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Gender segregation, underemployment and subjective well-being in the UK labour market

Abstract

This paper argues that gender segregation influences patterns of underemployment and the relationships that underemployment has with the subjective well-being of men and women. Previous studies have paid little attention to how gender segregation shapes underemployment, an increasingly prominent feature of the UK and European labour markets since the economic crisis of 2008. Using data from the UK Annual Population Surveys, this paper examines time-related underemployment: people working part-time because they cannot find a full-time job. The paper asks whether there are gender differences in underemployment trends and in the links between underemployment and subjective well-being. The results suggest that the probability of underemployment is growing at a faster rate among women rather than men and that underemployment is most common in the jobs that women are more likely to perform, namely in female-dominated occupations, the public sector, and small organisations. Underemployment is least common in male-dominated occupations and industries and in the private sector. Moreover, for employees with longer tenures, underemployment has more negative relationships with the subjective well-being of women than with that of men. These findings imply that gender segregation in labour markets is a crucial factor to consider when researching underemployment and its consequences.

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Introduction

The global economic crisis of 2008 halted the economic growth in many countries. While previous global economic crises had been associated with sharp increases in unemployment, the crisis of 2008 was characterised in many European countries by a marked increase in underemployment, that is, people working in jobs that are below their full working capacity in terms of working hours, skills, qualifications and income (Bell and Blanchflower, 2011, 2013; Gregg and Wadsworth, 2010a; Heyes et al., 2016). In the UK, the number and proportion of workers who would like to work longer hours or who are working part-time but would prefer a full-time job has been growing since 2008 and has reached historically high levels (Bell and Blanchflower, 2011, 2013, 2014; Blanchflower, 2015). The underemployment rate, measured as the proportion of people who want to work more hours than are currently available to them, hovered at around 5% of the labour force between 2001 and 2006, but by 2013 it was over 10%, with a sharp increase taking place during 2008 (Gregg and Wadsworth, 2010a, 2010b). The number of part-timers in the UK saying that they wanted full-time hours rose to 1.1 million by 2010 (up from 700,000 in 2008) (Parek et al., 2010). Likewise in the European Union, the proportion of employees who work part-time grew four times faster between 2008 and 2011 than between 2005 and 2008, fuelled mainly by a relatively rapid increase in involuntary part-time work; that is, people working part-time because they cannot find a full-time job (ETUC and ETUI, 2013).

This recent growth in underemployment has increased academic and public concern about the negative associations between time-related underemployment and the well-being of

employees. A number of studies have found that underemployment is related negatively to some dimensions of subjective well-being (Angrave and Charlwood, 2015; Dooley, 2003; Friedland and Price, 2003; Heyes et al., 2016; Maynard and Feldman, 2011; Wilkins, 2007; Wooden et al., 2009). These findings are relatively consistent across the USA, Australia and the UK where the studies have been conducted. In the UK, Heyes et al. (2016) also found that the negative relationships between time-related underemployment and well-being have become stronger since the 2008 economic recession. Most previous studies have found that, after controlling for a range of socio-demographic characteristics, women are more likely to be underemployed than men; however, there is less consistency in the findings about whether both male and female well-being suffers as a result of underemployment (Angrave and Charlwood, 2015; Friedland and Price, 2003; Heyes et al., 2016; Maynard and Feldman, 2011; Wilkins, 2007; Wooden et al., 2009).

A common feature of these studies is that despite the persistence of gender segregation in the labour market, it has not yet been a factor recognised within theoretical frameworks used to explain the patterns, predictors or consequences of underemployment. Previous studies have limited consideration of the gendered nature of employment to broad empirical comparisons between analytical models, estimated separately for men and women, or to using gender as a control variable. This is not surprising, as these studies have explicitly or implicitly taken an economic or psychological perspective to conceptualise the effects of underemployment on subjective well-being. For example, it has been argued that underemployment is negatively related to well-being because it is experienced as a psychological discrepancy between a desired and an actual situation (Angrave and Charlwood, 2015) or as a stress factor (Friedland and Price, 2003). Theoretical considerations of gender segregation as a structural factor potentially related to underemployment have been at best limited or missing altogether.

While such broad gender comparisons provide important empirical insights into the patterns of underemployment and its consequences, what is overlooked is the important question of why such gender differences in underemployment exist. This paper makes a theoretical contribution by arguing that conceptualising underemployment using the lens of gender segregation, and horizontal occupational segregation in particular, can expand our knowledge and understanding of underemployment, its predictors and consequences. The questions addressed here relate to how the gendered nature of the labour market shapes patterns of underemployment and the extent to which that explains the relationships between underemployment and the subjective well-being of men and women.

This paper also makes two empirical contributions. First, it examines the relationships between the structural predictors such as gender segregation and the probability and consequences of underemployment for men and women, using nationally representative surveys of UK workers. Second, in contrast to many previous studies that have conceptualised underemployment in terms of preferences, i.e. wanting to work more hours, this study conceptualises underemployment as involuntary part-time work – people working part-time because they cannot find a full-time job. This is an important nuance since part-time workers have less access to training, suffer a part-time wage penalty and are less likely to be promoted than full-time workers (e.g. Connolly and Gregory, 2008, 2009; Grant et al., 2005; Hoque and Kirkpatrick, 2003; Olsen et al., 2010; Thornley, 2007). Therefore underemployment conceptualised as involuntary part-time work represents a situation where a worker with fewer working hours than desired is also likely to be in a job of poorer quality than the full-time job they would like. In this paper, we use the Annual Population Surveys (APS) from 2006 to 2013, and the APS Personal Well-Being dataset 2012/2013—two datasets that to our knowledge have not yet been used to study underemployment and well-being.

We begin with an analysis of the post-recession labour market in the UK and particularly the issues and consequences of pervasive gender segregation and the relationships between occupational segregation by gender, underemployment and well-being. We take our analysis point from the 2008 crisis because of the significant growth in underemployment compared to other periods of recession. We then describe the methodology used before presenting the findings. The paper concludes with a discussion of the ensuing theoretical and policy implications.

Theory, literature and hypotheses

Gender segregation and underemployment in the UK labour market

Despite the widespread enforcement of equality legislation, the significant educational advances of women and profound changes in family roles, gender norms and childbearing patterns, gender segregation remains pervasive in all European labour markets, including the UK (Bettio et al., 2009). In this paper we make a proposition that horizontal gender segregation - the over or under-representation of women or men in certain jobs, occupations or sectors – is related to differences in the trends, propensity and outcomes of male and female underemployment during an economic recession.

Gender segregation is a structural factor that powerfully shapes the experiences at work of both women and men (Bettio et al., 2009; Scott et al., 2010). Around three quarters of working women in the UK are concentrated in jobs that fall into the so-called 'five Cs' - clerical (administrative), cashiering (retail), cleaning, catering and caring occupations. These are often part-time, low paid jobs with limited career prospects (ONS, 2013b). In contrast, only six per cent of engineering and 13 per cent of information and communication technology jobs are held by women (EHRC, 2010). Women are also overrepresented in work in the public sector. In 2010, 40 per cent of working women were employed in the public sector, compared with just 15 per cent of men (EHRC, 2010). Women are also concentrated

in part-time jobs: 42 per cent of working women are employed part-time compared with 12 per cent of working men (ONS, 2013b).

According to Rubery (1988) and Rubery and Rafferty (2013), this gender segregation across occupations and sectors is the key factor shaping the differential effects that an economic recession has on employment consequences for men and women. Every recession has varied outcomes and gender segregation can either protect women from job losses – or make them more exposed and vulnerable. For example, Rubery and Rafferty (2013) found that since the recession of 2008, women in the public, finance and banking sectors in the UK have experienced a disproportionately high share of job losses. During previous recessions, however, women in these sectors faced a relatively low level of job losses.

We extend the argument that gender segregation is the key factor that shapes the propensity of job losses during a recession and argue that gender segregation also affects the likelihood of men and women becoming underemployed, with subsequent negative relationships between underemployment and subjective well-being. Reducing the working hours of employees is one of the strategies that employers can use to deal with reduced demand for their services and products during times of general uncertainty in the economy (Lyonette et al., 2010). Thus, in the recession of 2008, employers were increasingly offering new employees part-time rather than full-time jobs, leading to a greater number of employees working part-time involuntarily because they could not get a full-time job (Bell and Blanchflower, 2011, 2014). At the same time, employers can also reduce the working hours of existing employees, sometimes transferring them from full-time to part-time contracts. Again this employment strategy can lead to increases in involuntary part-time working. Research shows that women have been particularly vulnerable to underemployment during the recent recession. While part-time and temporary work has been increasing in the UK

since 2008, the proportion of women who would prefer a full-time job is increasing even faster (Rubery and Rafferty, 2013).

In the current study, we argue that gender segregation exposed women to higher risks of underemployment than men during and after the recession of 2008. The concentration of women in administrative, retail, cleaning, catering and caring occupations situates them in part-time and low paid occupations which are flexible, labour intensive jobs, often involving temporary or zero hours contracts, in which employers can relatively easily adjust the number of employees (Rubery, 1988; Rubery and Rafferty, 2010; Rubery and Rafferty, 2013) or the number of hours they work to fit the fluctuations in business demand.

The concentration of women in the public sector has also made them more vulnerable to underemployment than men after the 2008 recession. Compared to the private sector, jobs in the public sector have been protected during previous recessions (Rubery and Rafferty, 2013). However, since 2008 the UK public sector has been subject to budget cuts resulting in a pay freeze, re-structuring and an increase in job insecurity, work intensification and job losses (Sands, 2012). The re-structuring of public sector service delivery has also led to more cost-cutting (Low Pay Commission, 2011), which is likely to mean a loss of full-time permanent jobs and an increase in part-time working. Therefore we predict that the probability of underemployment post-recession will also be higher in public sector occupations than in the private sector.

> Hypothesis 1a: The probability of underemployment will be highest in the public sector as well as in occupations and industries where women dominate.
>
> Hypothesis 1b: The probability of underemployment will be at its lowest in the private sector as well as male-dominated occupations and industries.

Gender segregation and subjective well-being

Having established the scale of gendered segregation in the UK labour market, it is important to examine the links that underemployment has with subjective well-being, and the extent to which gender segregation can explain these relationships. Subjective well-being is commonly defined as 'a person's cognitive and affective evaluation of his or her life' (Diener et al., 2005, p.63). That is, in other words, subjective well-being is what a person thinks or feels about their life. Subjectivity is what distinguishes subjective well-being from traditional 'objective' socio-economic measurements of well-being and quality of life, such as income, employment and health status. Subjective well-being captures the consequences of inequalities experienced by individuals in different parts of society (Stiglitz et al., 2009).

Subjective well-being has three components: a cognitive facet, positive affect and negative affect. The cognitive facet represents what a person thinks about his or her life and how satisfied they are with that life. This facet is often measured in terms of expressed life satisfaction. The positive and negative affects are two emotional facets and characterise how a person feels about their life; for instance how happy or anxious they usually are (Kahneman et al., 2003). Contrary to a prevalent view, positive and negative feelings about one's life are not at the opposite ends of the same scale, but are different facets (Huppert and Whittington, 2003).

Subjective well-being theories hold that individuals experience high levels of subjective well-being if they have opportunities to satisfy their needs and experience conditions that involve more positive and fewer negative emotions (Diener et al., 2009). Individuals also experience high subjective well-being when they are engaged in a process of setting goals, working towards them and making progress in that process (Brunstein, 1993; Emmons, 1986). Different jobs offer opportunities in varying degrees for satisfying needs, experiencing emotions and pursuing goals (Warr, 2007). For example, women in temporary jobs have

lower life satisfaction levels than women in permanent jobs (Bardasi and Francesconi, 2004). Precarious, low wage and involuntary part-time jobs - so-called 'bad jobs' – can have a potentially negative impact on subjective well-being (Kalleberg, 2011). Wooden et al. (2009) and Angrave et al. (2015) both found that a working time mismatch of either underemployment or over employment – that is, not working enough or working too much - also has a negative impact on well-being.

Gender is an important moderating factor for relationships between the quality of work and subjective well-being. For example, the Office for National Statistics data indicate that in the UK, part-time employees have slightly higher life satisfaction than full-time employees (ONS 2013a). However, when gender differences are considered, men working part-time are less satisfied with their lives than men working full-time, while for women the effect of part-time work on wellbeing is varied and depends on their marital status (Schoon et al. 2005).

Taking into account that involuntary part-time work means being in a situation in which an employee cannot satisfy their needs and achieve their goal of a full-time job, we predict that, as previous studies have found (e.g., Angrave and Charlwood, 2015; Dooley, 2003; Friedland and Price, 2003; Heyes et al., 2016; Maynard and Feldman, 2011; Wilkins, 2007; Wooden et al., 2009), underemployment will have negative relationships with the subjective well-being of both men and women.

However, previous studies have not taken into account that underemployment can occur through two pathways: by employers offering new employees part-time jobs or reducing the working hours of existing employees (Bell and Blanchflower, 2013; Grimshaw and Rafferty, 2012). Relationships between underemployment and subjective well-being could therefore be different for newly employed employees, defined as workers who started their job within the past 12 months (Eurostat, 2016), compared to staff with longer job tenures. To some extent, underemployed employees who have been with their current

employer for less than a year could perceive a part-time job as a positive step into employment away from unemployment (or the risk of becoming unemployed), even if they would have preferred to have been employed full-time. For example, research shows that securing new paid work enhances well-being, although this improvement is smaller for non-standard jobs, such as part-time work (Grün et al., 2010; Strandh, 2000). As a result, any possible negative relationships between involuntary part-time work and well-being for new employees could be neutralised by the positive relationships between securing paid work and well-being. In contrast, staff with longer tenures whose working hours have been reduced and thus are working part-time involuntarily, could perceive part-time work as a step away from their aim of having a full-time job. As such, there could be a negative relationship between involuntary part-time work and the well-being of employees with longer tenures.

> Hypothesis 2: There will be a negative relationship between involuntary part-time work and the subjective well-being of male and female workers who have been with their current employer for more than a year.

Our analyses control for gender composition in occupations and industries and also explore the relationships between gender composition and subjective well-being. This is because it is important to take into account the gendered nature of employment. Women are concentrated in occupations characterised by low pay, less security and limited career prospects (Bettio et al., 2009) which alone could have negative associations with female subjective well-being. If these jobs also have a higher likelihood of underemployment, then gender segregation could be a significant factor in partially or fully explaining the negative relationships between female underemployment and well-being.

Data and methods

This study used data from the UK Annual Population Survey (APS) (ONS Social Survey Division, 2013) to analyse trends in underemployment and the relationships between involuntary part-time work and the subjective well-being of men and women. The APS combines data from two waves of the main Labour Force Survey with data from local sample boosts in England, Wales and Scotland. Data are collected through face-to-face and telephone interviews with a multi-stage stratified random sample of approximately 150,000 households and around 320,000 individuals (ONS, 2012). To examine gendered trends in underemployment, we employed the APS data from 2006 to 2013. This data consisted of a nationally representative sample of 994,039 employed working age (16-64) adults in the UK, on average 124,255 respondents per calendar year. To examine relationships between underemployment and subjective well-being, we then used the APS Subjective Well-being dataset 2012-2013 which was drawn from a nationally representative sample of 114,516 employed adults (also aged 16-64) in the UK. The government introduced the 'Measuring National Well-being' programme with the levels of national subjective well-being measured officially since 2011 (Bache and Reardon, 2013; ONS, 2013a). The response rate for the APS was approximately 55 per cent (ONS, 2011, p.21). Therefore, to reflect the size and composition of the general population of adults in the UK by correcting for systematic non-response and sample design, all analyses presented in this paper were weighted. In the analysis of the APS Subjective Well-being dataset 2012-2013, the subjective well-being weights were used and analyses of the APS data from 2006 to 2013 applied person weights. These weights were used to minimise survey non-response bias and to provide more accurate estimates relating to the total UK population.

Measurements

Underemployment/involuntary part-time work: The key variable of interest in this study was time-related underemployment. Respondents were coded as being underemployed (i.e. working part-time involuntarily) if they reported that they worked part-time because they could not find a full-time job. Part-time work in the APS is self-defined: the question does not specify the number of working hours required for a job to be a part-time job. Instead, the respondents are asked what their arrangements for working hours are. In the 2012-2013 sample 92 per cent of the part-timers reported that they actually worked less than 30 hours a week, the number of hours for full-time work according to the ONS and OECD definitions. This suggests that this self-definition reliably classifies respondents into individuals working full-time and part-time.

Subjective well-being: We used three subjective well-being measurements from the APS 2012-2013 subjective well-being dataset (ONS, 2013a). Life satisfaction (a cognitive facet) was measured by asking: 'Overall, how satisfied are you with your life nowadays?' Anxiety (a negative affect) was measured by asking: 'Overall, how anxious did you feel yesterday?' Happiness (a positive affect) was measured using the question: 'Overall, how happy did you feel yesterday?' Answers to each of these questions were on a scale of 0 ('not at all') to 10 ('completely'). The questions related to 'yesterday' partly because 'today' would be unusual since respondents were being interviewed 'today' (Dolan and Metcalfe, 2012).

The subjective well-being measurements we used in this study have been found to have good convergent validity. They converge with other types of well-being measurements, including experience sampling, in which feelings or level of satisfaction are reported at random moments in everyday life. This includes participants' reports of positive and negative events in their lives, smiling and accounts from family and friends (Dolan et al., 2011; Pavot

and Diener, 1993). While the levels of reliability for subjective well-being measures are lower than those typically found for so-called 'objective' well-being variables (e.g. income or level of education), they are sufficiently high to support much of the research that is currently being undertaken on subjective well-being, particularly in studies where group means are compared (Krueger and Schkade, 2008; Pavot and Diener, 1993).

Control variables: Control variables were used to analyse both the extent of underemployment and subjective well-being levels by socio-demographic factors (e.g. age, income, marital status, health and disability status), type of work and working conditions, which are distributed unequally between men and women (Cummins, 2000; Diener, 2009; Dolan et al., 2008). To reliably assess the relationships between underemployment and gender and underemployment and subjective well-being, our analyses accounted for differences in those characteristics by including them in analytical models. For a description of all these variables and correlations between them, please see Appendices 1 and 2.

Data analysis methods

To examine gender differences in underemployment we used logistic regression analysis. To analyse the multivariate relationships between underemployment and subjective well-being, we estimated a series of ordinary least squares (OLS) models in which the dependent variable was, in turn, each of the three subjective well-being variables[1].

Results

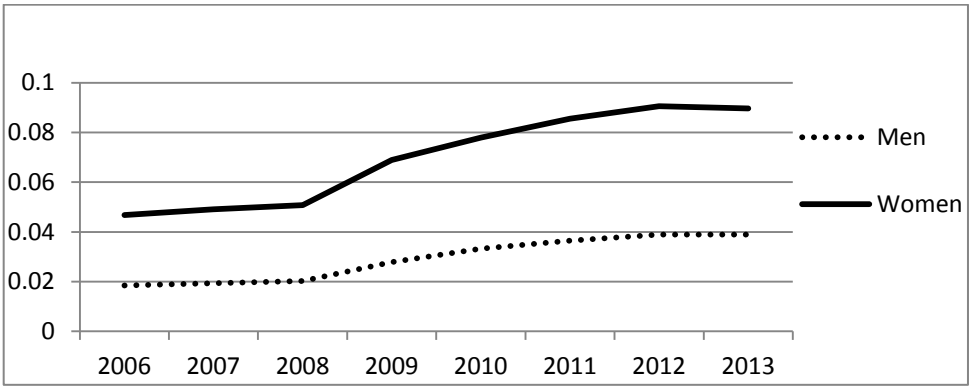
Gendered trends in underemployment

Firstly, to test hypotheses 1a and 1b, we investigated the gendered nature of trends in male and female underemployment between 2006 and 2013. Figure 1 presents predicted probabilities of underemployment for men and women. Predicted probabilities represent how

likely it is that women and men in the sample are underemployed instead of working full-time, taking into account variations among men and women in the types of jobs they do, employment length, their age, marital and disability status and the size of the employer they work for (see the regression model in Table 1 for the full list of variables taken into account).

As can be seen in Figure 1, women were always more likely to be underemployed than men, even before the recession in 2008 began. However, although during the recession underemployment levels increased for both men and women, the probability of underemployment grew more rapidly among women.

Figure 1. Predicted probabilities of underemployment



(Annual Population Survey, 2006-2013, weights applied)

According to the results of the logistic regression analysis in Table 1, the differences in the levels of underemployment between women and men remained significant even after the variations in types of jobs, working conditions, year and socio-demographic characteristics were taken into account. The regression coefficient 0.49 suggests that women were 1.6 times[2] as likely as men to be working part-time because they could not find a full-time job.

The results provided some support for hypotheses 1a and 1b. As hypothesized, underemployment was most commonly found in female-dominated occupations and least

Table 1. Predictors of underemployment (versus full-time work)

	b	*SE*
Gender (Women vs. men)	0.49***	(0.02)
Occupation (Gender-balanced)	.	.
Female dominated	0.25***	(0.01)
Male dominated	-0.99***	(0.02)
Industry (Gender-balanced)	.	.
Female dominated	-0.60***	(0.02)
Male dominated	-1.04***	(0.02)
Employment length (<1 year)	.	.
1-4 years	-0.62***	(0.01)
5+ years	-1.56***	(0.02)
Workplace size (Large 250+)	.	.
Medium (50-249)	0.19***	(0.02)
Small (<50)	0.89***	(0.02)
Sector (Public)	.	.
Private	-0.29***	(0.02)
Voluntary	-0.15***	(0.03)
Age	-0.10***	(0.00)
Age squared	0.01***	(0.00)
Disability (No disability)	.	.
Work limiting disability	0.55***	(0.02)
Work non-limiting disability	0.10***	(0.03)
Marital status (single)	.	.
Married, living together	-0.10***	(0.02)
Separated, widowed, divorced	0.15***	(0.02)
Civil partnership	-0.37**	(0.12)
Year (2006)		
2007	0.037	(0.03)
2008	0.10***	(0.03)
2009	0.47***	(0.03)
2010	0.63***	(0.03)
2011	0.70***	(0.03)
2012	0.78***	(0.03)
2013	0.78***	(0.03)
Constant	-1.60***	(0.07)
N	739,843	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Data source: Annual Population Survey, 2006-2013, person weights applied

commonly found in jobs where men dominated. Thus, individuals employed in female-dominated occupations were on average 1.3 times as likely to be underemployed as individuals working in gender-balanced occupations. The likelihood of underemployment was the lowest for individuals in male-dominated occupations.

However, contrary to our hypothesis, employees in gender-balanced industries (such as distribution, hospitality and banking) were significantly more likely to be underemployed than individuals working in male-dominated or female-dominated industries.

According to Table 1, underemployment was also most common among employees who have been with their employer for less than a year; those working in small organisations and in the public sector; among younger, separated, divorced or widowed people and people with work-limiting disabilities.

Finally, the significant and increasingly higher coefficients per year suggest that since 2008 the level of underemployment has been increasing. In 2013 the level of underemployment stabilised, but still remained 2.2 times as high as in 2006.

Underemployment and subjective well-being

To test hypothesis 2 we examined the relationships between involuntary part-time work and subjective well-being by estimating twelve regression models. The relationships between underemployment and three components of subjective well-being (life satisfaction, happiness and anxiety) were analysed separately for men and women with shorter and longer job tenures. The results from these models are presented in Table 2.

Our results were in agreement with hypothesis 2. There was a negative relationship between involuntary part-time working and subjective well-being for male and female workers who have been with their employer for more than a year. For men involuntary part-time work was negatively associated only with life satisfaction: men with longer tenures who

worked part-time because they could not find a full-time job scored on average 0.35 points less on life satisfaction than men employed full-time. Women who worked part-time because they could not find a full-time job also scored significantly lower (-0.39) on life satisfaction, happiness (-0.19) and higher on anxiety (0.18) than women working full-time.

To some extent our findings contradicted the assumption that there will be no relationship between involuntary part-time working and subjective well-being for male and female workers who have been with their current employer for less than a year. According to our results involuntary part-time work was negatively associated with levels of life satisfaction for newly-employed male and female staff. The regression coefficients of -0.35 suggested that newly-employed men who worked part-time because they could not find a full-time job scored on average 0.35 points less on life satisfaction than men employed full-time. Similarly, women who worked part-time because they could not find a full-time job scored significantly lower (-0.33) than women employed full-time). The results also indicated that there was no significant relationship between involuntary part-time work and the affective components (happiness and anxiety) of subjective well-being.

Part-time work by choice, other structural and individual factors and subjective well-being

In addition to testing our hypotheses, we also explored the relationships between subjective well-being and other factors, such as working part-time by choice, gender composition of occupation and industry and a range of individual characteristics. The results suggested that, in contrast to involuntary part-time work, men and women who reported working part-time by choice scored significantly higher on life satisfaction and happiness scales than men and women working full-time. Men who had chosen to work part-time were significantly more satisfied (regression coefficients 0.44 and 0.31) and also happier (0.39 and 0.31) with their

Table 2. Underemployment and subjective well-being. Regression estimates.

	Men						Women					
Employment length with current employer	Under one year			One year or longer			Under one year			One year or longer		
	A	H	LS	A	H	LS	A	H	LS	A	H	LS
Working time (Full-time)												
Part-time: choice	-0.17	0.39*	0.44***	-0.17	0.31***	0.31***	-0.064	0.016	0.14*	-0.042	0.10***	0.09***
	(0.22)	(0.16)	(0.13)	(0.09)	(0.07)	(0.05)	(0.12)	(0.09)	(0.07)	(0.04)	(0.03)	(0.02)
Part-time:	0.06	0.05	-0.35*	0.10	-0.06	-0.35***	0.12	-0.17	-0.33**	0.18*	-0.19**	-0.39***
involuntary	(0.18)	(0.15)	(0.14)	(0.12)	(0.10)	(0.08)	(0.17)	(0.13)	(0.10)	(0.08)	(0.06)	(0.05)
Part-time:	-0.12	0.34*	0.39**	0.13	0.32**	0.11	0.22	0.22	0.25*	0.15	0.16*	0.02
student or disabled	(0.22)	(0.15)	(0.13)	(0.14)	(0.10)	(0.09)	(0.19)	(0.13)	(0.10)	(0.11)	(0.08)	(0.06)
Age	0.01	-0.01*	-0.01**	0.01	0.004**	-0.01**	0.01*	-0.01	-0.01***	0.01***	0.01	-0.01***
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Subjective health	-0.62***	0.51***	0.52***	-0.53***	0.49***	0.50***	-0.64***	0.50***	0.51***	-0.68***	0.55***	0.51***
status	(0.07)	(0.05)	(0.04)	(0.03)	(0.02)	(0.02)	(0.06)	(0.05)	(0.04)	(0.02)	(0.02)	(0.01)
Marital status (Single, never married)												
Married	0.03	0.30**	0.25**	0.09*	0.27***	0.34***	-0.050	0.30***	0.32***	-0.04	0.33***	0.37***
	(0.13)	(0.09)	(0.08)	(0.04)	(0.03)	(0.02)	(0.12)	(0.09)	(0.06)	(0.04)	(0.03)	(0.02)
Separated, divorced	0.06	-0.04	-0.40**	0.1	-0.06	-0.15***	0.25	-0.23	-0.24**	0.11*	-0.10**	-0.28***
or widowed	(0.19)	(0.15)	(0.12)	(0.06)	(0.05)	(0.04)	(0.16)	(0.12)	(0.09)	(0.05)	(0.04)	(0.03)
Civil partnership in	0.94	0.53	0.75*	-0.07	0.55**	0.53***	-0.15	0.40	0.37	0.34	0.28	0.41**
past or present	(1.06)	(0.56)	(0.33)	(0.28)	(0.20)	(0.13)	(0.81)	(0.32)	(0.35)	(0.33)	(0.19)	(0.13)
Occupation (Gender-balanced)												
Female	0.04	-0.01	0.07	-0.05	-0.06	-0.05	-0.13	-0.02	-0.08	-0.14***	-0.03	-0.020
dominated	(0.13)	(0.10)	(0.08)	(0.05)	(0.04)	(0.03)	(0.10)	(0.07)	(0.05)	(0.04)	(0.03)	(0.02)
Male dominated	-0.06	-0.06	0.13*	-0.09*	-0.01	0.05*	-0.32	0.06	-0.15	-0.02	0.03	0.02
	(0.12)	(0.09)	(0.07)	(0.04)	(0.03)	(0.02)	(0.19)	(0.14)	(0.10)	(0.06)	(0.04)	(0.03)
Industry (Gender-balanced)												
Male dominated	-0.03	0.18	0.08	0.05	-0.12*	-0.04	0.05	-0.08	0.02	0.07	-0.04	-0.06*
	(0.18)	(0.14)	(0.11)	(0.06)	(0.05)	(0.04)	(0.12)	(0.09)	(0.07)	(0.05)	(0.04)	(0.03)
Female dominated	-0.04	0.06	0.1	-0.11**	-0.01	0.05*	-0.08	0.01	0.05	0.05	-0.02	0.06

	(0.12)	(0.09)	(0.07)	(0.04)	(0.03)	(0.02)	(0.15)	(0.11)	(0.08)	(0.06)	(0.04)	(0.03)
Income per	0.02	0.03	0.01	0.011	0.02***	0.03***	-0.01	-0.01	0.04	0.03*	0.03	0.01
week (£100s)	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.01)	(0.04)	(0.03)	(0.02)	(0.01)	(0.01)	(0.01)
Workplace size (Large (250+)												
Medium (50-249)	-0.14	-0.10	-0.08	-0.04	0.01	0.03	0.03	-0.12	-0.06	0.01	0.01	0.01
	(0.14)	(0.10)	(0.08)	(0.04)	(0.03)	(0.02)	(0.14)	(0.10)	(0.08)	(0.05)	(0.03)	(0.02)
Small (<50)	0.05	-0.05	-0.01	0.02	0.07*	0.06*	-0.15	0.06	0.02	-0.12**	0.08**	0.08***
	(0.13)	(0.09)	(0.07)	(0.04)	(0.03)	(0.02)	(0.13)	(0.09)	(0.07)	(0.04)	(0.03)	(0.02)
Sector (Public)												
Private	-0.16	0.07	-0.10	0.01	-0.10*	-0.02	0.16	-0.26**	-0.24**	0.08	-0.06	-0.11***
	(0.19)	(0.14)	(0.12)	(0.06)	(0.04)	(0.03)	(0.13)	(0.09)	(0.07)	(0.05)	(0.04)	(0.03)
Voluntary sector	0.08	0.17	0.05	-0.21	0.15	0.14*	0.29	-0.14	-0.20	0.05	0.03	-0.13**
	(0.32)	(0.21)	(0.17)	(0.11)	(0.08)	(0.06)	(0.21)	(0.15)	(0.11)	(0.08)	(0.06)	(0.05)
Constant	4.90***	5.63***	5.89***	4.60***	5.32***	5.72***	4.87***	5.94***	6.35***	5.04***	5.32***	6.03***
	(0.37)	(0.29)	(0.22)	(0.14)	(0.11)	(0.08)	(0.34)	(0.25)	(0.19)	(0.13)	(0.09)	(0.07)
Adjusted R^2	0.03	0.05	0.09	0.02	0.04	0.09	0.04	0.05	0.11	0.04	0.05	0.11
Observations	3,130	3,136	3,136	23,023	23,042	23,044	4,112	4,119	4,116	30,286	30,298	30,306

Notes:

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A- Anxiety, H- Happiness, LS- Life satisfaction

Data source: Annual Population Survey, Subjective Well-being Data for 2012/2013, well-being weights applied

lives than men working full-time, irrespective of the length of time they had been working for their current employer. Newly employed women who chose to work part-time were significantly more satisfied (0.14) with their lives than women working full-time. Women who chose to work part-time and who had been with their current employer for more than one year also scored significantly higher on life satisfaction (0.09) and happiness (0.10) measures than women working full-time.

The gender composition of an occupation and industry had some significant associations with the subjective well-being of men and women. For both tenure groups the life satisfaction scores (0.13 and 0.05) were higher for men working in male-dominated occupations than for men working in gender balanced occupations. Men working in male-dominated occupations who had been with their current employer for more than one year also scored lower on the anxiety scale (-0.09). Men who had been with their current employer for one year or longer and who worked in male-dominated industries were less happy (-0.12) than men in gender-balanced industries.

Women who had been with their employer for more than one year reported significantly lower levels of anxiety (-0.14) if they worked in female-dominated occupations. If they worked in male-dominated industries, their levels of life satisfaction were lower (-0.06).

Our results indicated that working in the public sector had a positive relationship with the well-being of newly recruited women. Women working in the private sector scored significantly lower on life satisfaction (-0.24) and happiness (-0.26) than women working in the public sector. The positive association between public sector work and female life satisfaction was also present among women with longer tenure. Men with tenure of over one year who worked in the private sector were less happy (-0.10) than men in public sector jobs.

Men with longer tenure working in the voluntary sector had significantly higher life satisfaction (0.14) and women's life satisfaction was significantly lower (-0.13) than life satisfaction among their counterparts in the public sector.

We also found that healthier people and individuals who were married or living with a partner scored higher on several subjective well-being dimensions.

The values of adjusted R^2 in Table 2 suggested that the total variance in the predictor variables in the models explained 2% - 9% of the variance in subjective well-being for men and 4% -11% of the variance in subjective well-being for women. All but one of these values of adjusted R^2 fall within the range of the typical model R^2 values between 3% and 15% of an OLS estimates of subjective well-being (Senik, 2014). This suggests that the explanatory power of our models is similar to the explanatory power of typical subjective well-being models.

Discussion

Given the relatively high rates of employment at the time of the 2008 recession and the marked increase in underemployment since, it was important to analyse the predictors and outcome of underemployment. Our findings support hypotheses predicting that the probability of underemployment will be at its highest in female-dominated occupations and industries and in the public sector, and lowest in male-dominated occupations and industries and in the private sector. The results of our analysis suggest that underemployment levels have been growing since 2008 and are the highest in female-dominated occupations, the public sector and in small organisations; that is, in jobs women are most likely to occupy. In contrast, underemployment is least common in male-dominated occupations and industries, and in the private sector. The exception from this pattern is gender-balanced industries which had a higher likelihood of underemployment than male or female-dominated industries.

These findings suggest that since 2008 employers are less likely to offer full-time positions or are more likely to reduce the working hours of existing employees, particularly in female-dominated workplaces.

These results support our argument that gender segregation plays an important role in gender differences regarding the likelihood of underemployment during a recession. These findings are also in line with the argument that women workers are a flexible reserve in 'buffer' jobs to be shed (or have hours reduced) in times of economic recession (Rubery, 1988; Rubery and Rafferty, 2010; Rubery and Rafferty, 2013).

However, we found that even after controlling for gender segregation, women still have a higher likelihood of becoming underemployed than men. This finding suggests that there might be other factors, such as discrimination based on gender (Bettio et al., 2009), that contribute to the gendered nature of underemployment. Women may also be more likely than men to accept part-time work instead of remaining unemployed or being made redundant. Both of these explanations require further empirical examination.

There are several other possible interrelated explanations for an increasingly gendered shortage of full-time jobs. More women are moving into the labour market and more of them want a full-time job (TUC, 2012). However, female-dominated jobs may be more likely to be offered on a part-time basis on the assumption that this is more 'suitable' for women. Jobs in female-dominated sectors such as caring and cashiering have significant demand spikes and workers need to be flexible to meet business needs (Twigg et al, 2011). At the same time full-time positions may not suit women who either want or need to work full-time but require some degree of flexibility because of caring responsibilities outside their paid work. The prevalence of gendered occupational roles are thus largely explained by motherhood (Longarela, 2016) but affect all women whether or not they have children.

A feature that sustains gendered segregation and the concentration of women in the lowest paid and lowest status sectors is their dominance within part-time working. There is a significant increase in segregation among women part-time workers as a result of restricted prospects and career paths for those wanting to work flexibly (Bettio and Verashchagina, 2009). More women than men opt for flexible working which then reduces the choice of careers open to them and helps explain the attraction of the public sector for female workers. Evidence suggests that the flexible forms of employment sought by women are more achievable in this sector (Bettio and Verashchagina, 2009).

We found that, independently of tenure, underemployment is associated negatively with well-being. These findings support the hypothesis that there is a negative relationship between involuntary part-time work and subjective well-being for male and female workers who have been with their current employer for more than a year. At the same time these results contradict the supposition that there is no relationship between male and female underemployment and well-being for workers who have been with their current employer for less than a year. Underemployed men and women are less satisfied with their lives than those working full-time, independent of their tenure. However, for underemployed women who have been working for their current employer for longer than one year (that is, women who are likely to have been asked to reduce their working hours) underemployment has negative relationships with two other dimensions of subjective well-being: anxiety and happiness.

Our results also suggest that underemployment has a negative relationship with the subjective well-being of both men and women, even after gender segregation is taken into account. These findings mean that underemployment *per se* has a negative relationship with employees' well-being, not only because it is more likely to occur in certain occupations and industries. Post-recession our findings that underemployment can have negative relationships with employees' subjective well-being are in line with studies by Wooden et al. (2009) and

Angrave and Charlwood (2015) which found that it is not the number of hours worked that impacts on subjective well-being but a working time mismatch.

This study found some evidence of relationships between male and female well-being and the gender composition of occupations and industries. In general, men have higher levels of life satisfaction and lower levels of anxiety in male-dominated occupations, possibly because these occupations offer better quality jobs. However men are also less happy in male-dominated industries, possibly because male-dominated industries demand longer hours of work (Burchell et al., 2014). Newly employed women tend to have lower levels of anxiety in female-dominated occupations. Women with longer tenure are less satisfied with their lives if they work in male-dominated industries, possibly because of frustrations related to issues of gendered career progression and other aspects of gender discrimination that are found to be present in these industries (Powell and Sang, 2015).

The key strength of this study is the use of very large nationally representative data sets (APS) which allowed us to conduct not only analyses of the average extent of underemployment and its associations to employees' subjective well-being, but also a fine-grained analysis of how these trends and relationships vary across different occupations, industries and sectors and individual characteristics. The advantage of the APS is that it includes measurements of involuntary part-time work and measurements of several different subjective well-being measures, thus allowing a more refined analysis of the relationships between underemployment and well-being.

As a cross-sectional study, however, this also has a limitation typical of all studies attempting to examine well-being using cross-sectional data. Without including stable individual genetic and personality predispositions in the models or using longitudinal panel data, our effect sizes are likely to be biased upwards. The effect sizes of underemployment on life satisfaction in our study are indeed larger than those found in Angrave and Charlwood's

(2015) and Wooden et al.'s (2009) studies. Assuming that roughly half of the variance in subjective well-being is explained by genetic and personality factors (Diener and Lucas, 1999; Tellegen et al., 1998), and if indeed individuals who are more predisposed to lower levels of well-being are also more likely to struggle to find a full-time job and end up working part-time, the effect sizes found in this study should be smaller.

This would be in line with the differences in the effect sizes between models with no fixed effects and ones with fixed effects for underemployed part-timers, as presented by Wooden et al. (2009). At the same time we still would expect the effect sizes in our study to be larger than those found in Angrave and Charlwood (2015) and Wooden et al. (2009) because of the differences in the nature of underemployment studied and the differences in the measurements associated with it. The studies by Angrave and Charlwood (2015) and Wooden et al. (2009) focused on underemployment in terms of preferences, i.e. wanting to work more hours. The question used in both studies does not specify whether workers are in a position to work more hours and whether they have actually tried to increase their hours.

Importantly, Angrave and Charlwood's (2015) study does not measure the gap between actual and desired hours. So while some part-timers in the sample might want to increase their hours to full-time, others might want only a relatively small increase in their hours - which might not mean a transition to a full-time job. As Angrave and Charlwood (2015) point out themselves, this is important because evidence from Wooden et al.'s (2009) study suggests that the size of this gap affects the relationship between underemployment and subjective well-being.

In our study, by way of contrast, all underemployed people in our sample have tried to get full-time jobs and have not succeeded, so are now working part-time. In addition, a full-time job, especially in the UK context, often means not only more working hours but is also a substantially different experience from part-time work; for example, full-time employees

usually have better quality working conditions (e.g. Connolly and Gregory, 2008, 2009; Grant et al., 2005; Hoque and Kirkpatrick, 2003; Olsen et al., 2010; Thornley, 2007; Warren, 2015). Therefore we expect that underemployment in our study would have stronger associations with subjective well-being than in the other two studies. To our knowledge, there are no panel data that measure involuntary part-time work, which has the potential to have at least the same if not considerably stronger negative effects on subjective well-being. Therefore this study, albeit cross-sectional, makes an important contribution to the debate about predictors and outcomes of underemployment.

Our findings indicate that the current trends towards practices of employer-led flexibility have negative implications for the subjective well-being of their workforce. As underemployment levels among women are increasing faster than among men, women are more likely to experience negative individual consequences of involuntary part-time work, such as short and long-term financial hardship and insecurity (Maynard and Feldman, 2011; McKee-Ryan, 2013) and the negative outcomes of part-time work, namely less access to training, a part-time wage penalty, financial hardship, occupational downgrading (being employed below their potential) and a lower likelihood of promotion (e.g. Connolly and Gregory, 2008, 2009; Grant et al., 2005; Hoque and Kirkpatrick, 2003; Olsen et al., 2010; Thornley, 2007; Warren, 2015). If the government wants to maintain or increase subjective well-being at work such employment practices should be limited, or policies developed to support the lowest-paid and most vulnerable in society (Stuckler and Basu, 2013). As the Fawcett Society (2012) points out, women are having to contend with cuts in jobs, wages and pensions as well as cuts in the services they use and are left 'filling the gaps' as state services disappear.

In addition, a current concern regarding the UK labour market is poor productivity of the workforce, with the Office for National Statistics reporting that UK labour market

productivity fell by 0.2 per cent in the last three months of 2014 (BBC, 2015). Research by the Social Market Foundation has suggested links between improved well-being and productivity (Evans, 2016). These links would certainly benefit from further research in the light of our study, perhaps with an emphasis on female subjective well-being at work.

Conclusions

This study found that that gender segregation shapes the patterns of underemployment and its relationships to employee well-being. Our results show that since 2008 the probability of underemployment is growing significantly faster for women than men and that underemployment levels are highest in jobs that women are most likely to perform and least common in male-dominated jobs. The results of this study also suggest that although underemployment is negatively related to the well-being of both men and women, for employees with longer tenures it is associated negatively with more components of female subjective well-being than male. Therefore, the primary theoretical contribution of this paper is that it has extended the current debate on underemployment by introducing gender segregation at work as an explanatory factor for gender differences in the prevalence of time-related underemployment and its consequences for the subjective well-being of employees. Our paper suggests that gender segregation should be an essential component in theoretical model that attempts to conceptualise underemployment. Because of the gendered nature of the labour market, this theoretical implication extends beyond time-related underemployment and is likely to apply to other types of underemployment, such as occupational mismatch and underemployment by low income (Smith, 2013). To conclude, this analysis of women and men at work in post-recession UK focusing on involuntary part-time work suggests that trends in underemployment are gendered, as are the consequences.

Notes

1. Although in a strict sense the well-being scales are ordinal, we use OLS in our study as other studies have shown that treating the well-being variables either as ordinal or as interval leads to the same conclusions (Diener and Tov, 2012; OECD, 2013). We tested the robustness of our OLS models against the violation of the interval scale assumption by running both OLS and ordered logit and probit regressions (which treat well-being data as ordinal variables). The conclusions from the OLS and ordered logit and probit estimates were identical. In this paper we report the OLS estimates as the interpretation of them is more straightforward and therefore they are likely to be more widely understood by readers.

2. Odds ratios were calculated by exponentiating beta coefficients.

References

Angrave D and Charlwood A (2015) What is the relationship between long working hours, over-employment, under-employment and the subjective well-being of workers? Longitudinal evidence from the UK. *Human Relations* 68(9): 1491-1515.

Bache I and Reardon L (2013) An idea whose time has come? Explaining the rise of well-being in British politics. *Political Studies* 61(4): 898-914.

Bardasi E and Francesconi M (2004) The impact of atypical employment on individual wellbeing: evidence from a panel of British workers. *Social Science & Medicine* 58(9): 1671-1688.

BBC. (2015) *Weak UK productivity unprecedented, ONS says*. Available at: http://www.bbc.com/news/business-32143552

Bell DNF and Blanchflower DG (2011) Underemployment in the UK in the great recession. *National Institute Economic Review* 215: R23-R33.

Bell DNF and Blanchflower DG (2013) Underemployment in the UK Revisited. *National Institute Economic Review* 224(1): F8-F22.

Bell DNF and Blanchflower DG (2014) Labour Market Slack in the UK. *National Institute Economic Review* 229: F4 -F11.

Bettio F Verashchagina A Mairhuber I and Kanjuo-Mrčela A. (2009) *Gender segregation in the labour market: Root causes, implications and policy responses in the EU*.

Blanchflower DG (2015) As good as it gets? The UK labour market in recession and recovery. *National Institute Economic Review* 231: 76-80.

Brunstein JC (1993) Personal goals and subjective well-being: A longitudinal study. *Journal of Personality and Social Psychology* 65(5): 1061.

Burchell B Sehnbruch K Piasna A and Agloni N (2014) The quality of employment and decent work: definitions, methodologies, and ongoing debates. *Cambridge Journal of Economics* 38(2): 459-477.

Connolly S and Gregory M (2008) Moving Down: Women's Part-Time Work and Occupational Change in Britain 1991-2001. *The Economic Journal* 118(526): F52-F76.

Connolly S and Gregory M (2009) The part-time pay penalty: earnings trajectories of British women. *Oxford Economic Papers* 61(suppl 1): i76-i97.

Cummins RA (2000) Personal income and subjective well-being: A review. *Journal of Happiness Studies* 1(2): 133-158.

Diener E (2009) Subjective well-being. *The science of well-being.* Springer, 11-58.

Diener E and Lucas RE (1999) Personality and subjective well-being. In: Kahneman D Diener E and Schwarz N (eds) *Well-being: The foundations of hedonic psychology.* New York: Russell Saga Foundation, 213-229.

Diener E Lucas RE and Shigehiro O (2005) Subjective well-being: the science of happiness and life satisfaction. In: Snyder CR and Lopez SJ (eds) *Handbook of Positive Psychology.* New York: Oxford University Press, 63-73.

Diener E Oishi S and Lucas RE (2009) Subjective Well-Being: The Science of Happiness and Life Satisfaction. *Oxford handbook of positive psychology*. 187.

Diener E and Tov W (2012) National accounts of well-being. *Handbook of social indicators and quality of life research.* Springer, 137-157.

Dolan P Layard R and Metcalfe R. (2011) *Measuring Subjective Well-being for Public Policy*. Available at: http://eprints.lse.ac.uk/35420/1/measuring-subjective-wellbeing-for-public-policy.pdf.

Dolan P and Metcalfe R (2012) Measuring subjective wellbeing: recommendations on measures for use by national governments. *Journal of social policy* 41(2): 409-427.

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 well-being. *Journal of Economic Psychology* 29(1): 94-122.

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

EHRC. (2010) How fair is Britain? Triennial Review.

Emmons RA (1986) Personal strivings: An approach to personality and subjective well-being. *Journal of Personality and Social Psychology* 51(5): 1058.

ETUC and ETUI (2013) *Benchmarking Working Europe 2013,* Brussels: ETUC and ETUI.

Eurostat. (2016) *Europe 2020 indicators-employment*. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_employment.

Evans K (2016) *Working well. How employers can improve the well-being and productivity of their workforce,* London: Social Market Foundation.

Fawcett Society. (2012) The impact of austerity on women. London: Fawcett Society.

Friedland DS and Price RH (2003) Underemployment: Consequences for the Health and Well-Being of Workers. *American Journal of Community Psychology* 32(1-2): 33-45.

Grant L Yeandle S Buckner L and Britain G (2005) *Working below potential: women and part-time work*: Equal Opportunities Commission.

Gregg P and Wadsworth J (2010a) The UK labour market and the 2008-9 recession *National Institute Economic Review* 212(1): R61-R72.

Gregg P and Wadsworth J (2010b) Unemployment and inactivity in the 2008-2009 recession. *Economic and Labour Market Review* 4(8): 44-50.

Grimshaw D and Rafferty A. (2012) Social Impact of the Crisis in the UK: Focus on Gender and Age Inequalities. *Inequalities in the world of work: The effects of the crisis, International Labour Office and European Commission Conference, Brussels.*

Grün C Hauser W and Rhein T (2010) Is any job better than no job? Life satisfaction and re-employment. *Journal of Labor Research* 31(3): 285-306.

Heyes J Tomlinson M and Whitworth A. (2016) Underemployment and well-being in the UK before and after the Great Recession. *Work, employment and society.* Epub ahead of print 24 November 2016: DOI:10.1177/0950017016666199.

Hoque K and Kirkpatrick I (2003) Non-Standard Employment in the Management and Professional Workforce: Training, Consultation and Gender Implications. *Work Employment Society* 17(4): 667-689.

Huppert FA and Whittington JE (2003) Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British journal of health psychology* 8(1): 107-122.

Kahneman D Diener E and Schwarz N (2003) *Well-being: The foundations of hedonic psychology*: Russell Sage Foundation.

Kalleberg AL (2011) *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s-2000s*: Russell Sage Foundation.

Krueger AB and Schkade DA (2008) The reliability of subjective well-being measures. *Journal of Public Economics* 92(8/9): 1833-1845.

Longarela IR (2016) Explaining vertical gender segregation: a research agenda. *Work, employment and society* Onlinefirst(doi:10.1177/0950017016668133): 1-11.

Low Pay Commission. (2011) National Minimum Wage. London: Low Pay Comission.

Lyonette C Baldauf B and Behle H (2010) *Quality part-time work: A review of the evidence,* London: Institute for Employment Research, University of Warwick, Government Equality Office.

Maynard DC and Feldman DC. (2011) Underemployment: Psychological, Economic and Social Challenges. New York: Springer.

McKee-Ryan F (2013) Underemployed workers. In: Smith V (ed) *Sociology of work: an encyclopedia.* Sage, 900-901.

OECD (2013) *OECD Guidelines on Measuring Subjective Well-being*: OECD Publishing.

Olsen W Heuvelman H Gash V and Vandecasteele L (2010) *The Gender Pay Gap in the UK 1995-2007,* London: Government Equalities Office.

ONS (2011) *User Guide: Volume 1- LFS Background and metodology 2011,* London: ONS.

ONS (2012) *APS: quality and methodology information,* London: Office for National Statistics.

ONS (2013a) *Personal Well-being in the UK 2012/2013,* London: ONS,.

ONS. (2013b) Women in the labour market: 2013. London: ONS.

ONS Social Survey Division (2013) *Annual Population Survey: Subjective Well-being, April 2012-March 2013*, Colchester, Essex: UK Data Archive.

Parek A MacInnes T and Kenway P (2010) *Monitoring poverty and social exclusion, 2010*: Joseph Rowntree Foundation.

Pavot W and Diener E (1993) Review of the satisfaction with life scale. *Psychological Assessment* 5(2): 164-172.

Powell A and Sang KJC (2015) Everyday experiences of sexism in male-dominated professions: A Bourdieusian perspective. *Sociology* 49(5): 919-936.

Rubery J. (1988) Women and Recession. London: Routledge.

Rubery J and Rafferty A. (2010) *Women and Recession*. Available at: http://www.geog.qmul.ac.uk/pedec/documents/pedecWomen%20and%20Recessionx%20%5BRead-Only%5D.pdf.

Rubery J and Rafferty A (2013) Women and recession revisited. *Work, Employment & Society* 27(3): 414-432.

Sands D (2012) The Impact of Austerity on Women. *Fawcett Society Policy Briefing, March*.

Schoon I Hansson L and Salmela-Aro K (2005) Combining work and family life: Life satisfaction among married and divorced men and women in Estonia, Finland, and the UK. *European Psychologist* 10(4): 309.

Scott J Crompton R and Lyonette C. (2010) Gender Inequalities in the 21st Century: New Barriers and Continuing Constraints. Edward Elgar Publishing Ltd.

Senik C (2014) The French unhappiness puzzle: The cultural dimension of happiness. *Journal of Economic Behavior & Organization* 106: 379-401.

Smith V. (2013) Underemployed Workers. In: Smith V (ed) *Sociology of Work: An Encyclopedia.* Sage, 897-899.

Stiglitz JE Sen A and Fitoussi J-P (2009) *Report by the commission on the measurement of economic performance and social progress*: OECD.

Strandh M (2000) Different Exit Routes from Unemployment and their Impact on Mental Well-being: The Role of the Economic Situation and the Predictability of the Life Course. *Work Employment Society* 14(3): 459-479.

Stuckler D and Basu S (2013) *The Body Economic: Eight experiments in economic recovery, from Iceland to Greece*: Penguin UK.

Tellegen A Lykken DT VBouchard TJ Wilconx KJ Segal NL and Rich S (1998) Personality similarity in twins reared apart and together. *Journal of Personality and Social Psychology* 54: 1031-1039.

Thornley C (2007) Working Part-Time for the State: Gender, Class and the Public Sector Pay Gap. *Gender, Work & Organization* 14(5): 454-475.

TUC (2012) *TUC briefing: Women and work*: TUC.

Warr P (2007) *Work, happiness, and unhappiness*: Psychology Press.

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

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

Wooden M Warren D and Drago R (2009) Working time mismatch and subjective well-being. *British Journal of Industrial Relations* 47(1): 147-179.

Appendices are available online.