirable employment. This section next discusses the role of perceived employability and how it may affect the relationship between person-job fit and mental health.

# Perceived employability as a resource in the young adult context

Perceived employability refers to a person's perceived ability to acquire a job when / if needed (Baruch, 2001) and can be considered a personal resource (De Cuyper et al., 2011). In line with the principles of the COR theory (Hobfoll, 1989, 2001), it was expected that employees with high perceived employability would have more resilience to cope, adjust and adapt to the varying circumstances in their workplace and more widely in contemporary labour markets.

The findings showed that perceived employability was a significant predictor of affective wellbeing, anxiety, fatigue and work-related stress. Higher levels of perceived employability were associated with better mental health among young workers, which provided partial support for Hypothesis 9. Therefore, similar to job quality, perceived employability was associated with both work-related and context-free mental health, and both positively and negatively framed mental health, as categorised by Warr (2013). Previous studies among working-age populations found mixed associations between perceived employability and mental health. Few studies found a positive relationship between these two concepts (e.g. De Cuyper et al., 2008; Berntson & Marklund, 2007). In contrast, Silla et al. (2009) did not find any associations between perceived employability and positive affect or life satisfaction. The findings of this study showed that, except for work-related exhaustion, perceived employability was significantly associated with all mental health outcomes examined in this study, indicating its particular importance to young workers' mental health. Therefore, given weak associations between contractual stability (in terms of contract type and job security) and mental health (as found in this study in relation to RO3), perceived employability may be a better predictor of mental health than job security and contract type in contemporary labour markets, which are characterised by increased job and organisational mobility and a shift away from a traditional career model (Fenton & Dermot, 2006; Lyons et al., 2012; Sweet & Meiksins, 2013).

Significant interactions between perceived employability and person-job fit were found for fatigue and anxiety, which provided partial support for Hypothesis 10. Specifically, the findings showed that anxiety and fatigue were most common among young workers who reported low person-job fit combined with low levels of perceived employability. In contrast, individuals in the high person job-fit group reported similar frequency of anxiety and fatigue, regardless of their levels of perceived employability, which suggests that perceived employability may be particularly beneficial to those who are poorly matched to their jobs in terms of skills and working hours. The findings also showed that the level of perceived employability does not have to be high before its moderating impact on young workers' mental health can be detected. In this study young workers who reported both high and average levels of perceived employability benefited from its positive effects.

Some recent studies found perceived employability to moderate the relationship between job insecurity and various individual and organisational outcomes among working-age populations (e.g. Fugate et al. 2004; Silla et al., 2009), but empirical research on perceived employability as a moderator of the relationship between person-job fit and mental health is scarce. These findings have important theoretical implications. This thesis established that perceived employability (which in this study is considered a personal resource, based on the COR theory) is an important moderator in the youth context and may influence the extent to which young workers' mental health is affected by being in jobs which do not correspond with their abilities and needs. Perceived employability helps to explain why the strength of associations between person-job fit and mental health may be either more or less pronounced.

Perceived employability is assumed to support individuals' ability to cope with change and uncertainty by providing feelings of control and possibilities to act in the surrounding environment (Green et al., 2011). Although not empirically tested in this study, individuals

who report higher levels of perceived employability may appraise their work situation more positively (Lazarus & Folkman, 1984), and the feeling of being employable may provide them with a feeling of control over their work situation (such as low person-job fit), which enhances well-being (Berntson & Marklund, 2007). In addition, people who perceive themselves as more employable are also more likely to change their jobs and improve their work situation (Vanhercke et al., 2016). This suggests that perceived employability may be beneficial to young workers' perceptions about themselves and their work situation, and may also impact on the extent to which they initiate change and eventually move to higher quality jobs, which fit their needs and abilities. These jobs, in turn, are known to promote mental health (Edwards, 1991), which has been supported in this study when examining the associations between person-job fit and mental health.

These findings may also explain why the associations between person-job fit and the mental health indicators of anxiety, fatigue and affective well-being were not significant (Hypothesis 8), as well as help to clarify one of the mechanisms underlying the relationship between person-job fit and context-free mental health. In particular, the results of this study suggest that person-job fit can affect work-related mental health directly, but its relationship with context-free mental health depends on the levels of perceived employability. This may be explained by the notion that, when faced with low person-job fit, work-related mental health is affected negatively regardless of the level of perceived employability, but this situation becomes even more threatening to mental health when workers do not have resources to cope with the situation of being in undesirable employment (i.e. low perceived employability in this study), in which case the negative impact of low person-job fit may spill over from the work context to life in general (i.e. context-free mental health in this study), as suggested by the spillover hypothesis (Danna & Griffin, 1999). However, due to the cross-sectional nature of this study, this suggestion is only tentative.

## 7.5 Chapter summary

This chapter considered the implications of the findings of the thesis in relation to the previous literature and this study's conceptual framework. It first provided the summary of the findings based on research objectives and hypotheses. Then, by following a thematic structure, it highlighted the implications of the findings in relation to two broad themes: (1) understanding

the determinants of job quality for young workers; and (2) the relationship between job quality and young workers' mental health.

This study highlights the importance of taking a holistic approach to the interpretation of young workers' job quality and emphasises the need to go beyond pay and employment status and to pay more attention to intrinsic aspects of work. A range of individual and contextual factors (such as occupation, industry and institutional context) emerged as important predictors of job quality and mental health in the youth context, which suggest that the role of individual factors and personal agency might have been overemphasized in previous research and policy. Significant associations between job quality and mental health have strengthened the importance of job quality in the youth context, but also pointed to the limited impact of contract type and job security for young workers' mental health. This suggested changing attitudes and / or lowered expectations in relation to these aspects of job quality. It seems that contractual stability (in terms of contract type and job security) matters less in the youth context, young people might have come to expect them.

At the same time, this study also highlights the importance of a good match between an individual and a job (i.e. high person-job fit), in addition to the need for work to be of good quality in terms of more universal aspects (such as high social support, for instance). In relation to this, perceived employability emerged as an important resource for young workers, which may not only positively impact on young people's mental health but also alleviate the negative impact of poor job quality. Given that perceived employability is influenced by both individual (e.g. educational status and skills) and external factors (e.g. employer-provided training and institutional context), this further strengthens the importance of taking a holistic approach into the interpretation of young workers' job quality, and thus highlights the need to give more attention to contextual factors. The following chapter concludes this thesis by pointing to the contributions that this thesis has made and by considering the limitations and directions for future research, as well as implications for policy and practice.

### 8.1 Understanding job quality and mental health in the youth context

The overarching aim of this study was to further our understanding of job quality, its determinants and mental health outcomes in the youth context. Specifically, this study aimed: (1) to examine how young workers evaluate the quality of their jobs in contemporary labour markets, while taking into account the role of individual differences, job-related characteristics and wider institutional context; (2) to examine the role of social background in affecting young workers' evaluations of job quality; (3) to examine the relationship between job quality and mental health among young workers; (4) to examine the extent to which person-job fit (in terms of skills, contract type and working hours) is associated with mental health among young workers and the moderating effect of perceived employability. This study used secondary research design, comprising three large-scale social surveys: the EWCS (2015), the ESS (2010) and the UK LFS (2017). While the main focus of this study was on the UK context, it included three other European countries (Denmark, Germany and Spain) for hypotheses examining the role of institutional context in affecting job quality and the relationship between job quality and mental health. Young workers aged 18-34 were considered due to increasingly longer transitions to employment and adulthood in contemporary labour markets which often extend into early 30s.

In examining factors affecting young workers' evaluations of job quality, findings from EWCS (2015) showed that young people in the UK reported lower quality work than those in Denmark and Germany, especially in relation to pay, intrinsic quality of work and work-life balance dimensions of job quality, which pointed to the role of institutional context in shaping young workers' job quality. Occupation and industry were the key predictors of intrinsic quality of work and health and safety. Individual differences explained much less variation in job quality

than expected, suggesting that the role of individual factors and personal agency in securing high quality jobs might have been overestimated in past research.

Findings from ESS (2010), which examined the effects of social background (using parental education and occupation as a proxy) on young workers' job quality showed that parental education is a significant predictor of two key dimensions of job quality: intrinsic quality of work and work-life balance. This suggests that social background shapes youth labour market trajectories, which are not only individualised but still occur in the context of social inequality, and those from less advantaged social backgrounds may be at disadvantage in terms of job quality. At the same time, the findings also showed that the impact of social background was not significant in Denmark, which suggests that institutional context may affect the relationship between social background and job quality and contribute to more equality for young people.

The examination of the relationship between job quality and mental health further highlighted the salience of job quality in the youth context and showed that there is a need to go beyond the role of psychosocial quality of work when examining the effects of job quality on mental health. In particular, findings from EWCS (2015) showed that work intensity, meaningfulness, psychosocial risks, social support and training are the key predictors of young workers' psychological well-being. This pointed to the importance of intrinsic aspects of work. The findings also revealed weak associations between contractual stability (in terms of contract type and job security) and mental health outcomes suggesting potentially changing attitudes and lowered expectations among young people towards these aspects of job quality.

Crucially, however, findings from EWCS (2015) also showed that, for some aspects of job quality (such as skills and working hours), it is important to consider the extent to which jobs are in line with young workers' abilities and needs when examining the relationship between job quality and mental health. Perceived employability emerged as important factor in the youth context, which may not only affect mental health but also alleviate the negative effects of poor job quality. Overall, the findings highlighted the importance of taking a holistic approach to the interpretation of youth employment, which considers the role of contextual factors, intrinsic aspects of work, as well as the role of person-job fit and personal resources. This chapter next discusses the contributions of this study.

### 8.2 Contributions of the study

In examining job quality and mental health among young workers, this thesis makes several contributions to theory and to extant debates. Conceptually, this thesis brings different strands of literature together (e.g. marginal employment, underemployment, generational research and the career literature) to a study of job quality in the youth context, and by doing so it provides the first comprehensive account of how young workers in the UK evaluate the quality of their jobs, when compared to young workers in countries with different institutional contexts. Using job quality framework proposed by De Bustillo and colleagues (2011) allowed this study to incorporate different approaches to youth employment and additionally shed light on the aspects of job quality on which research to date has been limited (e.g. intrinsic quality of work). This study provides a new evidence about the important issue of what happens after young people enter the labour market. In general, this thesis provides a point of comparison with job quality studies of the wider working-age population.

Another contribution of this study is the simultaneous examination of individual and contextual factors to identify their effects on job quality and mental health among young workers. Existing literature and policy have emphasized the role of individual factors and personal agency in developing careers and securing high quality jobs (e.g. Clarke, 2008; Tomlinson, 2012; Wilton, 2014). This study suggests that contextual factors (in terms of institutional and job-related characteristics) have more impact on young workers' job quality than individual factors, which further strengthens the argument that the role of individual differences (such as education) and individual responsibility in affecting youth labour market outcomes might have been overestimated in previous research (Nyhagen & Cebulla, 2011). This study highlights the importance of taking a holistic approach to the interpretation of young workers' job quality and shows that youth employment should not be studied in isolation from the wider context in which work takes place. This thesis has implications for policies that target young people, which in the UK mainly focus on enhancing young adults' skills and educational status, with no interventions on the demand side of the labour market (e.g. Brown et al., 2011; Keep et al., 2010; Sutherland, 2013).

At the same time, the role of individual-level factors is also important, and this study suggests that social background may constitute a barrier to high quality jobs for young adults. This

finding contributes to sociological literature by highlighting the impact of structure on opportunities (Blackburn, 2008) in contemporary labour markets. It seems that young people from less advantaged social backgrounds (in terms of parental education) report poorer quality jobs, when compared to those from more advantaged social backgrounds. Therefore, social background may be one of the sources of social inequality among young people (Goldthorpe & Jackson, 2007; Kauppinen et al., 2015) and may lead to unequal opportunities in youth labour markets (Blackburn, 2008). In addition, this study also found that the impact of social background on job quality is not significant in Denmark, suggesting that institutional context may offset the role of social background and contribute to greater equality for young people. This study extends the theoretical knowledge about young workers by providing primary insights into how individual and contextual variables may interact and affect the extent to which young workers are able to secure high quality jobs.

Furthermore, this study contributes to the improved understanding of the outcomes of job quality in the youth context. To date, there is a lack of consensus among researchers in relation to the extent to which young people have been affected by the current state of employment and involvement in lower quality jobs (e.g. Ng et al., 2010; Scarpetta et al., 2010; Virtanen et al., 2005; Zijl & Van Leeuwen, 2005). The findings of this study show that negative job characteristics tend to accumulate. Specifically, those employed in jobs of lower intrinsic quality also tend to have poorer pay, lower employment quality and worse work-life balance. What is more, young workers on temporary contracts experience poorer quality work on other dimensions (in terms of pay, skills, the provision of training in the workplace and career prospects), when compared to those on permanent contracts. These findings suggest that lowquality work, due to its multiple disadvantages, is less likely to be a 'stepping stone' to a betterquality work (Scherer, 2004), which contributes to the debate on whether low quality jobs constitute a 'stepping stone' or a 'career trap' for young people (e.g. Giesecke & Gross, 2003; Zijl & Van Leeuwen, 2005; Scarpetta et al., 2010; Scherer, 2004). More importantly, this study shows that job quality is important from a mental health perspective and the way young adults experience work in contemporary labour markets may undermine their psychological wellbeing.

Significant associations between intrinsic quality of work (in terms of meaningfulness and social support) and mental health on the one hand, and weak associations between extrinsic aspects of work (in terms of pay, contract type and job security) and mental health on the other

hand, further strengthened the importance of the intrinsic aspects of work in the youth context. The examination of the relationship between job quality and mental health also highlighted the importance of person-job fit (i.e. the extent to which young workers' jobs are in line with their abilities and needs), in addition to the need for work to be of good quality in terms of more universal aspects (such as high social support, for instance). This contributes to the improved theoretical understanding of the concept of job quality in the youth context. To date, there is still no consensus on how to define a good job (De Bustillo et al., 2011). The review of the literature highlighted the dominance of the objective perspective to defining and operationalising job quality, particularly in large survey-based studies (Green, 2005; Leschke & Watt, 2014; De Bustillo et al., 2011). What is more, in the context of youth employment, to date the attention of researchers has mainly focused on earnings and employment status as an indication of how well young workers fare in paid work (e.g., De Grip & Wolbers, 2006; European Youth Forum, 2014; O'Reilly et al., 2015). This thesis suggests that it is important to focus on both intrinsic and extrinsic aspects of work and the role of individual abilities and needs when defining job quality in the youth context and examining its mental health outcomes. More generally, this study also contributes to the economic literature by suggesting that pay is not the only aspect of a 'good' job.

Furthermore, weak associations between extrinsic aspects of work (in terms of contract type and job security) and mental health pointed to potentially changing attitudes and / or lowered expectations among young people as a result of increasingly challenging labour markets. In other words, job security and contractual stability may matter less for young people due to high prevalence of insecure and temporary jobs in today's labour markets, which helps to explain why these aspects of job quality do not appear as threatening for young workers' mental health, when compared to research on working-age populations. This finding contributes to generational literature by highlighting the importance of the wider context for young people's attitudes and expectations in relation to job quality. To date, the role of the context is the theme that is often missing in generational research (Deal et al., 2010). This thesis suggests that changing attitudes and expectations among young people in relation to a new employment norm characterised by constant instability and insecurity in employment (Ng et al., 2010).

Finally, this study showed that perceived employability may be an important personal resource for young workers in the context of contemporary labour markets, characterised by constant uncertainty and insecurity (De Cuyper et al., 2011; O'Reilly et al., 2015). It seems that perceived employability provides control over one's working life in the current unpredictable UK labour market, and thus contributes to better mental health among young people (Berntson & Marklund, 2006; De Grip et al., 2004). Perceived employability also helped to explain why the relationship between person-job fit and context-free mental health may be less or more pronounced, which contributes to person-job fit theory (Edwards, 1991) by uncovering one of the potential mechanisms linking person-job fit to mental health. In particular, this study showed that reporting higher levels of perceived employability is beneficial to the mental health of those who report low person-job fit. Since perceived employability is closely related to coping (Berntson, 2008), this suggests that young workers' may use their personal resources to cope with the situation of being in undesirable employment (i.e. low person-job fit). This chapter next considers the study limitations and directions for future research.

8.3 Study limitations and directions for future research

### Methodological evaluation of this study

Possibly the most important limitation of this research is its cross-sectional design, which hampers causal interpretations (Field, 2017; Tabachnick & Fidell, 2013). However, the hypotheses were aligned with theory and the results of past research (e.g. Bell et al., 2012; Cottini & Lucifora, 2013; Edwards, 1991; Hobfoll, 2002), which suggested that job quality, person-job fit and perceived employability are more likely to cause mental health than the other way around.

Moreover, the use of cross-sectional data might have resulted in the underestimation of the strength of associations between job quality and mental health in this study. In particular, it may take time for the stressor to have an effect (O'Driscoll & Brough, 2010; Zapf et al., 1996), which suggests that, over the long-term, experiencing lower quality work may have more damaging mental health consequences. In fact, there is a prevalent view among researchers that chronic job stressors are likely to result in poor health (Kinman & Jones, 2005).

However, it is not clear how long it takes for job quality to have a significant impact on mental health. The review of the literature suggests that the 'time-lag' for causal effects of different aspects of job quality on mental health has not been clearly established. Tucker et al. (2008, p. 90) suggested that "the time span may be different for different stressors such that high mental load may begin to affect one's health in a matter of days, whereas the health effects of shift work may not be realised for several years". There is clearly a need for more longitudinal studies in the area of work and mental health to explore this issue further.

The second important limitation of this thesis is the measures of concepts. In particular, this study relied entirely on secondary data sources and in some cases better measures would have been preferred. Some concepts (such as perceived employability, job security or meaningfulness) were measured with one-item measures. The use of one-item measures to capture different concepts may restrict the variation of the sample and result in a smaller explained variance (Silla et al., 2009). However, despite this limitation, the chosen measures explained quite a lot of variance in the current study. In fact, there is currently a growing number of studies in the area which have used one-item measures successfully (e.g. Cottini & Lucifora, 2013; De Cuyper et al., 2010; De Bustillo et al., 2011).

Moreover, the measures of positive aspects of mental health in the EWCS (2015) only included variables suitable to examine affective well-being. In contrast, the measures of negative aspects of mental health included common mental health problems (e.g. anxiety and fatigue). Except for work-related exhaustion and stress, all measures focused on context-free well-being, which allowed for a comprehensive evaluation of general mental health among young workers, but at the same time it might also be a potential limitation of this study. In particular, while work-related mental health is more responsive to conditions in the domain of work, the context-free mental health is additionally influenced by factors in other domains, such as family or community (Warr, 2013).

Another limitation in terms of measures was a lack of variables in the EWCS (2015) to examine the social background of respondents and the mismatch in terms of contract type. As a result, the relationship between person-job fit in terms of contract type and mental health (RO4) was examined with the use of a different survey. Similarly, the investigation of the impact of social background on job quality (RO2) was conducted with the use of the ESS (2010). These three datasets differed in terms of sample characteristics and measures used, which could have
affected the comparability of the data across different surveys (Leschke & Watt, 2014; MacInnes, 2017). However, in choosing the secondary data, the quality of different data sources was reviewed in great depth (Chapter 5), and only official, reliable and well documented data were selected for the purpose of this study. Using a combination of three surveys allowed for a greater breath of measures to be used, and this approach has been effectively applied in some of the previous studies in the area of job quality (e.g. Green, 2006; Green, 2013; Leschke & Watt, 2013).

Furthermore, all variables used in this thesis were obtained through self-reports. Some authors suggest that the use of self-reported data as measures of the work environment may be contaminated by a person's internal states (such as emotions), as well as a person's disposition (such as personality), which may limit the validity of such measures (Warr, 2013). Some other critics argued that measuring both dependent and independent variables through self-reports may blur the boundaries between work stressors and resulting job strains (Zapf et al., 1996). However, data from secondary sources have also been criticized and Fox et al. (2007) noted that secondary source reports may be based on more limited information than self-reports. For example, some stressors, such as job security, are more privately experienced and are less likely to be accurately perceived by the outsiders. While this study relies solely on self-reports, each dimension of job quality includes a mixture of both subjective (such as job security) and objective job attributes (such as contract type). This ensures the right 'balance' between individuals' perceptions and purely factual data and contributes to greater validity of the chosen measures (De Bustillo et al., 2011).

What is more, measuring mental health with the use of self-reports may also have some drawbacks. Due to the transparency of these measures, participants may adjust their responses in order to present themselves in a more socially desirable way (Kaplan et al., 2013). For instance, participants may be reluctant to report high levels of negative emotional states (e.g. anger) (Chan, 2009). Nevertheless, many researchers argue that well-being is best evaluated by individuals themselves (Jylha, 2009) and self-rated health was shown to be a reliable indicator of morbidity and mortality (Bauldry, 2014; Benyamini & Idler, 1999; Jylha, 2009). In addition to this, studies showed that self-reports of emotional states have high face validity – they measure what they are designed to measure (Kaplan et al., 2013). Another advantage of self-reports is related to the fact that emotional states are inherently perceptual in nature and therefore respondents themselves are in the best position to assess them (Warr, 2013). In this

study, individuals were asked to describe their emotional states over the past two weeks. It has been shown that inaccurate responding is less likely when people are asked to describe their emotional states over a short time interval rather than how they feel 'in general' (Larsen & Prizmic-Larsen, 2006).

Finally, another methodological issue is a small sample size of surveys included in this thesis, which limited the depth of analyses for different sub-groups of young workers. As a result, some occupational groups, sectors and industries had to be combined and others had to be removed entirely due to the lack of respondents in certain categories. Finally, given the small sample sizes of chosen surveys, the effect sizes were quite varied. For example, in relation to RO3, the final regression models explained between 23% and 38% of variance in mental health, which according to Cohen's delta (1988, 1992) represent medium-large effect size. In relation to RO4, the interaction effects between perceived employability and person-job fit were rather small (based on odds ratio) (Field, 2013). However, it should be noted that moderating effects are difficult to detect in non-experimental studies, because they do not allow researchers to control the study setting in the same way as in experimental research (McClelland & Judd, 1993). Therefore, the importance of the moderating effects cannot be assessed solely based on the effect sizes, but the meaningfulness of the interactions should also be considered.

### Implications for survey methodology

This study has implications for future survey methodology. To date, the EWCS is considered the best source of information to study job quality in the European context (De Bustillo et al., 2011). Future editions of the survey would clearly benefit from larger sample sizes, or even sample boosts could be introduced for specific sub-groups of the population that are at disadvantage. This study shows that the population of young workers clearly deserves to be given more attention in future research. The EWCS would also benefit from the inclusion of more measures that capture contemporary job quality issues (such as mismatch in terms of contract type) and multi-dimensional nature of perceived employability and mental health. The inclusion of more work-related mental health measures would also be advantageous, as well as more measures capturing the positive aspects of mental health at both trait and state levels. In general, future surveys could make better use of well-established and validated scales rather than using single-item measures (De Vaus, 2014).

# Implications for work-related stress theories

While this study found significant associations between person-job fit (in terms of skills and working hours) and mental health, which supports the person-job fit theory (Edwards, 1991), the mechanisms behind the found associations have not been fully explored. This study showed that perceived employability may be an important personal resource for young workers in the context of contemporary labour markets, which helps to explain why the relationship between person-job fit and context-free mental health may be less or more pronounced. However, the COR theory (Hobfoll, 2001) proposes that resources tend to accumulate and create resource caravans, which suggests that young workers who reported higher levels of perceived employability in this study might also score high on other personal resources. In the context of young adults, some of the key mechanisms may include perceived control and core self-evaluations, such as self-esteem (Hobfoll, 2001; De Cuyper et al., 2011; Stanfeld & Candy, 2006). Future studies would benefit from incorporating a wider range of personal resources (e.g. core self-evaluations) in order to examine how person-job fit and mental health may be related and to assess the importance of perceived employability as a moderator.

Finally, a further implication of this study is the importance of considering the role of the wider context (which include country-level institutions and organisational factors) in work-related stress theories, where individualistic perspective underpins most studies by abstracting the individual from the broader socio-economic context in which the work takes place (O'Driscoll & Brough, 2010). Recently, Burgard and Lin (2013) called for a need to develop a multi-level approach to the study of work and health. Yet, to date there is a lack of well-controlled studies that would address the role of contextual variables. Clearly, there is a need for stress theories to address the role of the wider context in order to avoid overestimating the relationship between job quality and mental health.

# 8.4 Implications for policy and practice

This study highlights the importance of job quality in the youth context and shows that the way young adults experience work in contemporary labour markets may undermine their psychological well-being. It shows that it is necessary to take a holistic approach to the interpretation of young workers' job quality and mental health, which takes into account the role of intrinsic aspects of work, individual and contextual factors, as well as the extent to

which young workers' jobs are in line with their abilities and needs. This raises important implications for policymakers and employers and is discussed next.

## Implications for policymakers

This research provides an informative basis for policymaking by offering a comprehensive account on how young workers in the UK fare in terms of job quality and which aspects of work may undermine their psychological well-being. It reveals groups of young people who have access to high quality jobs, and the characteristics of organisations and countries that contribute to better or poorer job quality for young adults. This study provides a novel evidence about young adults' experiences of work after entering the labour market.

Official figures show falling unemployment and growing economy in the UK. From 2012 the unemployment has been gradually decreasing in the UK, from 8.2 % in 2012 to 3.9 % in 2019 (ONS, 2019b). The current employment rate (as of July 2019) is at 76.1% which is the highest since comparable records began in 1971 (ONS, 2019b). Similarly, youth employment rate in the UK is improving and according to the Secretary of State for Work and Pensions: "with the youth unemployment down over 45% since 2010, school leavers this week can look forward to a growing jobs market, improving the prospects for their future careers" (UK Government, 2018).

However, while today many young people are in paid work, there is less evidence of their career prospects improving. This study shows that it is not only the employment status that matters. The extensiveness of poor quality jobs and high underemployment (in terms of skills and working hours) found in this study and their associations with poor mental health highlight the silence of job quality in the youth context and show that job quality cannot be ignored. Since the costs of poor mental health are both private (for workers and employers) and social (for families and taxpayers) (e.g. Cottini & Lucifora, 2013; Mark & Smith, 2008; Robone et al., 2011), policymakers should focus on improving the access to high quality jobs for young people.

In the last decades the vision of 'more and better jobs' has been advanced by the UK Government, and separately by its devolved administrations. The highest progress has been achieved in Scotland, where the vision and framework for 'Fair Work' is firmly established. However, despite some progress being made towards 'better jobs', currently job quality does not seem to be a priority in relation to the population of young adults. The Taylor Review of Modern Working Practices (Taylor et al., 2017) has made little reference to young workers. In the UK, skills policy focuses almost entirely on bringing more youth into paid employment and / or increasing the supply of highly qualified individuals (Sutherland, 2013), with little attention to job quality. While the UK skills system has helped to increase the level of skills and qualifications among the young workforce, this study shows that the UK suffers from poor utilisation of young workers' skills. The pervasiveness of low person-job fit (in terms of skills) found in this study suggests that while up-skilling of individuals is an important supply side policy, ensuring that there is demand for utilising these skills is equally essential (Keep et al., 2010)

As a result of the high prevalence of skills mismatch among young people in the UK, society is losing their valuable skills and this inhibits productivity growth that would have been achieved had these young workers been employed at their appropriate level of skills (ILO, 2013). According to the Office for National Statistics (ONS), productivity in the UK (measured by output per hour) is at historically low levels and fell at its fastest annual pace in the last five years (ONS, 2019c). It is well-known that, when it comes to productivity, the UK largely lags behind other developed countries (OECD, 2018). Based on the findings of this study, this may be partially due to poor utilisation of young adults' skills in the workplace (Brown et al., 2010). This highlights the importance of adapting employer practices to make better use of young workers' skills, for example through job redesign and greater investment in training and development opportunities (Hall & Las Heras, 2010).

As OECD has recently shown in *Getting Skills Right* report, one way to address the weaknesses of the UK skills system may be through developing a skills utilisation policy by funding "a set of pilot initiatives to test 'what works' in terms of adapting work organisation and management practices to make better use of employees' skills" (OECD, 2017, p. 13). The UK has an ambition to become a world class nation in employment and skills and job quality is one of the core issues impacting the UK's ability to meet this ambition (OECD, 2017).

Today, HE is regarded as a 'passport' to a good job (Guardian, 2016). However, given the high incidence of over-skilling among graduates, this assumption is questionable. For many years the skills system in the UK has prioritized the expansion of HE and little attention has

been given to developing further education and strong vocational training system to make non-university education more attractive to young people (CIPD, 2017). It also seems that, in the face of limited availability of graduate-level jobs, young people would benefit from better career guidance to have a clearer understanding of their career options and other possible pathways from school to work. Recent approaches to career guidance suggest that, in the current climate of more challenging labour market transitions, there is a need to change the nature and scope of youth career services (Watts, 2010). Some studies show that drawing on the counselling profession for inspiration concerning 'what works' when working with young people may prove beneficial (Westergaard, 2012). According to Westergaard (2012, p. 328) "today many young people in a range of contexts need support, not only to make decisions about future opportunities but also to manage the complexity of a range of issues connected with living full, active and positive lives". Given the associations between low quality jobs and poor mental health found in this study, reassessing the current approaches to career guidance certainly deserves more attention from policymakers.

The examination of the relative importance of individual and contextual factors showed that in contemporary labour markets young workers may be constrained by a wide range of external factors which are beyond their personal control. This study revealed high diversity across countries, occupations and sectors in the wider European context in relation to young workers' job quality. In the UK, approximately one in two young workers are employed in occupations and industries that offer poor quality work across multiple dimensions. This is particularly visible in the Customer Service industry and low-skilled white collar occupations (which includes clerks, service workers, shop and market sales workers). This segmentation of youth employment warrants attention and points to the importance of designing policies that target specific industries and occupations where young workers report the lowest quality jobs.

The findings of this study also showed that in some countries young adults fare better in terms of job quality, suggesting that the key factors shaping pay and work-life balance are employment policies and the relative capacity of organised labour (Gallie, 2009; Holman, 2013; Olsen et al., 2010). This study showed that young workers in Denmark report on average the highest quality jobs across multiple dimensions. Denmark has a specific institutional setup which combines generous social security with well-developed vocational training system and high provision of active labour market programmes for young people. It

is often held up as an example, because of its distinctive labour market policy that allows to bridge flexibility and security (Amable, 2003; Bambra, 2007; Culpepper & Thelen, 2007; Kristensen & Lilja, 2010). Some scholars argue that the success of Denmark is driven by its historical ability to balance economic and social considerations (Larsen, 2004). There is a good reason to investigate further what can be learnt from the Danish labour market context, with a particular focus on the extent to which the institutional and policy arrangements in Denmark are transferable to other countries (Larsen, 2004).

The findings of this study indicate that by emphasizing the role of individual factors and personal agency and diverting resources away from the underlying high-risk conditions created by poor quality jobs and contextual factors (in terms of occupation, industry, and institutional context), policymakers may unintentionally harm young adults' mental health. Hence, promoting job quality and mental health is much more than identifying young people at risk due to specific individual characteristics (such as lower educational status) and bringing more youth into HE. This thesis shows that many of the issues that affect the extent to which young workers can secure high quality jobs are beyond the role of individual factors and personal agency. Policymakers in the UK need to work with relevant stakeholders (especially employers) to build better working environments and promote mental health among young workers.

The examination of the relationship between job quality and mental health showed weak associations between extrinsic aspects of work (such as contract type and job security) and psychological well-being, suggesting changing attitudes and lowered expectations among young people towards these aspects of job quality. This issue is problematic from policy perspective as it implies that low quality work may become a new 'norm' in the youth context. In the UK, lack of aspirations among young people is used as an explanation for the stagnating levels of social mobility. Therefore, the 'raising of aspirations' has become the focus of UK government strategy in the past decades (Carlisle, 2010). However, if young people lowered their expectations towards work, raising aspirations may prove counterproductive. Research shows that if aspirations exceed expectations, this can cause common psychological problems such as depression (Greenaway, Frye, & Cruwys, 2015). This highlights the danger of teaching young people to aspire higher without also providing resources to ensure that they can reasonably expect to achieve their goals. Thus, unless policymakers tackle the structural barriers to high quality jobs, raising aspirations among

young people without ensuring they can also have high expectations in relation to their working lives may do more harm than good.

The role of perceived employability in affecting mental health and alleviating the negative effects of lower quality jobs suggests that enhancing young people's skills and education is important because it contributes to developing young workers' employability perceptions. However, external context in which work takes place has also been highlighted as important determinant of perceived employability (McQuaid & Lindsay, 2005; Purcell et al., 2005; Wilton, 2014), and thus given the salience of contextual factors, policymakers should complement, not replace, the interventions targeting individual workers with those addressing organisational practices and wider institutional forces. The current one-sided understanding of 'employability' in the policy context fits with the idea of individual responsibility where the responsibility of tackling labour market difficulties is conveniently shifted from the state to young people (Sweet & Meiksins, 2013).

Finally, it is important to note that perceived employability does not solve the issue of low quality work but is rather a 'remedy' for young people by helping them to cope with poor quality jobs and by providing them with possibilities to overcome structural disadvantages. Currently policymakers in the UK are preoccupied with enhancing youth employability which is assumed to contribute to better labour market outcomes for young people. However, unless we tackle the structural barriers that exists in the UK youth labour market, enhancing young people's employability perceptions will not ensure good mental health and equal labour market opportunities for all. Thus, as argued earlier, policymakers need to take a holistic approach to youth employment and address deficiencies on the demand side of the labour market (e.g. Dobbins et al., 2014; Bryson, 2010; Keep et al., 2010).

# Implications for employers

Given the negative impact of lower quality jobs on mental health among young workers, this study points to the importance of maximising high quality of working life in the youth context. Since the costs of poor mental health can affect employers in terms of potential productivity losses and sickness absence to name just a few (e.g. Mark & Smith, 2008; Schneider, 2011; Wright, 2010), organisations should consider paying more attention to young workers' job quality. In general, this study showed that improving the quality of work among young people involves not only increasing pay, but also providing access to more

meaningful work, tackling work intensification and preventing the exposure to psychosocial risks. This study showed that meaningfulness and work intensity are particularly problematic in the UK context and these aspects of job quality emerged as the key predictors of their mental health. Regular monitoring of job quality in the workplace is advised in order to better understand the trends in the quality of working life and minimize the detrimental impact of work on mental health.

The high prevalence of low person-job fit and its negative associations with mental health among young people has implications for recruitment and selection practices. This study indicated that almost half of young people are employed in jobs which are not in line with their abilities and needs (in terms of skills and working hours). The finding that poor person job fit contributes to differences in mental health highlights the importance of adapting recruitment and selection practices. Today employers are seeking to separate the best talent among an increasing pool of applicants by rising skill requirements for entry-level jobs (O'Reilly et al., 2015; Lain et al., 2014) and recruiting graduates in jobs that, in a different labour market, would have been filled with non-graduates (McGuinness, 2006; Walker & Zhu, 2005). This study emphasises the need to make efficient use of young workers' skills to prevent negative consequences of poor quality work. When considering what skills and qualifications to require in recruitment and selection, employers should only require those qualifications which are actually and demonstrably essential to perform the advertised job (Social Mobility Commission, 2019). Several studies have shown that skills mismatch can have negative consequences for employers, as overeducated workers are less productive than correctly allocated workers with the same formal qualifications (e.g. Buchel, 2001; Tsang & Levin, 1985; Tsang et al., 1991).

The importance of perceived employability for mental health has implications for training and development opportunities in the workplace. Training was highlighted as one of the key factors in the formation of employability perceptions (Smith & Comyn, 2004), because it enhances skills, knowledge and behaviour of workers (Barney, 1991). Today most organisations consider training as a long-term investment, or a wasted expenditure, and it is common for training budgets to be cut or completely removed (Bulut & Culha, 2010). In the UK, young workers have been affected by large decreases in the volume of training in the last decade (Green et al., 2016). This suggests that organisations do not see training provided by the employer as current priority for young workers. This can be considered as worrisome, as in the labour market where workers are exposed to uncertainty and possible career interruptions, the role of skills development is becoming increasingly important (Kauhanen & Natti, 2015) not only for career progression but, according to this study, also for young workers' mental health.

Finally, this study has implications for managing mental health in the workplace. The findings of this study showed that mental health is affected by the combination of workplace factors (job quality), contextual and individual factors, and that individual factors as opposed to job-related characteristics and institutional context, explained less variation in mental health outcomes. To date, secondary interventions (such as stress management training or relaxation) and tertiary interventions (such as counselling) are the most common strategies for managing stress in the workplace (Noblet & Rodwell, 2010). This study suggests that employees should not be the sole focus of change and mental health should be a shared responsibility of both employees and employers. The associations of work-related factors with mental health found in this study suggest that primary interventions, such as minimizing work intensity and the exposure to psychosocial risks or providing adequate levels of social support should be the key focus of employers in managing mental health in the workplace. Emphasizing individual responsibility for managing psychological well-being may further add to the stress of people by making them think that their own weaknesses are the source of poor mental health and managing these weaknesses is the end of their problem. The importance of the shared employer-employee responsibility to addressing work-related determinants of health is a guiding principle of today's Workplace Health Promotion (WHP). For example, the European Network for Workplace Health Promotion (ENWHP, 2012, p. 6) defines WHP as:

"the combined efforts of employers, employees and society to improve health and well-being of people at work. This is achieved through a combination of: improving the work organisation and the working environment; promoting the active participation of employees in health activities, and; encouraging personal development."

#### 8.5 Conclusion

The overarching aim of this study was to examine job quality, its determinants and mental health outcomes in the youth context. This study points to the importance of taking a holistic approach to the interpretation of young workers' job quality, which considers the role of intrinsic aspects of work and contextual factors. This study concludes that job quality among young people largely depends on occupation, industry and institutional context, and suggests that the role of individual factors and personal agency in securing high quality jobs might have been overestimated in past research and policy. Crucially, however, the role of perceived employability in enhancing mental health and alleviating the negative impacts of poor quality jobs suggests that both individual factors (e.g. in terms of ones' skills and experience) and contextual factors (e.g. organisational and institutional factors) are important, since they are key predictors of one's employability perceptions. Nevertheless, this study also suggest that perceived employability does not tackle the quality of work itself but is rather a 'remedy' for young people by helping them to cope with low quality jobs and by providing them with possibilities to overcome structural disadvantages. Thus, if we do not consider the wider context of why and how young workers end up in low quality jobs, this issue can end up being situated inside the person. This individualisation of risk in job quality and mental health studies not only puts the pressure for developing careers and securing high quality jobs on an individual's shoulders, but also turns the focus away from organisational and institutional factors which contribute to young adults being in these difficult positions in the first place. The examination of the outcomes of job quality in terms of mental health further strengthened the salience of job quality for young people and concluded that, in addition to the need for work to be good in terms of more universal aspects (such as high social support), the impact of job quality on mental health depends on the extent to which jobs are in line with young workers' abilities and needs. This study has important implications for policy and practice and calls for priority to be given to job quality and interventions on the demand side of the labour market. In terms of theory, the key contribution of this study is the examination of youth employment from the job quality perspective, which allowed it to incorporate different theoretical approaches to the study of young adults' working lives, the relative importance of individual and contextual factors, and the outcomes of job quality in terms of mental health.

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#### APPENDIX 1: Description and evaluation of surveys included in this study

#### 1. European Working Conditions Survey (2015)

The European Working Conditions Survey (EWCS) has been launched in 1990 by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), which is a tripartite European Union Agency based in Dublin. The main aim of Eurofound is to contribute to the planning and design of better working and living conditions in Europe (Eurofound, 2015g). Since 1990, six waves of the EWCS have been conducted (1991, 1995, 2000/2001, 2005, 2010 and 2015) and the survey takes place regularly every 4-5 years. This thesis will use the latest sixth wave of the EWCS which took place in 2015.

*Survey funding*. The EWCS is funded, designed and coordinated centrally by the Eurofound and the fieldwork contractor. The fieldwork contractor is a large EU-wide fieldwork company, which is chosen every five years to carry out the fieldwork in different countries, under the supervision of the Eurofound's staff. The list of all fieldwork companies can be found in the EWCS's technical report (Eurofound, 2015d).

*Survey objectives*. The EWCS (2015) covers all 28 EU Member States, as well as Norway, Switzerland, Albania, Montenegro, Serbia, the former Yugoslav Republic of Macedonia, and Turkey. The main aim of the EWCS is to evaluate working conditions across Europe on a harmonised basis, analyse associations between different aspects of working conditions, identify groups of workers at risk and issues of concern, monitor trends related to working life, and finally to contribute to European policy development in the area of job quality and employment issues (Eurofound, 2015). The EWCS's objectives are closely in line with the research objectives of this thesis.

*Thematic coverage*. In terms of its topical coverage, the EWCS provides information on the widest range of topics related to job quality at the European level (Munoz de Bustillo et al., 2011). Many proposals of job quality indexes and models have been based on it and the EWCS has been widely used in previous research when examining topics related to work and employment issues (e.g., Munoz de Bustillo et al., 2009; Green & Mostafa, 2012), and the relationship between job quality and mental health (e.g., Cottini & Lucifora, 2013). Themes covered in the EWCS (2015) include: employment status, working time, contractual

conditions, training and development opportunities, job security, work intensity, physical and psychosocial risk factors, earnings, as well as work and health and demographic information on participants (Eurofound, 2015). The EWCS (2015) covers all key areas of job quality and fits very well with the information required to address the research objectives of the current study.

*Target population*. The target population of the EWCS (2015) are all individuals 15 or over (except Bulgaria, Norway, Spain and the UK, where the age is 16 or over), who live in private households and are in paid employment (of at least one hour per week) during the week preceding the interview (Eurofound, 2015d). The EWCS (2015) covers 35 European countries.

*Sampling strategy*. In all countries, the same sampling strategy was used: the sample was stratified by province/region and degree of urbanization, and the sample was assigned to the strata proportionately to the number of employed individuals in each stratum. Eurostat Labour Force Surveys (LFSs) were utilized in most countries, but when this was not available, the national statistics were used. Households were selected randomly at an address, and within each selected household one eligible person was randomly selected. The sampling frames varied by country. The EWCS (2015) aimed to use high quality sampling frames, based on registers of individuals or addresses (when available), but in case where these were not available, the enumeration was used to create a list of addresses. The overall average response rate for the EWCS (2015) was around 43 per cent (Eurofound, 2015c).

*Sample size*. Sample size of the EWCS varies between countries and includes roughly 1000 individuals per country. In larger countries (such as the UK, France, and Germany), sample size is larger to reflect larger workforce. Three countries agreed to top-up their samples (Belgium, Spain and Slovenia). The sixth wave of the EWCS interviewed nearly 44,000 individuals in 35 countries, and therefore is the most comprehensive wave to date in terms of the number of countries and individuals involved (Eurofound, 2015d).

*Questionnaire*. The questionnaire was designed by a group of policy-makers and experts in the area of work and employment studies, together with the Eurofound research staff. The same questionnaire was used in all countries, which means that all the questions, definitions and classifications are identical across countries. The questionnaire was pre-tested through cognitive testing (which took place in England and involved 36 interviews in total) to assess

whether respondents found any of the questions problematic and to examine the comprehensiveness of the response categories. The questionnaire was translated from the source language (British English) based on the TRAPD model (Translation, Review, Adjudication, Pre-Testing and Documentation), which are five comprehensive procedures involved in producing the final translated version of the questionnaire. The second translation assessment was carried out by Ipsos. Following the translation process, pilot study was conducted and its key aim was to ensure that all the versions of the questionnaire measure the intended attitudes, values and behaviours, and that the data collection is conducted according to the EWCS study protocols in every country. At least 28 pre-test interviews were carried out in the 35 participating countries of the sixth edition of the EWCS. All interviewers had to attend at least one training session prior to starting their fieldwork (European Working Conditions Survey, 2015d).

*Data collection*. The face-to-face interviews were carried out at respondents' homes and took on average 45 minutes. The EWCS (2015) was the first edition of the survey in which the computer-aided personal interviewing (CAPI) was used across all countries and interviews (Eurofound, 2015d). In addition to the questionnaire, *show cards* were used during the interview process.

*Data quality*. Eurofound puts a great emphasis on quality for the EWCS, and a wide range of different measures for quality assurance have been taken during the stages of design and implementation of the survey, including: (1) pre-fieldwork quality control measures (such as cognitive tests, advanced translations, interviewer training sessions, etc.), (2) fieldwork quality control measures (such as interim data checks, checks on distribution of values within different variables, etc.), and (3) post-fieldwork quality control measures (such as final checks on permitted values, data errors, outliers, etc.). For instance, the fieldwork procedures followed rigorously the same principles across countries to ensure high degree of cross-country harmonization and comparability (Munoz de Bustillo et al., 2011). The Quality Control Plan was developed, which explains in more detail the quality assurance indicators and general measures taken to ensure the high quality of the whole survey (Eurofound, 2015d).

*Data documentation*. The EWCS offers high degree of transparency regarding every aspect of the survey design and data collection process. Comprehensive survey documentation is provided online, including: the technical report, survey questionnaire, quality control report,

and detailed reports on sampling, translation, coding and weighting procedures. The EWCS survey documents are important sources of information for the evaluation of different aspects of data quality.

*Data access*. The survey is available for downloading through the UK Data Service under the and is free of charge. To access the EWCS data, the researcher has to register with the UK Data Service, and then fill in a short online form, which states the title and broad aims of his/her research project. Data access is given immediately to PhD students and researchers, who intend to use it for research-related purposes. For the purpose of this thesis, data of the EWCS (2015) in SPSS format and accompanying survey documentation have been downloaded through the UK Data Service.

#### 2. European Social Survey (ESS)

The European Social Survey (ESS) is an academically-driven international survey, which is conducted every two years in over 30 European nations. Since its launch in 2002, seven editions have taken place so far (2002, 2004, 2006, 2008, 2010, 2012, and 2014). This thesis will use the fifth edition of the ESS, which took place in 2010 and covers 28 European countries (both EU and non-EU Member States).

*Survey funding*. The ESS is funded by European Commission and all participating countries, which are required to pay a basic membership fee and an additional fee (based on the GDP of each country). What is more, each participating country is responsible for covering the costs of fieldwork and national coordination. In 2013, the ESS was awarded the European Research Infrastructure Consortium (ERIC) status.

*Survey objectives*. The three key aims of the ESS are to "monitor and interpret changing public attitudes and values within Europe and to investigate how they interact with Europe's changing institutions, secondly - to advance and consolidate improved methods of cross-national survey measurement in Europe and beyond, and thirdly - to develop a series of European social indicators, including attitudinal indicators" (European Social Survey, 2015, p. 10).

*Thematic coverage*. The ESS covers a wide range of topics, which include the core topics (also called the 'core module') that remain largely the same in each edition, and the rotating topics (also called the 'rotating modules') which focus on specific themes, that are sometimes

repeated in later editions of the ESS. The core section of the ESS questionnaire covers the following topics: social trust, politics, subjective well-being, gender, household composition, family background, socio-demographic information and human values. The rotating section is smaller and devoted to a specific theme (usually between one and three themes per each edition of the survey). The fifth edition of the ESS (2010) is of interest to this thesis because it includes the rotating module called *Work, Family and Well-being*, which aims to provide insights into contemporary issues of work, family and well-being, and into the associations between them. The fifth round of the ESS (2010) covers the area of family background, mental health and job quality very well (European Social Survey, 2015).

*Target population*. The target population of the ESS is defined as "all persons aged 15 and over (no upper age limit) resident within private households in each country, regardless of their nationality, citizenship or language (The ESS Sampling Expert Panel, 2016, p. 5).

*Sampling strategy*. Regarding sampling strategy, the ESS sets the following key principles: the usage of strict random probability samples, best possible coverage of the ESS target population, and similar statistical precision across countries. The stratification of the sample is strongly recommended, as it allows to achieve a desirable distribution of individuals according to socio-demographic characteristics (such as sex and age, for instance). Sampling frames differ from country to country, which affects the quality of the selected sample. In general, registers of households or addresses were used as sampling frames. In case when registers were not available, the multi-stage sampling designs were applied.

*Sample size*. Sample size varies by country. In the fifth edition of the ESS, sample size ranged from 1600 to 5376 individuals per country.

*Questionnaire.* The questionnaire, which contains both core and rotating modules, has been developed by multi-national group of researchers. The core module measures topics of enduring importance to social scientists, as well as the most comprehensive set of socio-structural ('background') variables of any international survey. During the core module development, the academic specialists were asked to recommend specific themes to be included in the ESS under three broad themes: 'People's values and ideological orientations', 'People's cultural and national orientations', and 'The underlying social structure of society'. Prior to the tenth edition of the survey (which is expected to take place in 2020), the ESS will

review the entire core module in collaboration with subject experts to ensure its ongoing social importance and policy relevance. For each edition of the ESS, the international researchers were also asked to contribute to the development of the rotating modules. Themes for rotating modules were selected "following a Call for Proposals published in the Official Journal of the European Union (OJEU) and circulated via the European Science Foundation and relevant National Science Foundations" (European Social Survey, n.d.-a, para. 3).

The questions used in the main questionnaire underwent a rigorous evaluation using standard quality criteria (such as reliability and validity). These evaluations were conducted using the program SQP developed for the prediction of reliability and validity of questions (European Social Survey, n.d.-a). Attention has also been given to other quality criteria such as "scalability and internal consistency, comparability of items over time and space, expected item non-response, social desirability and other potential biases, and the avoidance of ambiguity, vagueness and double-barrelled questions" (European Social Survey, n.d.-a, p. 10). Two large scale national pilot studies were carried out in order to evaluate the quality of the proposed questions and the distribution of the answers. Problematic questions (for instance, on grounds of weak validity or reliability) were sent back to the drawing board. (European Social Survey, n.d.-a).

The final source questionnaire (in British English) was translated into all ESS languages, based on rigorous translation methods (European Social Survey, n.d.-a). Similarly to the EWCS, the ESS follows the TRAPD methodology (Translation, Review, Adjudication, Pretesting and Documentations). Each participating country carried out a pre-test study to eliminate any remaining translation issues (European Social Survey, 2016).

*Data collection*. Data is collected via face-to-face interviews, which takes approximately one hour. In each country, which participates in the ESS, the national funding body appoints a National Coordinator (NC) and a survey organisation to conduct the survey, based on the ESS requirements. The ESS Survey Specifications is an important document, which provides an overview of tasks and responsibilities with regard to implementing the survey. This ensures high quality of data in each participating country, and also high comparability of data across countries. The principal standards on data collection include: (1) response rate target of 70%; (2) non-contact rate target of 3% maximum; (3) fieldwork period of at least one month and between September and December of the survey year; (4) detailed briefing of all interviewers;

(5) restricted interviewer workload; (6) interviewer call schedule (at least four contact attempts); (7) contact forms to record and document data; (8) quality control back checks (on completed interviews and non-respondents); and (9) close monitoring of fieldwork process. The process of preparation and implementation of data collection is closely monitored by the ESS Core Scientific Team (CST), which comprises seven academic and research institutions (such as University of London, University of Leuven, Leibniz Institute for the Social Sciences, Norwegian Centre for Research Data, The Netherlands Institute for Social Research, Universitat Pompeu Fambra in Spain, and University of Ljubljana). In order to foster compliance with the ESS standards, the CST provides guidelines, additional training materials, and individual support to all countries. During the data collection process, each country is required to submit weekly feedback on fieldwork progress to the CST (e.g., number of refusals, number of completed interviews, etc.) (European Social Survey, n.d.-c).

*Data Archiving and Processing.* Following the data collection stage, each country is required to deposit the ESS data set and all fieldwork documents to the ESS Data Archive. The ESS Core Scientific Team (CST) is responsible for assessing and documenting numerous data quality aspects following the data collection process. Principles for data processing and archiving include ensuring that data is as user friendly as possible, and that the final data files reflect the original quality of the collected data (European Social Survey, n.d.-d).

*Weighting*. The ESS contains weights and it is recommended that the most accurate estimates will be achieved by weighting data. Two survey weights are available: design weights (to account for differences in inclusion probabilities) and post-stratification weights (which aim to reduce the sampling error and potential non-response bias). The population distributions for weighting variables were based on the European Labour Force Survey (ELFS) (European Social Survey, 2015).

*Data quality*. The ESS aims to generate high quality data and much emphasis is put on harmonisation of survey design and data collection process across nations and over time. Each European country which participates in the ESS has to follow strict rules and procedures (included in the document 'Specifications for participating countries'), which cover every aspect of the survey (such as sampling, questionnaire translation, data collection and data delivery, etc.). The purpose of setting rigorous standards is to achieve accurate and harmonised data. For instance, the ESS requires that only probability samples should be used. What is more,

regarding data collection, face-to-face interviewing is the only mode permitted. In each edition of the survey it is checked whether a country achieved or not the set standards (Koch, Halbherr, Stoop, &Kappelhof, 2014).

*Data documentation*. Survey documentation is transparent and very comprehensive. The ESS has a dedicated official website which explains in great depth survey methodology, data collection and delivery process. The ESS implements a comprehensive set of quality assurance activities (such as a set of clearly defined standards, the provision of support to national teams, etc.) to ensure high quality of the ESS survey. The ESS Survey Specifications provides an overview of tasks and responsibilities with regard to conducting the survey. Other survey documents provide detailed guidance in specific areas (such as sampling, translation, or data delivery).

*Data Processing*. Following fieldwork, 16 different programmes are used to process data and before final datasets are ready for approval. Some of the programmes do automatic checks of the data, while other produce output to be filled in manually.

*Survey weights*. The ESS provides three survey weights: the design weights and poststratification weights, and population size weights. It is recommended two use the weights during the data analysis process.

*Ethics*. The ESS established the ESS ERIC Research Ethics Committee (REC) in 2015, which reviews applications for studies for which the ESS is directly responsible. The ESS also subscribes to the Declaration on Ethics of the International Statistical Institute, which consists of a statement of Shared Professional Values, and also provides a set of Ethical Principles that derive from these values.

*Data access*. The ESS data is available free of charge and without any restrictions for noncommercial purposes. It can be downloaded from the survey's official website (at www.europeansocialsurvey.org) after a short registration. For the purpose of this thesis, the data has been downloaded in the SPSS format.

#### 3. UK Labour Force Survey (UK LFS, 2017)

The UK Labour Force Survey (LFS) is the largest survey of households in the UK (England, Wales, Scotland and Northern Ireland), which provides important insights into employment circumstances of the UK population. The LFS was launched in 1973 and it was first conducted biennially, then annually (between 1984 and 1991), and finally from 1992 it has been conducted on a quarterly basis. From 1992, the survey has been based on a panel design, where a fifth of the sample each quarter is replaced and respondents remain in the sample for five consecutive quarters. This thesis will use the latest LFS data (2017) which is included in January to March quarter.

*Survey funding*. The survey is managed and fully funded by the Office for National Statistics (ONS) in Great Britain, which is the largest producer of Government statistics, and by the Economic Labour Market Statistics Branch (ELMSB) of the Department of Finance and Personnel in Northern Ireland. In addition, some other Government departments also sponsor specific LFS questions. For instance, the Health and Safety Executive sponsors questions on work accidents (Office for National Statistics, 2016).

*Survey objectives*. The main purpose of the LFS is "to provide information on the UK labour market which can then be used to develop, manage, evaluate and report on labour market policies" (Office for National Statistics, 2016, p. 2). The LFS is used by UK Government's departments to obtain information, which could support the development and monitoring of social and economic policy.

*Thematic coverage*. The LFS provides a unique source of information on different aspects of people's work. The first part of the questionnaire covers respondent's household composition, family structure, housing information and basic demographic details of all household members. The second part of the questionnaire includes questions on economic activity and some job quality-related questions (such as detailed questions on pay, working hours, contractual conditions, and the provision of training), education and health problems, job search, benefits, alongside with some 'non-core' themes, which vary from quarter to quarter (UK Data Service, 2016).

*Target population*. The target population of the LFS is based on all people resident in private households, resident in National Health Service (NHS) accommodation, and young people

living away from the parental home in a student hall of residence (or similar institution) during term time (Office for National Statistics, 2017).

*Sampling strategy*. The LFS uses four different sampling frames. Great Britain is divided into two areas: south of the Caledonian Canal (which includes England, Wales and most of Scotland) and North of the Caledonian Canal (which includes the remaining part of Scotland). In the south of the Caledonian Canal the Postcode Address File (PAF) is used (in particular, 'small address file', which is a sub-set of PAF), whereas in the North of Caledonian Canal (which is a sparsely populated area) the sample is drawn from a telephone directory. Northern Ireland uses its own sampling frame, which is called POINTER and is based on the government's central register of domestic properties. Finally, the sampling frame for the NHS accommodation has been developed for the LFS, based on the list of addresses of all district health authorities and NHS trusts. Currently 16,640 addresses are selected for Wave 1 each quarter in the South of Caledonian Canal, 80 addresses in the North of Caledonian Canal, and 650 addresses in Northern Ireland (where, in addition, a boost of 260 addresses is added each year). In case of selecting a multiple-occupancy household, first the number of households is agreed, and then one person is selected at random for an interview (Office for National Statistics, 2016).

The Wave 1 sample is selected by "ordering the sampling frames geographically, and then drawing the selection systematically (that is, with a fixed interval)" (Labour Force Survey, 2015, p. 15). The geographical ordering of the sampling frame implicitly stratifies the sample, which ensures a geographic spread of addresses. It is important to note that subsequent waves are not selected from the sampling frames, as Wave 1 respondents are simply kept in the sample and become Wave 2 respondents in the next quarter, and so on. As a result, there are five waves in any given quarter of the LFS. All adults within the selected household are interviewed (Office for National Statistics, 2016).

The LFS uses a rotational sampling design, where a household (once selected for an interview), is kept in the sample for a total of five consecutive quarters. The interviews take place every 13 weeks, so that the last (fifth) interview is carried out one year on from the first. Rotating sample allows for longitudinal datasets to be produced to measure change over time (Office for National Statistics, 2016).

*Sample size*. Currently, a quarterly LFS dataset contains approximately 38,000 households in Great Britain and 15,000 households in Northern Ireland, which when combined result in a sample size of around 100,000 individuals for the whole of the UK.

*Questionnaire*. The LFS questionnaire comprises 'core' questions which are included in every survey, and 'non-core' questions that differ from quarter to quarter. Some questions are only asked during the first interview (Wave 1) and these include certain demographic information (such as sex or age), which do not change over time. The questionnaire content is determined by the ONS, together with the UK Government departments, which identify needs for new questions or alterations to existing questions. For example, some questions may be asked on behalf of Home Office and the Department for Work and Pensions (DWP). ONS also has to ensure the European Union requirements for data are being met – the LFS contributes to the European Union Labour Force Survey (EU-LFS) on annual basis. The LFS is revised each year and new updated version of the questionnaire is published regularly, together with a detailed overview of any changes to questions. New questions may be piloted (if ONS decided this was necessary) and then tested again during the Dress Rehearsal stage (which is a further round of testing) (Office for National Statistics, 2016).

*Data collection.* The fieldwork is carried out by the Social Survey Division of the ONS in Great Britain, and the Central Survey Unit of the Northern Ireland Statistics and Research Agency (NISRA) is responsible for conducting the data collection in Northern Ireland. Prior to an interview, a letter is sent to every selected household, which contains a Purpose Leaflet explaining the purpose of the LFS survey. Respondents are ensured that the information they provide will be handled with the strictest confidence. All interviewers are trained in Achieving Cooperation Training (ACT), are closely monitored and supported during the data collection process and received regular feedback on their performance.

Most households are interviewed face-to-face at their first interview (Wave 1), except respondents in the North of Caledonian Canal who are interviewed by telephone only. Subsequent interviews (from Wave 2) are carried out by telephone (if agreed by respondents). Overall, around 62% of all interviews (including Wave 1) are conducted by telephone and 38% are face-to-face. The telephone interviewers work from a centralized Telephone Operations Unit (Titchfield, Hampshire), where the quality of the telephone interviews can be maintained through close supervisory support. All interviewers rely on Computer Assisted Interviewing

(ACAI). In comparison to a paper-and-pencil based systems, the ACAI increases the speed of interviews and the quality of data collected.

Most core questions are asked only during the first interview (Wave 1) and rotated into the next quarter. However, interviewers must check whether the information given previously is still correct. (for instance, by asking the question again). Some core questions are asked each quarter (such as working hours or contractual conditions) without reference to the information given previously.

The LFS accepts proxy interviews and in case when the selected person is not available, a related adult from the same household (or different household if permitted by a respondent) can undertake the survey. In total, a third of all interviews are proxy interviews. The response rate for Wave 1 is 55.5% and the total response rate (including drop-outs in subsequent waves) is 45.5% for LFS 2016 (January – March quarter).

*Data Archiving and Processing*. All coding is conducted by interviewers (after the interview) and some is done by Computer Assisted Coding (CAC) during the interview. What is more, derived variables (DVs) are created by combining two or more questions and added to the final dataset. What is more, data checks are performed during the interview (by BLAISE survey instrument) and other checks (for example in terms of errors, outliers, or incorrect values) are undertaken whilst data has been collected to ensure the high-quality of the data.

*Survey Weights*. The LFS requires data to be weighted when analysing data. Several survey weights are available (such as person-weight and household-weight). This study will use the person-weight variable, which is designed for doing the person-level analyses.

*Data Quality*. The LFS claims to be a high-quality survey. The ONS has several wellestablished instruments for assuring quality, one of which is the programme of National Statistics Quality Reviews (NSQR). The in-depth quality review of the LFS, based on different quality criteria (the most important being accuracy, timeliness and comparability) has been provided by the NSQR and is available online. The overall conclusion of the quality review is that "currently the LFS enables the production of good quality estimates from the survey outputs, i.e. these are acceptable in terms of their accuracy and timeliness and are of comparable quality to those estimates produced elsewhere in the countries included in this review" (Office for National Statistics, n.d.-1, p. 8). Large sample size, continued improved of questionnaire, fieldwork practices and survey methodology are the key strengths of the LFS. All interviewers undertake training prior to starting fieldwork and are closely monitored and supported during the data collection process. When weakness in performance is noticed, additional training and support is offered.

*Data documentation*. Comprehensive documentation is available to accompany the LFS datasets and can be downloaded through the UK Data Service. The documentation involves detailed reports on survey background and methodology, questionnaire, and more specific reports on data quality, variables and classifications used.

*Data access*. The LFS data is available through the UK Data Service. It can be downloaded under the standard End User Licence (EUL) agreement. Secure Access datasets are also available for download – these datasets include more detailed variables (for instance, for the variable age, the year, month and day of birth is provided) and they have more restrictive access conditions. For the current study, the detailed information on variables was not needed, and the LFS data was downloaded under the EUL agreement, which required a quick registration and filling in a short form (which specifies the title of the project and its key aims. The registration process took approximately 5 minutes in total. The access to the LFS data was granted immediately upon registration.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Pay	1	.39 <sup>**</sup>	.30***	.00	.05 <sup>*</sup>	32**	.21**	.24**	.29**	.11**	.00	.01	15***	06*	.01	16**	03
2. Skills		1	.35**	.11**	.25**	06**	.12**	.26**	.33***	.19 <sup>**</sup>	.00	.15**	.14**	.03	.05 <sup>*</sup>	09**	.00
3. Autonomy			1	.13**	.19 <sup>**</sup>	11**	.19 <sup>**</sup>	.21**	.17**	.11**	.00	.25**	.00	.01	.00	00	.01
4. Social support				1	.32**	06**	.07**	.00	.25**	.07**	.12**	.08**	.18 <sup>**</sup>	.22**	.10 <sup>**</sup>	.16 <sup>**</sup>	06**
5. Meaningfulness					1	09**	.12**	.13**	.20***	.00	.10 <sup>**</sup>	.00	.17**	.34**	.10 <sup>**</sup>	.11**	11**
6. Temporary						1	32**	22***	09**	.10**	.04 <sup>*</sup>	22***	.02	.00	.00	09**	02
7. Job security							1	.13**	.21**	.08**	.05 <sup>*</sup>	.05	.06	.09**	.08**	.07**	08**
8. Training								1	.18 <sup>**</sup>	.03	.00	.04	04*	.00	.00	.07**	00
9. Career prospects									1	.15**	.08**	.07**	.04	.18 <sup>**</sup>	.11**	.06**	11**
10. Physical risks										1	.25**	.24**	.28**	.12**	.26**	.22**	09**
11. Psychosocial risks											1	.12**	.26**	.23**	.20**	.32**	21**
12. Working time												1	.17**	.04	.14**	.16**	04*
13. Work intensity													1	.24**	.31**	.45**	15**
14. Affective well-being														1	.30**	.31**	34**
15. Work-related exhaustion															1	.39**	19 <sup>**</sup>
16. Work-related stress																1	24**
17. Anxiety																	1

APPENDIX 2: Bivariate correlations for all variables from EWCS (2015)

*Note* . Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); p < .05; \*\* p < .01; \*\*\* p < .001.

#### **APPENDIX 2: Continued**

	18	19	20	21	22	23	24	25	26	27	28	29	30
1. Pay	.00	14**	.33**	.25**	28 <sup>*</sup>	12**	11**	.37**	.06**	.19 <sup>**</sup>	.16 <sup>**</sup>	.08**	.09**
2. Skills	.00	.04 <sup>*</sup>	.12**	.39**	11**	.02	44**	.74**	06***	.32**	.18 <sup>**</sup>	.40**	.02
3. Autonomy	.04 <sup>*</sup>	.01	.09**	.20**	11**	.03	17**	.25**	.02	.12**	.09**	.13**	.01
<ol> <li>Social support</li> </ol>	08**	.03	08**	.02	.02	.06**	11**	.07**	.03	.00	.05*	.05*	06**
5. Meaningfulness	08***	.03	.06**	.01	04	.02	15**	.16**	.07**	.04 <sup>*</sup>	0	.18 <sup>**</sup>	05 <sup>*</sup>
6. Temporary	05**	.00	.21**	.05**	20**	15**	.03	.04	.03	.01	.08**	.03	.00
'. Job security	10***	.02	.01	.01	08**	.02	05 <sup>*</sup>	.05 <sup>*</sup>	.01	.00	.06**	.01	.00
3. Training	.00	.01	.02	.09**	09**	.03	14**	.19**	.00	.15**	.10**	.15**	.01
. Career prospects	10**	07**	05 <sup>*</sup>	.09**	.02	.03	15**	.23**	.04 <sup>*</sup>	.12**	.15**	.10 <sup>**</sup>	.00
0. Physical risks	20***	.10**	.00	.16**	.00	.01	21**	.16**	19**	.03	.21**	.04 <sup>*</sup>	12**
1. Psychosocial risks	24**	11**	04 <sup>*</sup>	.01	.00	.00	.04 <sup>*</sup>	04 <sup>*</sup>	.07**	10**	.04 <sup>*</sup>	16**	.11**
2. Working time	09**	.11**	.03	.08**	.01	.01	09**	.11**	05 <sup>*</sup>	.11**	.11**	.13**	.01
3. Work intensity	21**	.04 <sup>*</sup>	06**	.00	.00	.01	07**	.04 <sup>*</sup>	05**	.07**	.03	.11**	.02
<ol> <li>Affective well-being</li> </ol>	39**	05 <sup>*</sup>	07**	05 <sup>*</sup>	.05 <sup>*</sup>	.04 <sup>*</sup>	05 <sup>*</sup>	.00	.08**	.00	.00	.00	.00
5. Work-related exhaustion	31**	.04	08**	.00	.02	.02	05**	.02	.04	.01	.05 <sup>*</sup>	.00	.01
6. Work-related stress	28**	06**	12**	05 <sup>*</sup>	.02	.03	.00	06**	.06**	.01	.01	.01	.00
7. Anxiety	.38**	.10**	.00	.05 <sup>*</sup>	.01	.02	.01	.00	05 <sup>*</sup>	.00	.02	.04 <sup>*</sup>	.01
3. Fatigue	1	.09**	.07**	.02	.03	.00	.00	.01	.03	.03	07**	.02	.01
9. Female		1	.00	.06**	06**	11**	14**	.09**	30**	.07**	.02	.22**	19**
). Age group: 25-34			1	.17**	43**	39**	.00	.13**	.04	.09**	.01	.08**	.05 <sup>*</sup>
1. Graduates				1	.01	.09**	19 <sup>**</sup>	.42**	15**	.26**	.16**	.26**	07**
2. Married					1	.42**	.04	08 <sup>**</sup>	.00	09**	.02	06**	.02
3. Children (yes)						1	.03	.02	.01	.00	.04 <sup>*</sup>	.02	.00
1. LS blue collar							1	29**	13***	14**	07**	18 <sup>**</sup>	.18 <sup>**</sup>
5. HS white collar								1	24**	.31**	.13**	.44**	04*
6. HS blue collar									1	13**	09**	19**	.19**
7. Public sector										1	07**	.61**	14**
3. Professional Service											1	16**	11**
9. Public Service												1	22***
0. Manufacturing									01: *** n				1

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); p < .05; \*\* p < .01; \*\*\* p < .001.

# **APPENDIX 2: Continued**

	31	32	33	34	35	36	37	38	39	40
1. Pay	.09**	.05 <sup>*</sup>	.13**	.26**	06 <sup>*</sup>	.13 <sup>**</sup>	.19 <sup>**</sup>	34**	.00	.17**
2. Skills	.00	.00	.02	.16**	.01	.08**	.06**	19 <sup>**</sup>	.11**	.08**
3. Autonomy	.02	06**	.02	.10**	.00	.00	.07**	18 <sup>**</sup>	05 <sup>*</sup>	.20**
4. Social support	.02	08 <sup>**</sup>	.02	.00	.05 <sup>*</sup>	12**	.00	.11**	21**	.08 <sup>**</sup>
5. Meaningfulness	.04 <sup>*</sup>	.00	07**	.02	.02	.00	.05 <sup>*</sup>	.07**	.02	.03
6. Temporary	.00	.01	.05 <sup>*</sup>	.06 <sup>*</sup>	05 <sup>*</sup>	.19 <sup>**</sup>	.29**	27***	.10**	.04
7. Job security	.00	.02	.01	.06 <sup>*</sup>	.04	.10**	.14**	34**	.15**	.12**
8. Training	.00	.00	.02	.15**	05 <sup>*</sup>	.09**	.09**	13 <sup>**</sup>	.07**	08**
9. Career prospects	.04	.00	.07**	.14**	.03	.01	.00	19 <sup>**</sup>	.00	.12**
10. Physical risks	10 <sup>**</sup>	09**	.02	.08**	.01	.03	.00	16 <sup>**</sup>	.09**	.01
11. Psychosocial risks	.09**	08 **	.01	.01	.03	.00	05 <sup>*</sup>	06***	.00	.02
12. Working time	.02	.00	.02	.09**	.03	.00	.01	24**	.14**	.21**
13. Work intensity	.02	.01	.03	07**	.02	.00	.02	.01	.05 <sup>*</sup>	05*
14. Affective well-being	.01	.01	.03	05 <sup>*</sup>	.00	.01	.00	.14**	.04 <sup>*</sup>	07**
15. Work-related exhaustion	.01	.00	.01	.00	.00	.03	.02	06***	.08**	.02
16. Work-related stress	.02	.02	.02	.04	.01	.00	08**	.00	08**	.08**
17. Anxiety	07**	.01	.00	.00	.00	.01	.00	.09**	16 <sup>**</sup>	.00
18. Fatigue	.01	.01	.00	.04	.02	.00	.01	.12**	15**	.10**
19. Female	19**	.02	05*	05*	.00	.00	.00	.01	.02	.02
20. Age group: 25-34	.01	.00	.01	.02	13**	.06**	.33**	.13**	.00	05*
21. Graduates	11**	.00	.05 <sup>*</sup>	.18 <sup>**</sup>	.00	.03	.02	.04 <sup>*</sup>	24**	.54 <sup>*</sup>
22. Married	.00	.00	.02	.00	.09**	06**	22**	.03	.02	.00
23. Children (yes)	.00	.01	.02	.06 <sup>*</sup>	.07**	.00	20**	.05*	07**	.01
24. LS blue collar	.01	.02	.03	.01	.00	.00	.04	.04 <sup>*</sup>	.00	07**
25. HS white collar	12**	.05 <sup>*</sup>	.06 <sup>*</sup>	.20**	.01	.08**	.01	11**	.00	.07**
26. HS blue collar	.47**	05*	.03	10***	.03	.00	.05 <sup>*</sup>	.08**	.00	.00
27. Public Sector	07**	.01	.02	.20**	.02	.00	.06 <sup>*</sup>	12**	07**	.17**
28. Professional Service	07**	.00	.03	.10**	.02	.00	.01	09**	.01	.00
29. Public Service	14**	.00	.04	.11**	.00	.05 <sup>*</sup>	.03	10**	.03	.07**
30. Manufacturing	09**	.06 <sup>*</sup>	.07**	.12**	.02	.02	.00	.02	.09**	06**
31. Construction	1	05*	.03	10 <sup>**</sup>	.00	.02	.00	.00	.01	.03
32. firm size: 50-99 workers		1	08**	15***	.02	.09**	.01	.01	.01	.00
33. firm size: 100-249 workers			1	15**	.02	.01	.01	09**	.02	.00
34. firm size: 250 and over				1	.02	.03	.01	19 <sup>**</sup>	.00	.00
35. job tenure: 1-2 years					1	34**	33**	08**	.03	.05*
36. job tenure: 3-5 years						1	28**	.00	.07**	.00
37. job tenure: 6 or over							1	.00	.07**	04*
38. Spain								1	47 <sup>**</sup>	29 <sup>**</sup>
39. Germany									1	21 <sup>**</sup>
40. Denmark										1

*Note.* Data source: EWCS (2015); N=1820 (UK, Denmark, Germany and Spain); p < .05; \*\* p < .01; \*\*\* p < .001.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Pay	1	.46**	.35**	.12**	.24**	.14**	.36**	.07*	08 <sup>*</sup>	14**	02	18 <sup>**</sup>	.07 <sup>*</sup>	.18 <sup>**</sup>	.01	01	11**
2. Skills		1	.32**	.09**	.03	.09**	.29**	.12**	.12**	24**	.13 <sup>**</sup>	20**	.29**	.23**	.12**	10**	18 <sup>**</sup>
3. Autonomy			1	.13**	.08 <sup>**</sup>	.22**	.20**	.10 <sup>**</sup>	.04	17**	.39**	03	.22*	.27**	.06	04	05
4. Social support				1	.05	.19 <sup>**</sup>	.10 <sup>**</sup>	.13 <sup>**</sup>	.00	.01	.00	.00	.23**	.36**	.01	05	.00
5. Temporary					1	17**	10**	.04	.01	.01	01	08 <sup>*</sup>	.05	05	.03	03	.02
6. Job security						1	.14**	.20**	.01	.05	.06 <sup>*</sup>	.03	.03	.04	.02	03	.00
7. Training							1	.15**	11**	16**	.00	13**	.04	.09**	.02	02	12**
8. Career prospects								1	.03	09**	09**	18 <sup>**</sup>	.05	.02	.00	.00	.00
9. Physical risks									1	.11**	.19 <sup>**</sup>	.21**	.00	.02	.02	.01	.02
10. Psychosocial risks										1	.09**	.35**	.05	05	.01	.03	.12**
11. Working time											1	.21**	.23**	.18 <sup>**</sup>	.03	03	04
12. Work intensity												1	.24**	.29**	01	.04	.04
13. Social background: secondary													1	27**	.07*	.01	08 <sup>*</sup>
14. Social background: tertiary														1	.10 <sup>**</sup>	24**	18 <sup>**</sup>
15. Social background: LS white collar															1	52**	30**
16. Social background: HS blue collar																1	40**
17. Social background: LS blue collar																	1

APPENDIX 3: Bivariate correlations for all variables from ESS (2010)

*Note.* Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Pay	20**	.33**	.29**	01	.02	30**	06	15**	.14**	.22**	.08 <sup>*</sup>	.02	05	.01
2. Skills	.07*	.28**	.55**	.05	.00	41**	24**	50**	.24**	.26**	.31**	12**	13**	.02
3. Autonomy	03	.14**	.17**	.00	.02	16**	.04	15**	01	.20**	02	.00	01	.00
4. Social support	03	07*	.04	01	.04	01	.03	11**	.03	03	.05	.02	.06	.02
5. Temporary	.00	.16**	04	03	.13**	.05	.05	05	09**	.04	07*	.08 <sup>*</sup>	09**	.01
6. Job security	.03	.00	.00	04	.09**	.01	04	06 <sup>*</sup>	.05	05	.07*	.00	02	03
7. Training	.05	.09**	.13**	.00	.06*	11**	06*	18**	.16**	.05	.14**	08 <sup>*</sup>	05	.02
8. Career prospects	09**	10**	.05	.05	12**	.04	.03	09**	.00	.03	.00	.00	.07*	07*
9. Physical risks	.13**	.00	.15**	.04	02	.09**	21**	07*	05	.21**	12**	.00	15**	.02
10. Psychosocial risks	04	14**	11**	.02	.00	.08 <sup>*</sup>	.00	.18**	10**	06	15**	.02	.00	04
11. Working time	.14**	.03	.11**	.01	.10**	10**	03	04	.06*	.18**	.06	.02	.03	.01
12. Work intensity	02	13**	13**	.00	.00	.08 <sup>*</sup>	.01	.11**	10**	01	12**	.06	01	04
13. Social background: secondary	.00	.00	.03	.03	.01	.00	02	08**	.02	.05	.05	06	.03	.07*
14. Social background: tertiary	.01	.05	.28**	01	.01	02	12**	14**	.15**	.09**	.12**	09*	11**	02
15. Social background: LS white collar	.02	01	.05	.01	.02	.00	07*	08 <sup>*</sup>	.03	.11**	.04	09**	08 <sup>*</sup>	.01
16. Social background: HS blue collar	.00	05	12**	.01	.00	.01	.08 <sup>*</sup>	.01	.00	10**	.00	.08 <sup>*</sup>	.06	02
17. Social background: LS blue collar	.01	.00	10**	04	.07*	.00	.07*	.16**	10**	07*	10**	.02	.03	.03
18. Female	1	.05	.13**	.06	.12**	.21**	35**	10**	.20**	.03	.24**	24**	24**	01
19. Age group: 25-34		1	.28**	.07*	.27**	16**	10**	06*	.11**	.14**	.12**	.00	04	.08 <sup>*</sup>
20. Graduates			1	.03	05	19**	24**	23**	.26**	.24**	.26**	15**	14**	.05
21. Married				1	.18**	01	03	01	.08 <sup>*</sup>	05	.11**	.02	03	.05
22. Children					1	.01	02	.00	.05	.04	.07*	.05	.01	.06*
23. LS white collar						1	26**	27**	04	03	16**	20**	18 <sup>**</sup>	05
24. HS blue collar							1	15**	17**	16**	18 <sup>**</sup>	.24**	.50**	.03
25. LS blue collar								1	15**	15**	15**	.22**	.00	.03
26. Public sector									1	17**	.69**	24**	13**	.01
27. Professional Service										1	27**	19**	13**	.00
28. Public Service											1	24**	16**	.00
29. Manufacturing												1	11**	.03
30. Construction													1	.02
31. firm size: 25-99														1

Note. Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain); \* p < .05; \*\* p < .01; \*\*\* p < .001.

# **APPENDIX 3: Continued**

	32	33	34	35	36	37	38	39
1. Pay	.09 <sup>*</sup>	.23**	23 ***	.07 <sup>*</sup>	.21**	.41**	07 <sup>*</sup>	24**
2. Skills	.01	.16 <sup>**</sup>	10**	.10 <sup>**</sup>	.00	.12**	03	08 <sup>*</sup>
3. Autonomy	.02	.08 <sup>*</sup>	11**	.03	.06	.15**	.09**	14**
4. Social support	.01	.03	.00	08 <sup>*</sup>	.07*	.04	.01	11**
5. Temporary	.02	.03	23**	.04	.23**	.06 <sup>*</sup>	03	15**
6. Job security	.04	.07*	08**	.01	.07 <sup>*</sup>	.05	.07 <sup>*</sup>	17**
7. Training	.07 <sup>*</sup>	.11**	05	.08**	.01	.18**	02	18 <sup>**</sup>
8. Career prospects	.03	.11**	.02	.03	04	12**	01	05
9. Physical risks	03	02	.08 <sup>*</sup>	.02	14**	.07 <sup>*</sup>	04	.08 <sup>*</sup>
10. Psychosocial risks	.01	04	.07*	01	09**	.06*	11**	.00
11. Working time	.00	.01	.03	02	03	.10**	.05	08 <sup>*</sup>
12. Work intensity	.01	03	.16**	09 <sup>**</sup>	10**	.08**	.11**	.01
13. Social background: secondary	.01	.00	02	.00	.02	05	.02	05
14. Social background: tertiary	03	.16**	.00	.05	05	.17**	12**	05
15. Social background: LS white collar	03	.04	.00	.00	.01	.02	.01	.00
16. Social background: HS blue collar	.09**	08 <sup>*</sup>	01	.00	.03	05	.15**	05
17. Social background: LS blue collar	06 <sup>*</sup>	05	.01	.03	.02	.03	15**	.07 <sup>*</sup>
18. Female	.02	.04	04	.02	03	01	09**	.03
19. Age group: 25-34	.04	.02	37**	.02	.38**	.00	09**	.12**
20. Graduates	.02	.13**	.05	.17**	11**	.10**	19 <sup>**</sup>	.07 <sup>*</sup>
21. Married	.00	01	.01	.00	.02	.02	08 <sup>*</sup>	.00
22. Children	.00	01	17**	10**	.28**	.03	09**	10**
23. LS white collar	02	06 <sup>*</sup>	.05	03	02	05	07 <sup>*</sup>	.04
24. HS blue collar	04	05	.01	12**	.12**	04	.15**	.00
25. LS blue collar	.01	09**	.08 <sup>*</sup>	.00	07 <sup>*</sup>	04	03	.04
26. Public sector	.10**	.18 <sup>**</sup>	.01	.00	.00	.03	02	07 <sup>*</sup>
27. Professional Service	05	.10**	07*	.11**	03	.02	01	.01
28. Public Service	.03	.15**	.03	02	.00	07*	01	.00
29. Manufacturing	.08 <sup>*</sup>	.03	.00	04	.03	03	.16**	03
30. Construction	.04	07 <sup>*</sup>	.02	04	.11**	01	.03	.05
31. firm size: 25-99	28***	26**	.02	.03	.00	.01	04	01
32. firm size: 100-499	1	22**	.05	03	.08 <sup>*</sup>	.01	.10 <sup>**</sup>	13**
33. firm size: 500 or more		1	.02	.02	.00	07 <sup>*</sup>	.00	11**
34. job tenure: 1-2 years			1	45**	47**	03	.11**	03
35. job tenure: 3-5 years				1	50**	.07*	10**	.10**
36. job tenure: 6 years and over					1	02	01	04
37. Denmark						1	28**	21**
38. Germany							1	38**
39. Spain								1

*Note.* Data source: ESS (2010); N=1029 (UK, Denmark, Germany and Spain); \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.

APPENDIX 4: Country-specific analyses: social background as the predictor of intrinsic quality of work and work-life balance

			Cha	nge Statis	tics
Country	Model	R Square	$\Delta R$ square	ΔF	р
Denmark	1	.17		1.59	<.05
	2	.19	.02	1.37	.21
UK	1	.21		2.70	<.01
	2	.29	.08	2.13	<.001
Germany	1	.23		3.63	<.001
	2	.29	.07	3.71	<.01
Spain	1	.34		4.30	<.001
	2	.42	.07	2.94	<.05

## Hierarchical regression: Model Summary for intrinsic quality of work

Hierarchical regression: Model Summary for work-life balance

			Cha	nge Statis	tics
Country	Model	R Square	∆R square	ΔF	р
Denmark	1	.35		2.13	<.01
	2	.36	.01	1.05	.23
UK	1	.13		1.56	.08
	2	.21	.08	3.30	<.01
Germany	1	.15		2.23	<.01
	2	.21	.06	2.48	<.05
Spain	1	.46		4.92	<.001
	2	.53	.07	2.22	<.05

*Note.* Data source: ESS (2010); N=1029 (UK=318, Denmark=138, Germany=346 and Spain=227). <u>Model 1</u>: gender, age, education, marital status, children, sector, industry, occupation, firm size, job tenure; <u>Model 2</u>: parental occupation, parental education.

11 12 13 2 3 4 5 6 7 8 9 10 14 15 1 .32\*\* .26\*\* -.17\*\* -.25\*\* -.17\*\* .32\*\* 1. Pay 1 .05 .05 -.04 -.03 -.04 -.02 .07 .01 .40\*\* .22\*\* .22\*\* .17\*\* 2. Intrinsic Quality of Work .26\*\* -.07 -.19\*\* .15\*\* .12 1 .03 .09 .02 .04 3. Employment Quality -.01 -.04 .12 -.03 .11 1 -.05 .10 .06 -.02 .01 .09 -.02 .38\*\* .42\*\* .36\*\* .30\*\* 4. Health and Safety .00 -.21\*\* -.30 .07 -.02 1 .06 .09 .33\*\* .43\*\* 5. Work-life Balance .24\*\* .05 -.02 1 -.14<sup>\*\*</sup> -.23<sup>\*'</sup> .05 .02 .03 .38\*\* .25\*\* -.37\*\* -.43\*\* 6. Affective well-being .32<sup>\*''</sup> 1 .10 -.07 .01 .07 -.23\*\* .45\*\* -.24\*\* -.27\* .17<sup>\*"</sup> 7. Anxiety 1 -.06 -.01 -.06 -.39\*\* -.29\*\* 8. Fatique 1 -.31 -.06 -.07 .04 .11 .46\*\* .31\*\* .35\*\* 9. Work-related exhaustion .12 -.08 -.12 1 .27\*\* .26\*\* .28\*\* 10. Work-related stress -.04 -.10\* 1 .23\*\* 11. Person-job Fit Skills .02 .02 .06 1 .21\*\* 12. Person-job Fit Working Hours -.06 -.11 1 13. Perceived employability .03 -.13 1 14. Female .05 1 15. Age group: 25-34 1 16. Graduates

APPENDIX 5: Bivariate correlations for all variables from EWCS (2015) – UK only

*Note.* Data source: EWCS (2015); N=382 (UK only); \* p < .05; \*\* p < .01; \*\*\* p < .001.

16

.29\*\*

.23 \*\*

.12

.18\*\*

.05

.02

.03

-.01

.05

-.02

-.10

.00

.05

.02

.19<sup>\*''</sup>

1

	17	18	19	20	21	22	23	24	25
1. Pay	.22**	.04	.17**	49**	12 <sup>*</sup>	.13 <sup>*</sup>	.16**	.13 <sup>*</sup>	.12 <sup>*</sup>
2. Intrinsic Quality of Work	.07	02	.07	26**	36**	.19 <sup>**</sup>	.19 <sup>**</sup>	.27**	09
3. Employment Quality	.09	02	.10 <sup>*</sup>	12 <sup>*</sup>	15**	.13 <sup>*</sup>	.15**	.18 <sup>**</sup>	.00
4. Health and Safety	.00	09	03	09	07	13 <sup>*</sup>	.25**	15**	.02
5. Work-life Balance	03	.04	06	.13 <sup>**</sup>	09	04	.05	.06	.04
6. Affective well-being	03	.01	.06	10 <sup>*</sup>	.06	04	.05	06	.09
7. Anxiety	.00	.00	11 <sup>*</sup>	.12 <sup>*</sup>	11 <sup>*</sup>	.09	07	.17**	04
8. Fatigue	.07	.03	05	.08	10	.06	11 <sup>*</sup>	.13 <sup>*</sup>	08
9. Work-related exhaustion	06	07	03	.03	.00	06	.11 <sup>*</sup>	12 <sup>*</sup>	.11 <sup>*</sup>
10. Work-related stress	05	.00	.02	.11 <sup>*</sup>	.09	09	.02	11 <sup>*</sup>	.10
11. Person-job Fit Skills	.04	01	02	.01	04	.00	06	01	.02
12. Person-job Fit Working Hours	.06	.05	05	07	.09	09	.20**	07	.06
13. Perceived employability	.02	15**	.05	03	10	01	.11 <sup>*</sup>	.00	10
14. Female	.06	.10	21**	.26**	22**	.11 <sup>*</sup>	.02	.23**	23**
15. Age	.36**	.27**	.01	24**	.01	.10 <sup>*</sup>	.07	.11	.09
16. Graduates	02	13**	12 <sup>*</sup>	18 <sup>**</sup>	23**	.22**	.22**	.26**	06
17. Single	1	.36**	.03	10	11 <sup>*</sup>	.12 <sup>*</sup>	.02	.10	.01
18. No children		1	.08	.00	.02	01	07	03	01
19. HS blue collar			1	19 <sup>**</sup>	10 <sup>*</sup>	11 <sup>*</sup>	08	13 <sup>**</sup>	.10
20. LS white collar				1	33**	02	03	04	24**
21. LS blue collar					1	19 <sup>**</sup>	11 <sup>*</sup>	24**	.34**
22. Public sector						1	13 <sup>*</sup>	.55**	14**
23. Proffessional Service							1	21**	11 <sup>*</sup>
24. Public Service								1	22**
25. Manufacturing									1

### **APPENDIX 5: Continued**

*Note.* Data source: EWCS (2015); N=382 (UK only); \* p < .05; \*\* p < .01; \*\*\* p < .001.

# **APPENDIX 5: Continued**

	26	27	28	29	30	31	32
1. Pay	.11	04	.12 <sup>*</sup>	.21**	18 <sup>**</sup>	.22**	.16 <sup>**</sup>
2. Intrinsic Quality of Work	.04	09	.01	.08	12 <sup>*</sup>	.09	.10 <sup>*</sup>
3. Employment Quality	.09	12 <sup>*</sup>	.06	.09	05	.11*	.06
4. Health and Safety	.00	.04	.02	.11	.03	04	07
5. Work-life Balance	05	02	09	01	.02	07	07
6. Affective well-being	.02	.01	12 <sup>*</sup>	.03	.02	.00	.03
7. Anxiety	10 <sup>*</sup>	.11*	.00	02	.03	.02	03
3. Fatigue	05	.02	.07	10	.04	.02	01
<ol> <li>Work-related exhaustion</li> </ol>	.02	.08	07	.02	.07	11 <sup>*</sup>	02
0. Work-related stress	.07	.04	09	03	.01	14**	01
1. Person-job Fit Skills	01	.02	.11	02	01	.04	.04
2. Person-job Fit Working Hours	04	04	04	.07	01	.05	05
<ol> <li>Perceived employability</li> </ol>	.04	.00	07	.02	02	.01	11
14. Female	19 <sup>**</sup>	.09	02	08	02	.03	04
5. Age	04	.00	.02	03	15**	.16**	.28
6. Graduates	15**	12 <sup>*</sup>	.06	.18 <sup>**</sup>	04	.01	.00
7. Single	.03	.02	03	.02	12 <sup>*</sup>	.13 <sup>**</sup>	.21
8. No children	.03	.08	03	15**	07	01	.20
9. HS blue collar	.54**	08	.05	09	11 <sup>*</sup>	03	.15
20. LS white collar	15***	.11	04	10	.09	12 <sup>*</sup>	07
1. LS blue collar	.04	.07	02	04	.08	06	05
2. Public sector	10	11	.05	.12 <sup>*</sup>	07	.04	.10
3. Proffessional Service	07	05	.03	.17**	.05	.02	02
24. Public Service	14**	02	.01	.05	08	.05	.03
25. Manufacturing	08	01	.03	.16**	02	.03	.07
26. Construction	1	06	.01	14 <sup>*</sup>	.00	07	02
?7. firm size: 50-99 workers		1	11 <sup>*</sup>	19**	07	.07	.04
8. firm size: 100-249 workers			1	27**	.10	04	04
9. firm size: 250 and over				1	04	.08	01
0. job tenure: 1-2 years					1	36**	33
1. job tenure: 3-5 years						1	27
32. job tenure: 6 or over Note. Data source: EWCS (2015); N=3							1

*Note.* Data source: EWCS (2015); N=382 (UK only); \* p < .05; \*\* p < .01; \*\*\* p < .001.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Pay	1	.12	22**	07	16	.27**	.34**	.29**	.00	26**	.13	33***	.23**	02	.11
2. Working time		1	12**	05**	26**	.12**	.11**	01	23**	19 <sup>**</sup>	.12**	08**	.09**	04**	.09**
3. Temporary job			1	.51**	.02 <sup>*</sup>	15**	.00	06**	03**	.00	05**	.08**	02 <sup>*</sup>	.04**	02
4. P-J Fit Contract Type				1	.00	04**	01	03**	01	01	01	.09**	01	.00	.00
5. Female					1	.00	.08**	.03**	.09**	.26**	26**	12**	02	.25**	15**
6. Age group: 25-34						1	.24**	.36**	.11**	14**	.00	11**	.06**	.11**	.04**
7. Graduates							1	.13**	15**	18 <sup>**</sup>	16**	26**	.10**	.20**	07**
8. Married								1	.31**	09**	02	07***	.02*	.09**	.01
9. Children (yes)									1	.05**	.02*	.08**	06**	.03**	.00
10. HS white collar										1	22**	34**	02 <sup>*</sup>	.09**	14**
11. HS blue collar											1	14**	07**	16**	.15**
12. LS blue collar												1	11**	23**	.13**
13. Professional														**	
Service													1	29	14**
14. Public Service														1	20**
15. Manufacturing															1

APPENDIX 6: Bivariate correlations for all variables from UK LFS (2017)

*Note.* Data source: UK LFS (2017); N=11275 (UK only); \* p < .05; \*\* p < .01; \*\*\* p < .001.

# **APPENDIX 6: Continued**

	16	17	18	19	20	21	22
1. Pay	.08	.09	.03	.08	08	02	.25**
2. Working time	.09**	02**	.03**	.07**	03**	.03**	.03**
3. Temporary job	03**	.07**	.01	.01	.01	08**	14**
4. P-J Fit Contract Type	.00	.02	.01	.00	.02	05**	08**
5. Female	17**	.15**	01	02*	.02	01	02
6. Age group: 25-34	.00	.11**	.02*	.11**	10***	.02 <sup>*</sup>	.31**
7. Graduates	08**	.24**	.03**	.17**	01	.04**	.02
8. Married	.01	.09**	.00	.09**	06***	01	.20**
9. Children (yes)	.01	.00	01	03**	04**	05**	.12**
10. HS white collar	12**	04**	03**	10**	.02	.00	06**
11. HS blue collar	.29**	13**	03**	07**	01	.00	.04**
12. LS blue collar	.02*	18 <sup>**</sup>	.01	07**	.02	04**	07**
13.Professional Service	10**	17**	01	.04**	.00	.02*	02
14. Public Service	15 <sup>**</sup>	.65**	.01	.14**	02	01	.06**
15. Manufacturing	07**	16**	.03**	.07**	01	.00	.03**
16. Construction	1	10**	01	06**	.00	.01	.01
17. Public sector		1	.03**	.24**	03**	01	.08**
18. firm size: 50-249			1	33**	.00	.04 <sup>**</sup>	01
19. firm size: 250 and over				1	03**	01	.11**
20. job tenure: 1-2 years					1	31**	28 <sup>**</sup>
21. job tenure: 2-5 years						1	38**
22. job tenure: 5 years and over							1

*Note.* Data source: UK LFS (2017); N=11275 (UK only); \* p < .05; \*\* p < .01; \*\*\* p < .001.