



This is a repository copy of *Underemployment and well-being in the UK before and after the Great Recession*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/108824/>

Version: Accepted Version

Article:

Heyes, J., Tomlinson, M. and Whitworth, A. orcid.org/0000-0001-6119-9373 (2017)
Underemployment and well-being in the UK before and after the Great Recession. *Work, Employment and Society*, 31 (1). pp. 71-89. ISSN 0950-0170

<https://doi.org/10.1177/0950017016666199>

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Underemployment and wellbeing in the UK before and after the Great Recession

Jason Heyes, Mark Tomlinson, Adam Whitworth, University of Sheffield, UK

Abstract

Since the start of the economic crisis in 2008 there has been widespread concern with changes in the level and composition of unemployment. The phenomenon of underemployment has, however, received markedly less attention, although it too increased in extent following the start of the crisis. This paper considers the consequences of underemployment for the subjective wellbeing of UK employees. Drawing on data from the 2006 and 2012 Employment and Skills Surveys, the paper assesses how the Great Recession affected relationships between different dimensions of underemployment and wellbeing. The findings demonstrate that the negative wellbeing consequences of workers' dissatisfaction with opportunities to make use of their abilities became more substantial, as did the consequences of being 'hours constrained' and having an unsatisfactory workload. The paper also shows that the economic crisis had a negative impact on the wellbeing of employees who work very long hours.

Keywords: Economic crisis, Great recession, Job quality, Labour market, Underemployment, Wellbeing

1. Introduction

On the surface, the UK labour market appears to be recovering from the shock inflicted by the economic crisis that began in 2008. By spring 2015 the employment rate had regained its pre-crisis level while the rate of unemployment, which increased from approximately 5.3 percent to 8 percent between 2007 and 2011, had fallen to 5.6 percent (Office for National Statistics 2015). However, the improvement in the labour market masked a number of substantial ongoing problems that had become more acute since 2008, a number of which related to increases in underemployment. The concept of under-employment can refer to a variety of phenomena, all of which relate to employment situations that are unsatisfactory as far as the affected workers are concerned. Underemployed workers may be unable to work as many hours as they would like, may be in jobs that do not allow them to make effective use of the qualifications, knowledge and experience that they possess, or may be paid below a level commensurate with their qualifications, knowledge and experience. Studies have shown that despite the decline in unemployment since 2013 there has been a growth in the number of workers who would like to work longer hours and of part-time workers who would prefer a full-time job (Bell and Blanchflower, 2014; Blanchflower, 2015). Other dimensions of underemployment have also become more significant since the start of the crisis. For example, there is evidence that the number of young workers who are ‘over qualified’ for their jobs has increased. The proportion of recent graduates working in non-graduate jobs has been increasing since 2001 and according to the Office for National Statistics (2013) the rate of increase accelerated after 2008, as did increases in the proportion of recent graduates working in jobs that could be defined as ‘low/lower middle skill’. Young workers with low or no skills, on the other hand, have faced a heightened risk of becoming and remaining unemployed (Bell and Blanchflower, 2010).

In addition to being an indicator of economic malaise, underemployment has consequences for workers’ health and wellbeing. Studies have shown that the subjective wellbeing of underemployed workers tends to be less than the wellbeing of those who are more adequately employed (Dooley, 2003; Friedland and Price, 2003; Paul and Moser, 2009). This association provides the point of departure for this paper. Drawing on data from the 2006 and 2012 waves of the UK’s Skills and Employment Survey,

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

the paper addresses two questions: firstly, how is workers' subjective wellbeing affected by different types of underemployment and, secondly, how did the Great Recession affect the consequences of underemployment for workers' wellbeing? Underemployment is a multidimensional concept, yet previous research has tended to focus on single dimensions, for example 'involuntary' part-time work. This paper, by contrast, examines separate dimensions of under-employment, specifically hours constraints, under-utilisation of skills and abilities and being 'over-qualified' for a job. The paper uses structural equation modelling to identify relationships between workers' affective wellbeing (that is, their feelings about their work) and different types of underemployment. The paper begins by briefly reviewing the extant evidence concerning under-employment and wellbeing. It then describes the datasets and the analytical methods before going on to present and compare the findings for 2006 and 2012. The paper concludes with a discussion of the implications of the findings for policy debates relating to the labour market and worker wellbeing.

2. Wellbeing, underemployment and the economy

Wellbeing has become a prominent issue in the public policy discourse and is frequently a subject for academic study, receiving the attention of psychologists (e.g. Warr 1990), economists (e.g. Layard, 2005) and sociologists (e.g. Russell et al. 2013). Wellbeing is, however, a complex and contested concept, which can be defined and operationalised in a variety of ways. The different conceptualisations matter because they result in the measurement of different aspects of wellbeing and also imply different analytical emphases, particularly in relation to the relationship between individuals and their environment. While 'life satisfaction' is a context-free measure of wellbeing, 'job satisfaction' implies a particular context. Even where context is a concern, a further issue relates to whether inquiry is focused on individuals (e.g. personality traits) or their environment (Warr 2013a). According to Sointu (2005) the public discourse concerning wellbeing (as measured by references in the popular press) has shifted away from a concern with the health of economies and societies and towards individuals, who are assumed to act in a self-responsible way in seeking improvements in their subjective sense of

wellbeing. Much of the academic literature, however, remains concerned with the ways in which environments, including the workplace and wider economy, influence wellbeing and limit the ability of individuals to improve their own wellbeing. Wellbeing-related studies in the broad field of work and employment research in particular have drawn attention to the importance of factors over which individual workers often have little or no control, such as the job opportunities that are available to them, their terms and conditions of employment and the way in which their work is organised.

The importance of work to wellbeing is widely acknowledged. A large number of studies have demonstrated that employed workers tend to experience higher levels of subjective wellbeing than unemployed persons (Jahoda, 1972; Fryer, 1986; Whelan, 1992; Nordenmark and Strandh, 1999) and that wellbeing is negatively associated with non-standard employment and long hours of work (New Economics Foundation 2013; Gundert and Hohendanner, 2014). However, relatively few studies have focused on the wellbeing consequences of underemployment (Dooley, 2003; Maynard et al., 2006). Underemployment is ‘a multidimensional, complex construct that has been studied from a variety of research perspectives’ (McKee-Ryan and Harvey, 2011: 963) and has long been recognised as a social problem, having first been discussed by the International Labour Organisation (ILO) in the 1920s. At that time, under-employment was thought of primarily in terms of workers being unable to work as many hours as they would like. This remains the dominant interpretation of underemployment and the phenomenon of ‘hours under-employment’ continues to be regularly researched (see, for example, Abrahamsen, 2010; Wilkins, 2007). However, underemployment can also be conceived of in terms of a worker being employed in a job that requires less education, skills and experience than they possess (e.g. Burke, 1997; Scurry and Blenkinsopp, 2011), being employed in a job that does not relate to their area of education (Feldman, 1996: 389), or in a job that offers inferior pay and conditions when compared to a previous employment (Feldman et al., 2007). In addition, underemployment can occur where a worker has appropriate credentials or abilities for their job, but the job is designed in a way that does not enable them to fully utilise their skills (termed a ‘performance gap’ by de Witte and Steijn, 2000) or constrains their creativity and growth potential (Burris, 1983).

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Those studies that have examined underemployment's connection with wellbeing have tended to uncover negative consequences. Findings have been relatively consistent across the small number of countries in which these studies have been undertaken. Studies based on survey data from Australia (Wilkins, 2007), the USA (Prause and Dooley 1997; Friedland and Price, 2003; Maynard et al., 2006) and the UK (New Economics Foundation, 2013; Oguz, 2013) have found that wellbeing tends to be lower for involuntary part-time workers than for full-time employees and those who freely choose to work on a part-time basis. Workers who believe that they are 'overqualified' for their job, or have insufficient opportunities to make use of their skills and knowledge in their job, may also experience loss of wellbeing (O'Brien and Feather, 1990; Allen and Van Der Velden, 2001; Jones-Johnson and Johnson, 2004; Friedland and Price, 2003; Maynard et al., 2006). In addition, workers who routinely endure excessive workloads or experience a poor work-life balance are prone to experience low wellbeing (Green, 2006; New Economics Foundation, 2013).

A crucial question for this paper is how feelings of wellbeing change over time and, in particular, how they vary according to the state of the economy. Blanchflower and Oswald's (2011) reporting of Eurobarometer data suggests that overall life satisfaction in some EU countries has been affected by the Great Recession, having declined between 2007 and 2010 in Greece and Portugal, two countries that were particularly hard hit by the economic crisis and related sovereign debt problems. However, life satisfaction increased in Germany, Sweden, Ireland and the UK over the same period. These findings are surprising given that the economies of the UK and, in particular, Ireland were substantially affected by the crisis although, as Blanchflower and Oswald note, the 2010 Eurobarometer findings predate the imposition of stringent austerity measures in the two countries.

The connections between economic conditions and different dimensions of wellbeing need to be unpicked, particularly in relation to the working population. One issue relates to the need to disentangle trend effects and cyclical effects. As Green (2006: 153-55) has shown, wellbeing (as measured by job satisfaction) exhibited a long-term decline in the UK after the 1970s. Although Green expresses some scepticism about the importance of the impact of the economic cycle, other studies have found it to be significant. Clark's (2011) analysis of British Household Panel Survey data is instructive in this regard,

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

suggesting that employees' satisfaction with work (feeling good about the work they do) increases during recessions, whereas satisfaction with pay and job security decreases. Findings from the most recent wave of the UK's Skill and Employment Survey demonstrate that fear of job loss increased sharply between 2006 and 2012, particularly among women (Gallie et al., 2013). Anxiety relating to loss of job status (e.g. work becoming less interesting or less skilled) was also widespread in 2012, particularly in the public sector. Further insights into changes in workers' wellbeing before and after the onset of the economic crisis have been provided by the 2011 Workplace Employment Relations Study (WERS) (van Wanrooy et al., 2013). The findings suggest an increase in job-related contentment between 2004 and 2011 in both the public and private sectors, although the authors suggest that the use of different questions in the two time periods might have affected the results (van Wanrooy et al., 2013: 136). However, employees who directly experienced changes to their pay, conditions and working practices as a result of the crisis experienced a decrease in wellbeing. Job-related contentment in the public and private sectors was negatively affected by work reorganisation and increases in workloads. Job satisfaction in the private sector was also negatively affected by reductions in contractual hours (i.e. hours underemployment) (van Wanrooy et al., 2013: 143-144).

A further consideration is whether wellbeing is most strongly influenced by workers' absolute or relative position (i.e. whether the wider social context influences their perception of their own position). Clark (2003: 326) has suggested that unemployment 'hurts less the more there is of it around' as the wellbeing of the unemployed is dependent on how they view their situation relative to other reference groups (also see Ballas and Tranmer, 2012). What might a focus on relative position mean for the analysis of underemployment since 2008? Given that underemployment has become more widespread, it is possible that workers' expectations of their current jobs and estimation of their short term prospects for improvement have been reduced. To that extent, the impact of underemployment on wellbeing might have lessened since 2008. However, as Maynard et al. (2006) have argued, the relationship between underemployment and wellbeing is 'domain specific', which means that different underemployment-related drivers of wellbeing need to be considered. In relation to involuntary part-time employment, it is possible that falling real incomes in the period since 2008 have resulted in increased financial pressure

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

on part-time workers and a strengthening of the impact of constrained working hours on wellbeing. However, there is also a class dimension to this issue and there are likely to be differences between workers who receive a salary and those who are paid a wage (Warren, 2015).

A further possibility is that the wellbeing of workers who feel themselves to be ‘over qualified’ for their jobs might have been negatively affected after 2008, to the extent that they perceived a slowdown in hiring to have reduced their prospects to move upward in the labour market. By contrast, reduced expectations of work and the increased difficulty of finding employment of any kind might have led to a lessening in the negative consequences of ‘overqualification’ and skills underutilisation for wellbeing (to the extent that ‘overqualified’ workers regard their jobs as preferable to being unemployed).

With these considerations in mind, we set out to test the following hypotheses:

H1. Workers whose skills, qualifications, abilities and experiences are under-utilised will tend to have lower wellbeing than those whose skills are fully utilised;

H2. Workers who are dissatisfied with their hours of work will tend to have lower wellbeing than those who are satisfied with their working hours;

H3. The negative consequences of underemployment for wellbeing have increased since the start of the Great Recession.

3. Data and Methods

The findings are derived from the Skills and Employment Survey, a nationally representative survey of people aged 20-65 years who are in paid employment in Britain. The survey gathers information about the work that people do, their skills and aspects of working life. The survey was first conducted in 1986 and has since been repeated every few years, with a large number of questions on skills, job expectations, employment conditions and training which are often consistent and comparable over

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

time. The findings in this paper are based on the 2006 and 2012 surveys, which were selected so as to enable us to analyse and compare effects before and after the start of the economic crisis. A total of 3,200 individuals took part in the 2012 survey and 7,787 took part in 2006, offering well-timed and sufficient sample sizes to allow for changes since the start of the economic crisis to be identified.

The Skills and Employment Surveys includes variables that enable us to examine underemployment in the sense of having too few hours of paid employment and also enables an investigation of underemployment related to the underutilisation of workers' abilities, skills, experience and initiative. The method adopted to test the hypotheses is structural equation modelling (SEM). SEM is a family of models that allows unobserved or latent variables to be measured by examining observed manifestations of the latent concepts under consideration. In our case, it is possible to measure indirectly concepts such as wellbeing via observed variables that reflect underlying feelings and perceptions. As noted, wellbeing can be measured in a variety of ways. In this paper two dimensions of wellbeing are measured using a standard set of twelve questions from the Skills and Employment Surveys of 2006 and 2012. The two dimensions, which are shown in Table 1, are 'enthusiasm-depression' and 'contentment-anxiety', which are widely used measures in studies of affective wellbeing (i.e. studies that examine feelings). In the Skills and Employment Surveys the dimensions were probed by asking workers how often their job had made them experience the specific feelings listed in Table 1 during the past few weeks. Responses ranged from 'never' to 'all of the time' (see Green et al. 2012: 3).

The dimensions measure experience in terms of displeasure-to-pleasure and from low-to-high mental arousal). Depression and contentment are regarded as states of low arousal while anxiety and enthusiasm are states of high arousal (for a discussion see Warr 2013b). Extensive research in occupational psychology (see Warr, 1990; 2013b) has found that 'enthusiasm-depression' and 'contentment-anxiety' are the main dimensions in which workers' feelings about their jobs vary and the dimensions are increasingly used in more sociologically-inclined research. As well as being the measures of wellbeing used in the Skills and Employment Survey, the dimensions provided the basis for the measures of wellbeing used in the most recent Workplace Employment Relations Survey (WERS) (Van Wanrooy et al, 2013). The dimensions capture a wider range of emotional responses than

measures of 'job satisfaction' in enabling job-related pleasure and stimulation to be distinguished from each other (e.g. the possibility that jobs might be pleasant and not induce anxiety, yet also be unstimulating) (Green, 2006: 153). (2)

TABLE 1 here

The most elementary form of SEM is Confirmatory Factor Analysis (CFA). SEM has significant advantages over the two other primary methods of creating scales or indicators from a set of manifest variables (viz. exploratory factor analysis or simple additive scales). Unlike exploratory factor analysis, the researcher chooses which variables are associated with which factors in advance and specifies it in the model to be estimated. The indicators are therefore derived from theory, as opposed to allowing the method to determine the allocation of variables to dimensions. By employing maximum likelihood techniques SEM estimates how much each observed variable contributes to the overall unobserved concepts (enthusiasm-depression and contentment-anxiety) and computes measures of the concepts that better represent the underlying dimensions than would be the case if variables were simply summed to form an additive scale. Fit statistics are generated which indicate whether the models are acceptable in terms of capturing conceptually meaningful latent concepts. Different software packages produce different fit statistics and the interpretation of these statistics has been a matter for debate (Byrne 2012, Hooper et al 2008). Lavaan (the package used for this paper) estimates the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI), both of which should be around 0.9 or higher. All of our models comfortably meet this criterion. Lavaan also estimates the root mean square error of approximation (RMSEA). Values up to 0.05 indicate a good fit. Again, our models meet the criterion. Following Byrne (2012), error terms on the wellbeing variables with very high associated modification indices were allowed to co-vary.

A further advantage of SEM is that once the model has been estimated it can be extended to include controls or covariates in a regression framework directly within the model in order to predict the latent concepts. We have estimated separate models for 2006 and 2012. A pooled model, combining the two years and including a control for time, has also been estimated. The covariates shown predict the two

dimensions of wellbeing in each case. It should be noted that interaction terms are included in the models and that sometimes these interactions are related to a small number of cases. However, we also estimated a ‘non-interaction’ model and the results did not change our overall conclusions.

4. Findings

We begin by examining changes in the extent of worker dissatisfaction with aspects of their jobs that potentially relate to under-employment. As shown in Figure 1, the proportion of workers who were dissatisfied with their ability to use their abilities and initiative was greater in 2012 than in 2006, as was the proportion of workers who were dissatisfied with their workload. The latter includes those who had ‘too much’ as well as ‘too little’ work. However, compared to 2006 a smaller proportion of employees felt dissatisfied with their hours of work and the extent to which their jobs made use of their experience and skills. The changes in respect of hours of work and use of experience and skill might reflect reduced worker expectations in a context of increased unemployment, along the lines suggested by Clark (2011).

FIGURE 1 here

In order to examine the relationship between underemployment and wellbeing we begin by discussing a pooled model that includes findings for both 2006 and 2012 before going on to examine changes between the two years. Table 2 shows the results of the pooled model for both years and also shows the results of certain interactions. Table 3 shows results for the individual years estimated separately. To begin it is pertinent to make some remarks about general differences in wellbeing between different groups of workers. Controls have been included for workers’ age, gender, family circumstances and sector of employment (public versus private and third sectors) workers in all of the models, but no specific hypotheses have been formulated with respect to these. Nevertheless, almost all appear to be significant predictors of wellbeing after taking into account pre/post-recession timing and the underemployment variables. The exception is family circumstances (having children, whether or not cohabiting), which appear to have little bearing on workplace-related wellbeing (3). Older workers are

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

clearly more enthusiastic and content than younger workers, especially as they approach retirement age. This finding is in line with research (e.g. Blanchflower and Oswald, 2008; Dolan, 2008) that suggests wellbeing increases after ‘middle age’, although in contrast to these studies we do not find a U-shaped relationship between age and wellbeing (i.e. the young workers in our study were not more enthusiastic or content than older workers). With regard to sector of employment, the findings suggest that public sector workers are less content and enthusiastic than workers outside the public sector, although the difference appears mainly in relation to contentment when the models are estimated for the separate years (as shown in Table 3). This finding resonates with evidence from WERS (Van Wanrooy et al. 2013: 137-140), which indicates that overall job satisfaction in the public sector is lower than in the private sector and fell after the start of the crisis as perceived job insecurity increased.

Previous research has found that men tend to be less satisfied with their jobs than women (Van Praag and Ferrer-i-Carbonell 2010). Our findings, in using two dimensions of wellbeing, present a more nuanced picture for we find that women are slightly more enthusiastic about their work than men, all other things being equal, but less content (although the effects are significant in the pooled model they are small in degree). With this in mind separate models for men and women were estimated (not reproduced here for sake of brevity, but available on request). The main finding is that the wellbeing of men changed more than that of women between 2006 and 2012 on both dimensions. Being a public sector worker reduced female contentment significantly, but only male enthusiasm. Under-utilisation of skill had a greater impact on women’s wellbeing than under-utilisation of experience in relation to both dimensions of wellbeing, whereas for men under-utilisation of experience was not significant for contentment. The impact of constraints on workers’ ability to use their initiative was greater for women than for men and women were also more affected than men by dissatisfaction with low working hours. Occupation level, which was measured using the International Socio-Economic Index of Occupational Status (ISEI), also appears to be associated with wellbeing. Workers in higher level occupations appear to be less content than those in lower level occupations, other things being equal. This may be due to higher-level jobs being more demanding and therefore anxiety-inducing (Green 2006: 162). Having a degree seems to exacerbate the problem, reducing contentment even more.

TABLE 2 and 3 here

Turning to the specific hypotheses: the first concerns whether workers' wellbeing is affected in a negative way if their skills, experiences and qualifications are under-utilised. In almost all the models (pooled or not) there are significant negative impacts on both dimensions of wellbeing if workers feel they are not using their skills sufficiently. The results are similar in relation to the extent to which workers feel their jobs allow them to make use of their experience. As is the case for skill under-utilisation, the effect is generally stronger in relation to enthusiasm-depression than contentment-anxiety. The findings also show a substantial negative impact on wellbeing where workers are dissatisfied with the extent to which they can use their abilities in their jobs and, in particular, where the scope for them to use their initiative is tightly constrained. This implies that jobs that offer workers' little autonomy or opportunity to exercise judgment are bad for their wellbeing. Furthermore, dissatisfaction with the use of abilities and the use of initiative have among the greatest impact on the wellbeing indicators in the models when compared to other potential determinants, highlighting the need to consider the concept of under-employment in a broader sense than the usual focus on fewer than desired work hours.

The proportion of workers in lower- and intermediate-level jobs who possess A-level and higher-level qualifications has increased substantially over time, even though the jobs they fill might be relatively unchanged, which implies credential inflation and potential 'over qualification' (Author A; Author Ba). The Skills and Employment survey does not directly measure whether workers believe themselves to be over-qualified, but does allow us to examine the relationship between qualification level, occupation level and wellbeing. As noted, higher-level occupations are associated with lower contentment than lower level ones. It can also be seen that in general degree holders are less content than non-degree holders. Interacting the major ISCO groups (split into three levels) with degree level qualifications indicates that this effect is not shared across different levels of the occupational hierarchy (Table 2). While we might expect degree holders in low-level occupations to be less enthusiastic about their jobs

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

than non-degree holders, this is found not to be the case. It is not clear why degree holders in medium and higher-level occupations are less content (potentially more anxious) than non-degree holders. Possibly the findings are caused by differences in the extent to which degree-holders and non-degree holders are found in different occupations within the broad ISCO bands and that these occupations differ in terms of the demands they place upon workers.

The other aspect of under- (or over-) employment to consider is hours worked. Hypothesis two is based on the assumption that workers who are dissatisfied with their hours of work will tend to have lower wellbeing than those who are satisfied with their working hours. In order to obtain information about both part-time workers and full-time workers in jobs **requiring very long hours of work**, the dissatisfaction scores relating to hours worked were interacted with people working ‘very short hours’ (less than 16 hours), ‘short hours’ (17-29 hours), ‘medium hours’ (30-39 hours – the reference group) and ‘long hours’ (40+). Employees working for a relatively low number of hours and who are dissatisfied with their hours are treated as being ‘underemployed’ in the sense of being hours constrained. The findings from the pooled model demonstrate that dissatisfaction with hours of work coupled with very short hours degrades contentment but not enthusiasm when compared to those with ‘medium hours’. However, dissatisfaction with hours of work coupled with both short hours and long hours degrades both contentment and enthusiasm, with the size of the effect being much more substantial for long hours of work than for short hours.

The effects on wellbeing of, respectively, having too much or too little work were tested further by interacting a variable measuring workers’ dissatisfaction with the amount of work they have to undertake (as opposed to the hours of work within which they have to do it) with the length of working time (as detailed above). The results here are consistent with the findings relating to satisfaction with hours of work: dissatisfaction with the amount of work coupled with ‘very short’ hours of work degrades contentment (i.e. provokes anxiety) but not enthusiasm while dissatisfaction with the amount of work coupled with ‘short’ or ‘long’ hours of work degrades both, with the effect being greatest in respect of the latter. It should also be noted that these last interactions are among the strongest effects in the models

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

when they relate to ‘long’ working hours. With respect to both ‘long’ and ‘short’ hours it is plausible that the negative effects on wellbeing of having either too much or too little work to do reflects work strain resulting from an inability of employees to manage their workloads comfortably in the time available (Author Bb; Green 2006).

We now turn to the third hypothesis, which is that the negative consequences of underemployment for wellbeing increased following the start of the economic crisis. The pooled model demonstrates that there was a decline in wellbeing in terms of both contentment and enthusiasm between 2006 and 2012, all other things being equal. This is particularly true of contentment, which has a larger standardised coefficient than enthusiasm. There are a number of notable changes affecting different categories of employee. In 2006, women’s contentment was significantly lower than that of men. By 2012 the relationship was no longer statistically significant, although it appeared that women in 2012 felt more enthusiastic than men. It also appeared that the contentment experienced by older workers (those over 50 years of age) relative to workers aged 20-29 years increased, a finding which possibly reflects the disproportionate impact of the crisis on the labour market prospects of young workers. In addition, and as suggested by the pooled model, the experiences of workers in different occupational categories have varied. Higher level occupations were associated with negative coefficients for contentment in both 2006 and 2012, although the relationship in the latter year was less strong than in the former (Table 3). Furthermore, the interaction of ISEI and year (Table 2) shows a greater negative impact in 2012 on contentment and enthusiasm suggesting that more prestigious occupations have been hit hardest.

The findings in Table 3 indicate that the negative impact of underemployment on wellbeing increased after the start of the economic crisis in a number of ways. Insufficient opportunities to make use of skills and experience had a more detrimental effect on workers’ wellbeing in 2012 compared to 2006. The negative consequences of workers’ dissatisfaction with opportunities to use their initiative also increased, but only in relation to enthusiasm-depression. In addition, the interaction of dissatisfaction with hours of work and having very short hours of work had a statistically significant negative impact on contentment in 2012 but not in 2006. The same result was observed in relation to the interaction of

very short hours and amount of work. The strength of the negative effects for those with short hours (17-29 hours) increased for enthusiasm (but lessened slightly in relation to contentment). Overall, these findings suggest that 'hours underemployment' was having more substantial deleterious consequences for wellbeing in 2012 than in the earlier period.

Negative relationships in both years were uncovered for workers who were dissatisfied with their hours of work and were working long hours, although the effect on contentment appeared to be less strong in 2012 compared to 2006. It is possible that in the context of the recession and mounting unemployment, those in 'long hours' jobs became less discontented with their lot. However, the negative consequences of dissatisfaction with the amount of work that those in 'long hours' jobs have to contend with increased in relation to both their enthusiasm and contentment. This might reflect a deterioration in the 'wage – effort' bargain as real wage increases stalled, particularly in the public sector. It is notable that the coefficient relating to the negative relationship between contentment and employment in the public sector (relative to the private and third sector) increased after the start of the Great Recession

5. Conclusion

This paper has demonstrated that UK workers who are underemployed experience lower levels of wellbeing compared to those who are more adequately employed. Our findings therefore add to the international evidence highlighting the negative impact of underemployment on wellbeing (e.g. Friedland and Price, 2003; Maynard et al., 2006; McKee-Ryan and Harvey, 2011). Moreover, the paper has shown how relationships between different dimensions of underemployment and wellbeing changed after the start of the Great Recession. Although we are not able to demonstrate causality, it appears that the negative wellbeing consequences of workers' dissatisfaction with opportunities to make use of their skills and abilities became more substantial during the recession, as did the consequences of being 'hours constrained' and having an unsatisfactory workload. Furthermore, the findings suggest that the economic crisis may have had a negative impact on the wellbeing of those working very long hours, as mounting dissatisfaction with workloads served to reduce enthusiasm and contentment. Our results

therefore suggest that prevailing economic conditions do have implications for wellbeing, although clearly this does not mean that the longer-term changes in the organisation and intensity of work emphasised by Green (2006) are not also important factors. In addition, although it is debateable whether unemployment ‘hurts less the more there is of it around’ (Clark, 2003: 326), it does not seem to be true in relation to underemployment. While it is possible that some workers’ expectations were revised downwards during the crisis, the wellbeing dimensions used in this paper indicate that the direct negative impact of underemployment on wellbeing intensified.

The findings raise a number of issues for policy. Firstly, the UK government is fixated with the quantity of jobs in the economy and the rates of employment and unemployment in aggregate and for different groups of workers. The employment rate, however, reveals nothing about the quality of jobs and whether they provide workers with a means of achieving an acceptable standard of living. The post-2010 increase in the employment rate in the UK has been associated with a growth in involuntary part-time work (hours underemployment) (Blanchflower, 2015) which, as we have shown, has negative consequences for workers’ wellbeing. Secondly, while the government, in common with its predecessors and governments elsewhere in the EU, regularly emphasises the need for improvements in the skills base of the economy, many workers find that the skills and knowledge that they possess are not fully utilised in their jobs. Although the supply of skills is undoubtedly a matter of importance, attention also needs to be paid to whether skills are subsequently put to use and the detrimental consequences of skill under-utilisation for workers’ wellbeing. The under-utilisation of workers’ skills, knowledge and abilities also has implications for productivity growth, which continues to be extremely weak in the UK economy. Thirdly, our findings add to the extant evidence showing the damaging consequences of long hours and heavy workloads for wellbeing. Indeed, ‘overemployment’ appears to have an even more detrimental effect on wellbeing than ‘underemployment’ and, as other studies have shown (Green, 2006; New Economics Foundation, 2013), excessively long hours of work can lead to health problems and emotional exhaustion. The 2014 report of the All-Party Parliamentary Group on Wellbeing Economics (2014) has also highlighted the negative consequences of excessive work durations for wellbeing and has set out a number of objectives for policy, including the promotion of

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

shorter and more flexible hours of work. However, the report has little to say about how the issue of underemployment might be tackled. Important questions, such as how might paid and unpaid work be more equitably distributed, how might employers be induced to transform part-time jobs into full-time employment, how might workers be empowered to exert greater control over their jobs and their working time, and how might workers be helped to fulfil their potential will need to be addressed if underemployment is to be tackled and workers' wellbeing enhanced.

Endnotes

1. <http://www.ons.gov.uk/ons/rel/lmac/underemployed-workers-in-the-uk/2012/rpt-underemployed-workers.html#tab=People-in-work-wanting-more-hours-increases-by-1-million-since-2008>
2. Job satisfaction measures can also be affected by adaptive preferences (i.e. workers expressing satisfaction with low quality work because they are accustomed to it) (Spencer, 2013: 585).
3. Although evidence suggests that wellbeing in general is influenced by marital status, familial composition and relationships (Blanchflower and Oswald, 2011).

References

Abrahamsen B (2010) Employment status and commitment to work in professions. *Economic and Industrial Democracy* 31: 93-115.

All-Party Parliamentary Group on Wellbeing Economics (2014) *Wellbeing in Four Policy Areas*. London: New Economics Foundation.

Allen J and Van Der Velden R (2001) Educational mismatches versus skill mismatches: effects on wages, job satisfaction, and on-the-job search. *Oxford Economic Papers* 3: 343-542.

Ballas D and Tranmer M (2012) Happy people or happy places? A multilevel modelling approach to the analysis of happiness and wellbeing. *International Regional Science Review* 35(1): 70-102

Bell DNF and Blanchflower DG (2010) UK unemployment in the Great Recession. *National Institute Economic Review* 214(1): R3-R25

Bell DNF and Blanchflower DG (2011) Underemployment in the UK in the Great Recession. *National Institute Economic Review* 215: R23-R32.

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Bell DNF and Blanchflower DG (2015) Commentary: labour market slack in the UK. *National Institute Economic Review* 229: F4-F11.

Blanchflower DG (2015) As good as it gets? The UK labour market in recession and recover. *National Institute Economic Review* 231: F76-F80.

Blanchflower DG and Oswald AJ (2008) Is well-being U-shaped over the life cycle? *Social Science and Medicine*, 66: 1733-1749.

Blanchflower DG and Oswald AJ (2011) International happiness: a new view on the measure of performance. *Academy of Management Perspectives*. February: 6-22.

Burke RJ (1997) Correlates of under-employment among recent business school graduates. *International Journal of Manpower* 18: 627-635.

Burris BH (1983) The human effects of underemployment. *Social Problems* 31(1): 96-110.

Byrne B (2012) *Structural equation modelling with MPlus: Basic concepts, applications, and programming*. New York: Routledge.

Clark AE (2003) Unemployment as a social norm: psychological evidence from panel data. *Journal of Labor Economics* 21(2): 323-351.

Clark AE (2011) Worker wellbeing in booms and busts. In: Gregg P and Wadsworth J (eds) *The Labour Market in Winter: The State of Working Britain*. Oxford: OUP.

De Witte M. and Steijn B (2000) Automation, job content and underemployment. *Work, Employment & Society* 14(2): 245-264.

Dolan P, Peasgood T and White M (2008) Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective wellbeing. *Journal of Economic Psychology*, 29: 94-122.

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Dooley D (2003) Unemployment, underemployment, and mental health: Conceptualizing employment status as a continuum. *American Journal of Community Psychology* 32(1/2): 9-20.

Dooley D, Prause J and Ham-Rowbottom KA (2000) Underemployment and depression: longitudinal relationships. *Journal of Health and Social Behavior* 41(4): 421-436.

European Commission (2014) *European Vacancy and Recruitment Report 2014*. Brussels: European Commission.

Feldman DC (1996) The nature, antecedents and consequences of underemployment. *Journal of Management* 22(3): 385-407.

Friedland DS and Price RH (2003) Underemployment: Consequences for the health and wellbeing of workers. *American Journal of Community Psychology*, 32(1/2): 33-45.

Fryer D (1986) 'Employment, deprivation and personal agency during unemployment: a critical discussion of Jahoda's explanation of the psychological effects of unemployment. *Social Behaviour* 1: 3-23.

Gallie D, Felstead A, Green, F and Inanc H (2013) *Fear at Work in Britain: First Findings from the Skills and Employment Survey, 2012*. University of Cardiff.

Green F. (2006) *Demanding Work: The Paradox of Job Quality in the Affluent Economy*. Princeton: Princeton University Press.

Green F, Felstead A, Gallie D and Inanc H (2012) *Job-related Well-being in Britain. First Findings from the Skills and Employment Survey 2012*. University of Cardiff.

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Gundert S and Hohendanner C (2014) Do fixed-term and temporary agency workers feel socially excluded? Labour market integration and social wellbeing in Germany. *Acta Sociologica* 57(2): 135-152.

Hooper D, Coughlan J and Mullen M (2008) Structural Equation Modelling: Guidelines for Determining Model Fit. *Electronic Journal of Business Research Methods* 6(1): 53-60.

Jahoda M (1982) *Employment and Unemployment: A Social-Psychological Analysis*. Cambridge: Cambridge University Press.

Jones-Johnson G and Johnson WR (2004) Subjective underemployment and psychological stress: the role of perceived social and supervisor support. *The Journal of Social Psychology* 132(1): 11-21.

Layard R (2005) *Happiness: Lessons from a New Science*. London: Penguin.

McKee-Ryan FM and Harvey J (2011) "I have a job, but...": A review of underemployment. *Journal of Management* 37(4): 962-996.

Maynard DC, Joseph TA and Maynard AM (2006) Underemployment, job attitudes, and turnover intentions. *Journal of Organizational Behaviour* 27: 509-536.

New Economics Foundation (2012) *Wellbeing Uncovered: An Analysis of UK Data*. London: New Economics Foundation.

Nordenmark M and Strandh M (1999) Towards a sociological understanding of mental well-being among the unemployed: the role of economic and psychosocial factors. *Sociology* 33(3): 577-97.

Office for National Statistics (2013) Full Report- Graduates in the UK Labour Market 2013.

http://www.ons.gov.uk/ons/dcp171776_337841.pdf

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Office for National Statistics (2015) UK Labour Market, April 2015.

<http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/april-2015/statistical-bulletin.html>

Oguz S, Merad S and Snape D (2013) Measuring national wellbeing – What matters most to personal wellbeing. London: Office for National Statistics

Paul KI and Moser K (2009) Unemployment impairs mental health: meta-analyses. *Journal of Vocational Behavior* 74: 264-282.

Prause J and Dooley D (1997) Effect of underemployment on school-leavers' self-esteem. *Journal of Adolescence*, 20: 243-260.

Russell H, Watson D and McGinnity F (2013) Unemployment and subjective well-being. In Gallie D (ed.) *Economic Crisis, Quality of Work & Social Integration*. Oxford: Oxford University Press.

Scurry T and Blenkinsopp J (2011) Under-employment among recent graduates: a review of the literature. *Personnel Review* 40(5): 643-659.

Sointu E (2005) The rise of an ideal: tracing changing discourses of wellbeing. *The Sociological Review* 53(2): 255-274.

Spencer DA (2013) Promoting high quality work: obstacles and opportunities. *Journal of Business Ethics*, 114:583-597.

Van Praag BMS and Ferrer-i-Carbonell A (2010) Happiness economics: a new road to measuring and comparing happiness. *Foundations and Trends in Microeconomics*, 6(1): 1-97.

Van Wanrooy B, Bewley H, Bryson A, Forth J, Freeth S, Stokes L and Wood S (2013) *Employment Relations in the Shadow of Recession*. Basingstoke: Macmillan.

Warr P (1990) The measurement of wellbeing and other aspects of mental health. *Journal of Occupational Psychology* 63: 193-210.

***** This is a post-print OA version of the article. The article is published in *Work, Employment & Society* (2016) available at <http://tiny.cc/e8wdhy>. Please cite using the published WES article *****

Warr P (2013a) Jobs and job-holders: two sources of happiness and unhappiness. In David SA, Boniwell I and Ayers AC (eds.) *The Oxford Handbook of Happiness*. Oxford: Oxford University Press.

Warr P (2013b) How to think about and measure psychological well-being. In Sinclair RR, Wang M and Tetrick LE (eds.) *Research Methods in Occupational Health Psychology*. New York: Routledge.

Warren T (2015) Work-time underemployment and financial hardship: class inequalities and recession in the UK. *Work, Employment & Society* 29(2): 191-212.

Whelan CT (1992) The role of income, life-style deprivation and financial strain in mediating the impact of unemployment on psychological distress: Evidence from the Republic of Ireland. *Journal of Occupational Psychology* 65(4): 331-44.

Wilkins R (2007) The consequence of underemployment for the under-employed. *Journal of Industrial Relations* 49(2): 247-275.

Table 1 **Variables used to measure the two dimensions of wellbeing**

Enthusiasm-Depression	Contentment-Anxiety
ENTHUSIASTIC	CALM
CHEERFUL	TENSE
DEPRESSED	CONTENTED
GLOOMY	RELAXED
MISERABLE	UNEASY
OPTIMISTIC	WORRIED

Note: These items were measured on a 6-point scale and recoded into 4 categories to maintain high cell counts. They were also recoded so that positive categories were all coded in the same direction.

Table 2: Results of the models - pooled 2006 and 2012 dataset (standardised coefficients)

Variable	Enthusiasm	Contentment	Enthusiasm	Contentment	Enthusiasm	Contentment
Female	0.067**	-0.081**	0.071**	-0.081**	0.066**	-0.084**
Aged 30-39 years	-0.030	-0.012	-0.030	-0.005	-0.029	-0.007
Aged 40-49 years	-0.004	-0.023	-0.006	-0.016	-0.006	-0.021
Aged 50-59 years	0.115**	0.110**	0.111**	0.111**	0.113**	0.114**
Aged 60+ years REF Aged 20-29	0.319**	0.432**	0.314**	0.435**	0.314**	0.432**
Cohabiting	0.021	-0.031	0.020	-0.030	0.021	-0.029
Children under 5	0.001	0.036	0.000	0.033	-0.000	0.033
Children 5-16	0.029*	0.002	0.029*	0.004	0.028*	0.003
Year=2012 (vs 2006)	-0.106**	-0.190**	-0.105**	-0.178**		
Degree holder	0.047	-0.130**				
Occupational status	0.011	-0.151**			0.000	-0.107**
Year 2006 * occupational status					0.026**	-0.035**
Year 2012 * occupational status					-0.019*	-0.104**
Degree * occupational status					0.014	-0.050**
High occupation*degree			0.023	-0.632**		
High occupation*no degree			0.017	-0.487**		
Medium occupation *degree			0.039	-0.350**		
Medium occupation*no degree			-0.063	-0.230**		
Low occupation*degree REF low occupation*no degree			0.216	-0.081		
Public Sector employee REF private and NGO	-0.053*	-0.099**	-0.058*	-0.081**	-0.051*	-0.100**
Use skills very little/a little REF use skills a lot/ almost all the time	-0.238**	-0.106**	-0.243**	-0.118**	-0.236**	-0.106**
Use experience very little/a little REF use experience a lot/almost all the time	-0.114**	0.046	-0.117**	0.026	-0.114**	0.051

Dissatisfied with use of abilities	-0.432**	-0.284**	-0.433**	-0.279**	-0.432**	-0.290**
Dissatisfied with the use of initiative	-0.602**	-0.492**	-0.600**	-0.498**	-0.602**	-0.493**
Dissatisfied with amount of work and working <16 hrs per week	-0.097	-0.218**	-0.093	-0.220**	-0.099	-0.223**
Dissatisfied with amount of work and working 17-29 hrs per week	-0.193**	-0.275**	-0.209**	-0.274**	-0.193**	-0.280**
Dissatisfied with amount of work and working 40 + hrs per week	-0.488**	-0.667**	-0.487**	-0.669**	-0.487**	-0.667**
Dissatisfied with hours worked and working <16 hrs per week	-0.097	-0.218**	-0.110	-0.220**	-0.099	-0.223**
Dissatisfied with hours worked and working 17-29 hrs per week	-0.193**	-0.275**	-0.184**	-0.275**	-0.193**	-0.280**
Dissatisfied with hours worked and working 40 + hrs per week	-0.454**	-0.533**	-0.455**	-0.538**	-0.452**	-0.529**
N=10912	10912	10912	10919	10919	10912	10912

* sig at 5%, ** sig at 1%, otherwise not significant

The reference category for the interactions of satisfaction with amount of work and hours of work and satisfaction with hours worked and number of hours worked is 30-39 hours.

Fit for model without interactions: CFI=0.973 TLI=0.966 RMSEA=0.048

Fit for model with year interactions: CFI=0.971 TLI=0.964 RMSEA=0.047

Fit for model with occupation interactions 2: CFI=0.973 TLI=0.966 RMSEA=0.048

Table 3: Results of the base models for 2006 and 2012 separately (standardised coefficients)

Variable	Enthusiasm 2006	Contentment 2006	Enthusiasm 2012	Contentment 2012
Female	0.047	-0.102**	0.110**	-0.033
Aged 30-39 years	-0.031	-0.059	-0.030	0.105
Aged 40-49 years	0.001	-0.082*	-0.021	0.112
Aged 50-59 years	0.116**	0.059	0.108	0.233**
Aged 60+ years REF Aged 20-29	0.298**	0.385**	0.338**	0.548**
Cohabiting	0.029	-0.003	0.005	-0.096*
Children under 5	0.012	0.049	-0.035	-0.005
Children 5-16	0.021	-0.014	0.048*	0.045
Occupational status	0.004	-0.169**	0.029	-0.104**
Degree holder	0.045	-0.133**	0.048	-0.135*
Public Sector employee REF private and NGO	-0.052	-0.087**	-0.047	-0.124**
Use skills very little/a little REF use skills a lot/almost all the time	-0.212**	-0.078**	-0.310**	-0.187**
Use experience very little/a little REF use experience a lot/almost all the time	-0.110**	0.034	-0.123**	0.080
Dissatisfied with use of abilities	-0.392**	-0.239**	-0.526**	-0.397**
Dissatisfied with the use of initiative	-0.577**	-0.540**	-0.644**	-0.385**
Dissatisfied with amount of work and working <16 hrs per week	-0.081	-0.100	-0.144	-0.404**
Dissatisfied with amount of work and working 17-29 hrs per week	-0.144*	-0.285**	-0.284**	-0.250**
Dissatisfied with amount of work and working 40 + hrs per week	-0.423**	-0.578**	-0.631**	-0.897**
Dissatisfied with hours worked and working <16 hrs per week	-0.067	-0.100	-0.144	-0.404**
Dissatisfied with hours worked and working 17-29 hrs per week	-0.143*	-0.285**	-0.284**	-0.250**
Dissatisfied with hours worked and working 40 + hrs per week	-0.463**	-0.584**	-0.454**	-0.397**
N	7732	7732	3180	3180

* sig at 5%, ** sig at 1%, otherwise not significant.

The reference category for the interactions of satisfaction with amount of work and hours of work and satisfaction with hours worked and number of hours worked is 30-39 hours.

Fit for model in 2006: CFI=0.974 TLI=0.968 RMSEA=0.048

Fit for model in 2012: CFI=0.973 TLI=0.966 RMSEA=0.050

Figure 1: Dissatisfaction with elements of job quality

